

Fintech in banking sector: challenges and opportunities

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Abstract:

The advent of technology has profoundly impacted various industries, including the banking sector. By harnessing technological advancements, businesses can significantly enhance productivity and performance. In the banking sector, technology plays a pivotal role in facilitating seamless financial transactions and minimizing operational costs.

In today's digital era, technology has become an indispensable part of daily life, with individuals increasingly relying on digital platforms to manage their financial transactions. Moreover, technology has been instrumental in promoting financial inclusion, thereby bridging the gap between underserved populations and traditional banking services.

The COVID-19 pandemic has further accelerated the adoption of digital technologies, as social distancing measures have necessitated a shift towards online transactions. This study aims to conduct a comprehensive examination of the fintech landscape within the banking industry, highlighting both the obstacles and prospects that arise from its integration. Fintech companies are driven by innovation, adopting novel strategies to penetrate the financial services market. Meanwhile, traditional banks have begun to prepare for competition in the digital age, formulating strategies such as investing in software, hardware, and financial technology companies to remain competitive.

Keywords:

Fintech, AI, Block chain, ML (Machine language), ECF (Equity Crowdfunding).

Introduction:

The strategic use of technology to improve the provision of financial services is known as financial technology, or fintech. The goal of this creative strategy is to streamline financial procedures so they are more effective, accessible, and user-friendly. The wide range of digital tools, platforms, and solutions that make up fintech are all intended to transform financial transactions. A wide range of financial activities, such as banking services, investment opportunities, lending facilities, payment systems, insurance products, and personal financial management, are intended to be made easier, better, and more accessible through these developments.

The fintech industry is poised for unprecedented growth, with projections indicating that the global market will reach a staggering \$305 billion by 2025. India is expected to emerge as a dominant player, becoming the third-largest fintech market worldwide. The country's fintech

industry, valued at \$50 billion in 2021, is anticipated to experience a threefold increase, reaching \$150 billion.

TOP FINTECH COMPANIES IN INDIA

Ranking	Company Name	Business Category	City	Total Funding
1.	Paytm	Mobile wallet, E-commerce Platform and Payment bank	Noida	\$890M
2.	Mobikwik	Mobile wallet, recharge ,bill payments	Gurgaon	\$86.8M
3.	Bankbazaar	Online marketplace providing customized rate quotes on loan and insurance projects	Chennai	\$80M
4.	Policybazaar	Leading online insurance aggregator in india	Gurgaon	\$69.6M
5.	FINO PayTech	Financial inclusion technology provider	Mumbai	\$65M
6.	ItzCash	Multi purpose prepaid cash card	Mumbai	\$50.6M
7.	Capital Float	Online lending platform for small businesses	Bangalore	\$42M
8.	Mswipe	Pos terminals for accepting card	Mumbai	\$35 M

		payments		
9.	Ezetap	Payment device marker	Bangalore	\$35M
10.	Citrus Pay	Payment gateway and Mobile wallet	Mumbai	\$34.5M

Source:Tracxn.(June06,2016) India's 50 Most well Funded Fintech Companies.

Litrature Review:

The fintech sector has introduced innovative digital services and models to the banking industry, encompassing a wide range of offerings such as digital payment systems, online investment pplatforms, and digital insurance services. Moreover, emerging technologies like blockchain and artificial intelligence are being leveraged by financial institutions to enhance their service delivery and operational efficiency.

The COVID-19 pandemic has created new avenues for collaboration between fintech firms and traditional banks, driving the latter to adopt digital solutions to remain competitive in a rapidly evolving market. As a result, financial institutions are continually adapting and integrating digital products into their operations.

Li et al. (2021) Conducted a study which reveals that The adoption of fintech innovations by banking institutions can significantly cut down operational expenses and boost overall efficiency, ultimately fostering a more cautious and risk-averse strategy.

(2023)Amit Shrivastava,Ajay Mishra,pooja Talreja conducted research on ‘An Analysis of the role of ICT in Digitalisation of Banking Financial Services & Insurance Sector.’The research States that despite the modernization and technological advancements, AI-powered Fintech can tackle complex problems but a gap remains that still Fintech toos can bridge.

(2023).Ddepa pillai,Ardhendu Shekhar Singh,Trupti Bhosale,Adesh Doifode, conducted Research on ‘A Perspective On The Application Of Fintech as a Gateway for Financial Literacy.’The research States that AI-driven fintech solutions are capable of addressing complex financial challenges while offering flexible and adaptive support.Despite ongoing efforts to expand fintech adoption in emerging nations and advancements in digital literacy and financial inclusion, a gap still exists—one that fintech tools have the potential to bridge.

