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Address for correspondence:
Dr. Tahseen
Associate professor, in Dept of commerce,Government R C college, Bengaluru,Karnataka India
Email:
abdulbasheer82@gmail.com

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The Role of FinTech in Transforming the Indian Banking and Financial Services Sector

Dr. Tahseen
Associate professor, in Dept of commerce,Government R C college, Bengaluru,Karnataka India

Abstract

Financial Technology or FinTech is one of the major players in the revolution of India's banking and financial services industry. Mobile technology, artificial intelligence, cloud computing, blockchain, biometric identification, data analytics, digital payments and automated financial services have revolutionized the way financial institutions engage with their customers. The development of Unified Payments Interface (UPI), mobile banking, digital lending, account aggregation, digital insurance, and technology-enabled investment services has led to a more connected financial ecosystem in India. The Reserve Bank of India (RBI) has also enabled innovation through various regulatory measures, digital payment systems, regulatory sandbox, and technology-based credit delivery system. In October 2024, UPI transaction volume surged to 16.6 billion, highlighting the impressive volume of digital payments. Meanwhile, FinTech has raised issues surrounding cybersecurity, data privacy, exclusion from the digital world, consumer protection, fraud, algorithmic decision-making, and regulatory coordination. In this paper, the evolution of FinTech in Indian Banking and Financial Service is explored using Secondary Research. It is dedicated to paying attention to digital payments, financial inclusion, loans, customer services, operational efficiency, innovation and emerging risks. The paper states that FinTech is not just about supplanting traditional banking, but the banks and tech companies are increasingly building complementary relationships. Sustainable transformation thus needs to be accompanied by technological innovation, responsible regulation, financial literacy, data protection, cyber security and customer-centric banking.

Keywords: *FinTech, Indian Banking, Digital Payments, Financial Inclusion, Digital Lending, Financial Innovation*

Introduction

The Indian banking and financial services industry has been greatly transformed in the past decade. Traditional banking had long been linked with physical branches, paper documentation, cash transactions, face-to-face interactions, and fairly lengthy processes. This arrangement has been altered due to the fast paced growth of financial technology. The customer is able to open an account, transfer funds, pay bills, secure loans, buy insurance, invest and check financial status with a smartphone and digital interface today.

FinTech is the use of technology in general to enhance or reimagine financial services. According to Gomber, Koch and Siering, FinTech is a significant technological leap that links finance and digital innovation. Finally, Lee and Shin define the FinTech ecosystem as comprised of payments, lending, crowdfunding, wealth management, insurance, and technology-based financial services activities. FinTech in India is especially evident in the rise of digital payments and tech-based banking.

India has built a unique digital financial environment around the network of mobile connectivity, Aadhaar, bank accounts, UPI, digital identity, and more forms of digital public infrastructure. As per the reports published by RBI, UPI has reached 13 billion monthly transactions in the month of March 2024, while later reports from RBI have noted that 16.6 billion transactions were made on the UPI in October 2024. The 2025 Global Findex also highlights the increasing relevance of digital access and financial services in India, and indicates that access and usage are not synonymous. (World Bank)

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Payment apps have, therefore, become obsolete in the eyes of FinTech. It is impacting credit assessment, customer service, risk management, investment, insurance, remittances, financial inclusion. But tech growth brings with it new duties for banks, FinTech companies, regulators and customers. The present study thus investigates the prospect of a transformative opportunity for FinTech and its need for prudent governance.

Review of Literature

Previous research has shown that FinTech has evolved from a technology-driven innovation to a significant part of the current financial system. Gomber, Koch and Siering have come up with a broad definition of digital finance, which encompasses financial services, information technology and new business models. The study by Thakor notes that technological innovation impacts on payments, lending, information processing, competition and the role of financial intermediaries. Vives also states that digital transformation can stimulate competition and the financial services, but can also present problems to existing banks.

Ercan et al. and Pandey et al. literature reviews reveal that the research field of FinTech has grown significantly and includes aspects of digital payments, blockchain, crowdfunding, lending, financial inclusion and banking transformation. According to the bibliometric study by Pandey et al. performed on 366 papers published in the Scopus-indexed journals, digital transformation is an important theme of research in FinTech. More recent research in the field still pinpoints bank-FinTech relationships, disruptive technologies, business models, and financial inclusion as key research priorities. (ScienceDirect)

One area of focus in Indian research is financial inclusion. Ghosh and Kulkarni's qualitative study highlights four themes central to the Indian FinTech environment–evolution, potential, market strategy and regulation. However, research on rural India, however, raises a cautionary note that digital access alone will not necessarily lead to meaningful financial inclusion. Cnaan et al. discovered that financial literacy and internet connectivity were key factors affecting digital banking use in rural areas of India. (Cambridge)

Research Gap

Sizable studies have been carried out on individual components of FinTech, particularly on digital payments and financial inclusion. Yet, the need for an integrated analysis of the impact of FinTech on payments, lending, customers, banks, inclusion, competition and regulation in India still exists. Recent reviews also highlight the need for additional contextual and methodological research. This paper fills this gap by exploring FinTech as a multidimensional transformation of the Indian banking and financial services (BFS) ecosystem instead of discussing only digital payments; to that end, the paper analyzes FinTech from both the perspectives of the BFS sector and the customers that the sector serves.In doing so, the paper shows that FinTech is more than just a transformation of the Indian digital payments segment, and examines FinTech from the lens of the BFS sector and the customers served by the BFS sector.

The study aims to examine the objectives of the study.

The study aims at accomplishing four things:

1. To explore how FinTech is changing the banking operations and the way customers are serviced in India.
2. To study FinTech contribution towards digital payments and financial inclusion.
3. To analyze its impact on lending, risk management and financial innovation.
4. To find the big problems and recommend responsible development of Fintech.

Research Methodology

The research design adopted in the study is descriptive and qualitative with secondary sources as the only type of sources used. The information has been gathered from the different journals, books, RBI reports, government publications and financial databases across the world. Special focus was placed on literature publications on FinTech, Digital Banking and Financial inclusion, Digital payments, and Financial Innovation. For understanding India's regulatory and technological evolution, the use of RBI publications has been considered and for broader financial inclusion context, World Bank data have been used. The gathered content was structured under the headings: digital payments, financial inclusion, lending, customer service, operational transformation, and emerging risks. The results of the study are not original or primary findings and the artificial respondents and artificial statistical results are not used in the study. Analysis is interpretive and descriptive that explain the evolving relationship between technology and financial services and its impact on the Indian context.

The rise of FinTech and Banking Services Transformation.The emergence of FinTech and Banking Services Transformation.

The most prominent impact of FinTech is on how traditional banking services are revolutionized. Customers have become less reliant on physical branches thanks to mobile applications and online banking. Previously, banking services that required in-person visits are now done virtually. Customers are able to view their balances, move money, pay bills, arrange

investments, request services, and get notifications of transactions almost immediately.

The most obvious instance is digital payments. UPI has designed an interoperable payment platform where through mobile apps, a customer can directly transfer money from one bank account to another. Its quick growth has altered the consumers' expectations in terms of speed, convenience, and availability. In October 2024, UPI reported 16.6 billion transactions to the RBI and by September 2024, there were around 61 crore active UPI QR codes, as per RBI. (Reserve Bank of India)

The banking hours have also been impacted by FinTech.FinTech has also influenced customer expectations around banking hours. Digital financial services are outside of the normal branch hours, which implies additional flexibility for customers. AI is being leveraged in various automated customer service, fraud detection, transaction monitoring, and personal finance communication applications. By leveraging cloud technologies, institutions can build scalable digital platforms by relying less on traditional physical infrastructure.

The change is therefore organisational, as well as technological. The changes in the model of banks from branch-centred to platform-based and customer-centred are beginning to take shape. Overall, the use of digital infrastructure has been leveraged to promote efficiency in credit delivery, with the RBI's Public Tech Platform for Frictionless Credit being one example. (System Health)

The theme for the second day of this year's feature conference is “FinTech, Financial Inclusion and Digital Payments”.

Financial inclusion is certainly one of the most important social aspects of FinTech. Geographically remote and economically weaker, and digitally unserved, have always been a challenge in India. By offering the low cost digital access via mobile phones and agent networks, FinTech can help to address some of these barriers.