(2024)Rahul Singh Gautam,Mobashshir Siddiqui ,Nishant Panda,Shailesh Rastogi,Ravi Teja Gannamaraju conducted research on ‘Digitalization of Financial Services and its impact on Sustainable Development Goals in India.’The results show a significant positive impact of digital financial services on the Sustainable Development Goals (SDGs).However, the study underscores challenges in financial literacy and infrastructure that the government must address to enhance the effective delivery of digital services.

Research Gap in literature on adoption of Fintech in banking sector :

1. More studies are needed on how **organizational culture**, leadership, and employee resistance affect Fintech implementation.
2. Most research is focused on developed countries (e.g., the US, UK, EU). There's a lack of empirical studies on how Fintech is adopted in developing countries (e.g., regulatory, infrastructural, and cultural challenges) and their impact on India's Financial system and economy.

Objectives of the study

1. To assess the challenges associated with Fintech in banking sector .
2. To analyse the possible solutions for the transformation of a financial sector in the context of digitalisation .
3. Summarise the future trends in the digital transformation of the banking sector.

Research Methodology:

Research Design

Data Collection:

The facts and figures for the study has been collected from secondary sources and data is also presented in the form of tables and graphs.

Sources of secondary data:

The research relied on a comprehensive literature review analysis to acquire secondary data. This comprehensive analysis included scholarly publications, reports, news, magazines related website and important books about financial technology in banking sector. The literature research sought to discover and synthesize existing information and insights into the opportunities and challenges of digital transformation in banking sector

Fintech in banks: Opportunities and benefits

Extensive research and specialized reports have highlighted the vast opportunities and benefits that fintech presents for the financial industry, encompassing multiple facets such as consumer and investor protection, market integrity, competition, financial inclusion, and international coordination. According to prominent global reports and studies, the primary opportunities afforded by fintech can be summarized as follows:

1. Enhanced access to capital:

Peer-to-peer (P2P) lending and equity crowdfunding (ECF) platforms have emerged as vital channels for providing credit to borrowers, particularly small and medium-sized enterprises (SMEs), that lack access to traditional bank loans, thereby opening up new avenues for equity financing.

The Reserve Bank of India has designated the Fintech Association for Consumer Empowerment (FACE) as a Self-Regulatory Organisation in the FinTech Sector. The RBI received three

applications, including FACE, for this recognition, and one application has been returned for resubmission. The governor indicated that more such organisations could be approved in the future.

2.Better and more tailored banking services:

The collaboration between banks and fintech firms can lead to the development of more sophisticated and personalized banking services. By leveraging the specialized expertise of fintech companies, banks can enhance their traditional offerings, making them more cost-effective and flexible.

3.More Economic:

Another significant advantage of fintech is its potential to reduce costs. Fintech firms can offer lower transaction costs and faster banking services, enabling speedier transfers and payments at a lower cost. This is particularly evident in cross-border transactions, where fintech companies can facilitate faster and more affordable services. Furthermore, the implementation of blockchain technologies has the potential to minimize counterparty and settlement risks, ultimately leading to near-instantaneous settlement cycles.

4.Security improvement:

One of the main innovations of FinTech is that the blockchain is made more secure by encrypting both the blocks and the connections between them. Furthermore, with current technology, it is more difficult to attack each node in a blockchain than it is to attack a central database. FinTech platforms also offer a number of ways to safeguard privacy and stop information from leaking.

5.Opportunities for Collaboration:

To stay competitive, banks are encouraged to collaborate with FinTech companies. These partnerships can foster the development of innovative banking products and services, enabling banks to provide more efficient, cost-effective services through integrated platforms.

6.Increased Innovation and Competitiveness:

Banks can quickly develop and launch innovative financial products like digital wallets, and P2P lending platforms. Partnerships and Collaborations with fintech startups can bring agility and innovation to traditional banks.

6.Financial Inclusion: Fintech enables financial institutions to reach underserved or unbanked populations, especially in remote areas, by offering low-cost banking services through mobile phones or internet-based platforms.

Banks linked to Top Digital Payment System In India as of May 2024

Sr.No.	Payment System	No.of Banks linked
1	Unified payments Interface(UPI)	598

2	Rupay	1254
3	Immediate payment Service (IPS)	871
4	National Automated Clearing House (NACH)	1360
5	National Financial Swith(NFS)	1304
6	Aadhaar Enabled Payment System(AEPS)	149
7	National Electronic Toll Collection (NETC)	38

Source: National payment Corporation of India(NPCI),Accessed on 6 June 2024

7. Robo-Advisors:

banks can integrate white-labeled robo-advisory services to provide customers with tailored investment guidance and a more refined user experience. Fintech innovations in robo-advisors have made wealth management services more affordable and accessible, allowing customers to receive financial advice and portfolio management without the high fees associated with traditional financial advisors.