Small value transactions are more convenient and quicker with digital payments. Customers don't always have to go to a bank branch to make any of their transactions. This can be particularly beneficial for small traders, self-employed persons, students, migrant workers and households receiving government related payments. Digital financial infrastructure can also help the formalisation of economic activities by maintaining transaction history.

Financial inclusion should not be defined by having a bank account, though! Other attributes such as actual usage, digital literacy, affordability, internet access, trust, and problem solving are also crucial. Demand-side evidence for financial access and digital financial behaviour has been provided by the World Bank's Global Findex 2025 data, and the India data reveal ongoing disparities between account ownership and patterns of digital use. (World Bank)

The study by Cnaan et al. is of special relevance in the context of rural India as it shows the positive link between financial literacy and digital banking activity, and the positive link between access to the internet and digital banking activity. Thus, it is important to consider FinTech as a means of inclusion, not as a means to inclusion. Digital literacy initiatives, regional language interfaces, secure connectivity, customer support, and consumer protection are all still vital.

FinTech, Digital Lending and Financial Innovation

The lending process is also being impacted by FinTech. The process of traditional lending involves a lot of paperwork, physical verification, and lengthy assessment. Technology-based lending can leverage on digitally available data, automated processes, alternative data and algorithmic assessment to aid quick decision. It can be especially beneficial for small companies, or for individuals with no traditional credit histories.

In a world where technology plays an increasingly significant role in the delivery of credit, the RBI's Public Tech Platform for Frictionless Credit signals this trend. The purpose of this initiative was to make the provision of credit to the people more effective, cost effective, timely and rule based. In this regard, (System Health) FinTech can help lower transactional costs and increase access to credit.

Insurance and investment services are also undergoing a transformation due to technology. Digital insurance apps streamline comparison and buying, digital investment apps make investment products and information accessible to common customers. The Account Aggregator infrastructure can be used to enable consent-based sharing of financial information and can enhance financial decision-making.

However, digital lending needs to be well regulated. Automated decisions may reinforce underlying data gaps and fast access to credit can pose repayment challenges if customers aren't aware of the costs and obligations. Transparency about interest and fees, data usage, repayment plans and grievance procedures is therefore essential for responsible FinTech.

Problems and Projections

FinTech pose various risks, even with its benefits. One of the most vital is cybersecurity. With more and more financial transactions forging a digital path, attacks, phishing, identity theft, account takeover and fraudulent transactions can erode the confidence of the public. Another significant worry is data privacy, particularly given the reliance on

personal and transactional data for digital financial services.

Innovation and regulation must therefore go hand in hand. The need to understand the regulatory concerns related to the growing FinTech ecosystem led to the formation of the Working Group on FinTech and Digital Banking by the RBI. Other more recent papers also name regulation, risk, and bank-FinTech relations as ongoing research topics. (ScienceDirect)

The digital divide is another challenge. Technological advancements in the financial system can inadvertently leave behind those who aren't confident in online transactions, don't have digital skills, or don't have a smartphone or reliable internet connection. The answer isn't to decelerate technological progress, it's to ensure that digital transformation is more inclusive.

Hence, the future of Indian FinTech will largely hinge on co-innovation between technology firms, public digital infrastructure, banks, and regulators. The future of financial services may look different with the advent of artificial intelligence, open banking, account aggregation, embedded finance, blockchain applications, digital currencies, and sophisticated fraud-detection solutions. But technological progress should be related to fiscal sustainability, consumer protection, transparency, and to social responsibility.

Conclusion

In India, the FinTech sector is emerging as a powerful force for the transformation of banking and financial services. It impacts not just on digital payment, but also on customer service, financial inclusion, lending, risk management, investment, insurance, and banking. The ability of technology to build financial infrastructure that can manage transactions on a very big scale is evident in the rapid growth of UPI. (Technological access) Meanwhile, evidence indicates that when it comes to financial inclusion, the technology does not automatically create meaningful financial inclusion. The digital literacy, connectivity, trust, affordability, and protection of customers are still significant.

The connection between banks and FinTech companies can thus not only be seen as a competition between traditional financial institutions and new technology companies. More and more, the opposing sides are able to bring distinct skills to the table. Banks bring their regulatory expertise, customer relationships, financial infrastructure, and institutional trust along with them, whereas FinTech companies can offer technological innovation, flexible platforms, data-driven solutions, and fresh business models.