8. Lending and Credit Scoring:

Fintech solutions provide alternative credit scoring models based on non-traditional data (e.g., social media activity, transaction history) for lending decisions. This opens up access to credit for underserved populations who may not have traditional credit histories.

In essence, banks must embrace collaboration and innovation to stay relevant in an increasingly FinTech-driven market. This approach not only mitigates the risk of losing customers to FinTechs but also opens new avenues for growth and improved customer experience.

Fintech in banks:

New Challenges and solutions

Fintech in banking has transformed the industry by introducing innovative solutions, but it has also created new challenges. Here's an overview of some key challenges and corresponding solutions in the context of fintech in banking:

1. **Regulatory compliance:** Fintech companies often face difficulties navigating complex and ever-changing regulatory frameworks across different countries. Traditional banks must also adapt to ensure compliance with stringent laws related to money laundering, data protection, and financial transparency.

.There are various methods to satisfy this challenge.

- Collaboration between fintech firms and regulators can foster the development of clear and consistent guidelines. Additionally, adopting RegTech (Regulatory Technology) can help automate compliance tasks and ensure up-to-date adherence to regulations.
- Consult a legal advisor for advice.

2. The technical expertise gap in banking:

Most banks and other financial companies rely on legacy software or are unable to innovate in mobile banking. This is a big concern because their apps are not user friendly and intuitive. While the race is still long, we can continue to watch the emphasis on providing a better user experience in Web 3.

Any mobile financial app must-have the following features:

- A top-notch UI and UX
- Viz: Data visualization in great detail
- QR-code payments
- NFC support

3.Sustaining user engagement:

Retaining users is one of the most widely occurred fintech problems. Poor retention equals fewer users, which translates into less money.

You can increase user retention by delivering a better experience. Here are some examples:

- A system of gamification and rewards
- Custom push recommendations
- User-friendly UI(user interfaces)/UX(user experiences)

4.Cybersecurity Risks: With the integration of advanced technologies like AI, blockchain, and cloud computing, banks face increasing cybersecurity threats. Data breaches, fraud, and hacking attacks are more prevalent as financial institutions handle sensitive customer information. These threats can be handled by following ways.

- AI and Machine Learning (ML): These technologies can be used for real-time monitoring of transactions to detect fraudulent activities and identify vulnerabilities in security systems.
- Enhanced Encryption: Improved encryption protocols and multi-factor authentication (MFA) can further secure transactions and data storage.
- Blockchain: Blockchain's decentralized nature helps protect data integrity and reduce the risk of data manipulation

5. Regulatory Compliance: As fintech evolves rapidly, regulatory bodies struggle to keep pace with the innovations. Compliance with local and international regulations (e.g., GDPR, PSD2) becomes difficult, and banks may face penalties for non-compliance.

This challenge has the following solution :

- RegTech Solutions: Technologies designed to help institutions comply with regulations can automate compliance processes, reduce errors, and lower the cost of compliance. AI-driven RegTech tools can monitor transactions and ensure adherence to regulatory requirements.

- Collaboration with Regulators: Many fintech companies work closely with regulators to ensure that the innovation aligns with legal frameworks. By providing clarity, regulators and fintech firms can ensure safer adoption of fintech innovations.

6. Integration with Legacy Systems: Banks often operate on outdated legacy systems that are not easily compatible with new fintech solutions. This integration can be costly, time-consuming, and complex.

- API-based Integration: Open banking APIs allow third-party fintech providers to seamlessly integrate their services with banks' legacy systems without disrupting day-to-day operations.
- Cloud Computing: By migrating some services to the cloud, banks can modernize their infrastructure incrementally, allowing them to incorporate new fintech solutions while maintaining some legacy systems.

7. Customer Trust and Adoption: Traditional banks have built a strong reputation over decades. Fintech innovations, while providing convenience and efficiency, can face skepticism from customers due to concerns about security, reliability, and trust.

- Education and Transparency: Banks and fintech companies need to educate consumers about the security and benefits of new technologies. Transparency in how customer data is handled and protected is essential for fostering trust.
- User-friendly Interfaces: Simplified user experiences (UX) and intuitive platforms can encourage more users to adopt fintech services. Easy access to customer support is also important.