Balancing it is imperative for Indian FinTech's sustainable development. It is desirable that innovation be encouraged but that it takes place within effective regulatory and ethical constraints. The key elements to include are robust cybersecurity, clear data usage practices, responsible digital lending, financial literacy initiatives, user-friendly complaints procedures, and inclusive digital systems. While Technological advancements can play a pivotal role in the modernization of the Indian financial landscape, the true impact of FinTech on the Indian financial system will rely on the ability to integrate this technology with responsible governance and meaningful accessibility.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper.

Works Cited

1. Arner, Douglas W., Janos Barberis and Ross P. Buckley. A new paradigm of post-crisis evolution of Fintech? Georgetown Journal of International Law 47 (2016), 47(4). 1271–1319.
2. Financial Inclusion in the Digital Banking Age: Lessons from Rural India, Cnaan, Ram A., et al. Journal of Social Policy, vol. 52, no. 3, 2023, pp. 520–541. (Cambridge)
3. Choudhary, Priya and M. Thenmozhi. Financial Sector and Fintech: ADO Analysis and Future Research Agenda.” The 2024 volume of International Review of Financial Analysis, number 93, 103201. (ScienceDirect)
4. Anandita Ghosh and Lalitagauri Kulkarni. A Qualitative Analysis of “Unleashing the Potential of the Indian Fintech for Financial Inclusion.” Finance India, vol. 11, no. 1, 2025. (Sage Journals)
5. D. Gomber, Peter, Robert J. Kauffman, Chris Parker, and Bruce W. Weber. “What is the Fintech Revolution? Decoding the drivers of innovation, disruption and transformation in

financial services." This paper was published in the Journal of Management Information Systems, 2018, 35(1): 49-84. 220–265.
6. Gomber, Peter, Jascha-Alexander Koch and Michael Siering. Digital Finance and FinTech: Current Research and Future Research Directions." Journal of Business Economics, Volume 87, 2017, pages 1003-1017. 537–580.
7. Kou, Mingting, Yuanqi Yang, and Kaihua Chen. Past and future trends in financial technology research. What proportion of the global population is in debt?How many people across the world are in debt? 162–181. (ScienceDirect)
8. Lee and Yong Jae Shin are both In. Fintech: Ecosystem, Business Models, Investment Decisions, and Challenges." Business Horizons, vol. 61, no. 1, 2018, pp. 35–46.
9. Mishra, Vikas and others, The Impact of Fintech and Digital Financial Services on Financial Inclusion in India. This is an article from Journal of Risk and Financial Management, Vol. 16, No. 2, 2023. (MDPI)
10. Pandey, Dharen Kumar, et al. "Mapping the Landscape of FinTech in Banking and Finance: A Bibliometric Review." 2024, Research in International Business and Finance, article 102116, vol. 67. (ScienceDirect)
11. Puschmann, Thomas. "Fintech." Business & Information Systems Engineering, 59(1):2017, pp. 69–76.
12. The Reserve Bank of India. Annual Report 2024–25. The RBI is scheduled to publish its policy announcement on currency in 2025. It is an anagram of the term (Reserve Bank of India).
13. The Reserve Bank of India (RBI). Report of the Working Group on FinTech and Digital Banking. Reserve Bank of India, 2018.
14. Thakor, Anjan V. "Fintech and Banking: What Do We Know?" Journal of Financial Intermediation, 2020, vol. 41, article 100833. (ScienceDirect)
15. Vives, Xavier. The title of the paper is Digital Disruption in Banking. Financial Economics, Annual Review of (2019) 11: 243–272.
16. World Bank. Global Findex Database 2025: Connectivity and Financial Inclusion in the Digital Economy. World Bank, 2025. (World Bank)
17. Ercan, Serkan, et al. "Digital Transformation and the Emergence of the Fintech Sector: Systematic Literature Review." Digital Business, vol. 2, no. 2, 2022, article 100028. (ScienceDirect)
18. Kajol, K., Ranjit Singh and Justin Paul. Adoption of Digital Financial Transactions: A Review of Literature and Future Research Agenda." Technological Forecasting and Social Change, 2022, 184, 121991. (ScienceDirect)