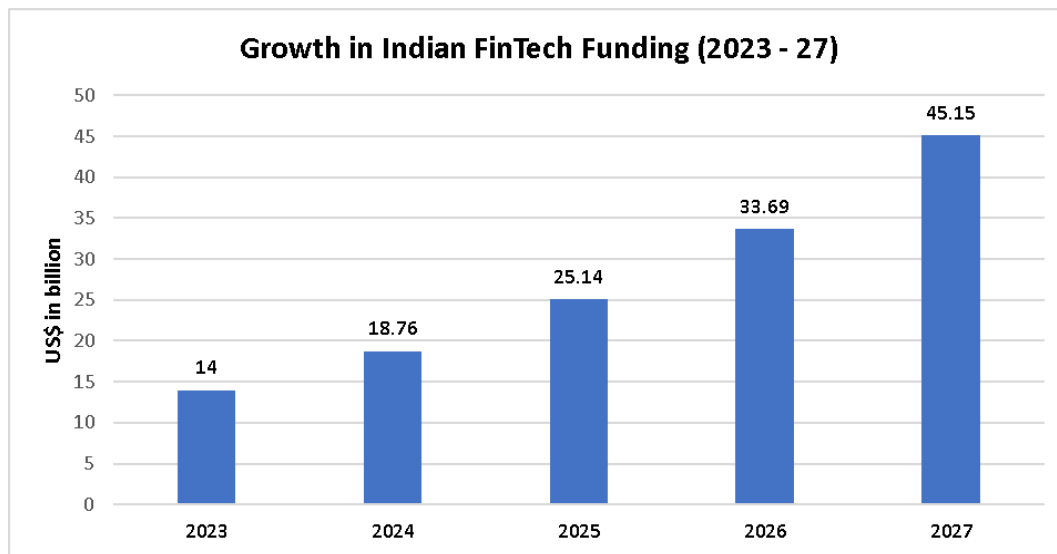
9. . Services Tailored To Individual Needs: For a long time, personalized services have been a vital part of how we provide banking services. But these days, personalization entails talking to a user at the right time, at their right preferred channel, with a satisfactory solution to their proper needs. Additionally, clients are ready to embrace Fintech as a financial wellbeing influencer. Some users may get lost within the panic of too many options, and quality personalization gives them what they are looking for in a limitation of effective options.

Future perspective:

- linking with the Aadhaar card, eKYC, UPI and BHIM, the financial sector in India was reoriented. Following the banning of the 500 and 1000 notes, it was said that there was an increase of up to 22% in digital transactions and 435% more traffic in Indian FinTech start-ups like PayTM were reported onto their websites and Apps. This allows me to go ahead to the growing FinTech start-ups in India as they have a lot of scope.

- According to Industry reports, India's Fintech market is projected to achieve a valuation of \$1 trillion by 2030, supported by exponential growth in digital payments and lending. With over 2,000 fintech startups, India has become a hub for innovation, ranking among the top three fintech ecosystems globally. Digital payments will continue to lead, with transactions exceeding \$10 trillion annually, while segments like insuretech, regtech, and wealthtech will scale rapidly.

- Government policies for start-ups have benefited Digital Finance companies. Setting up a FinTech start-up has also been simplified by the Reserve Bank of India. The government is also funding start-ups to the tune of 1 crore. There has been acceptance of the digital currency for personal and business transactions.
- Artificial Intelligence (AI) and machine learning will become integral in banking operations. These technologies can optimize customer service (e.g., through chatbots), enhance fraud detection, and provide personalized financial advice. AI-driven decision-making can improve credit scoring, risk management, and predictive analytics.



Source: www.dartconsulting.co.in

Limitations Of The Study:

1. The rapid pace at which technology is developing implies that study findings might be rendered obsolete very fast.
2. Data from several sources might range in obsolete and incomplete, which might result in incorrect conclusions.
3. Financial Services Digitalisation includes a wide spectrum of technology such as AI, Blockchain and cybersecurity. Researching this issue necessitates a thorough grasp of numerous fields, which might be difficult for researchers who specialize in one area.

conclusion: As the fintech landscape continues to evolve, it is clear that this industry will have a profound impact on the world. The vast potential of fintech remains untapped, and the trends shaping this industry will bring about transformative changes in our lives. The future of fintech holds immense promise for innovation, collaboration, and customer-centric experiences, ultimately giving rise to a more inclusive, efficient, and sustainable financial ecosystem. However, this study shows that banks have already decided to use an innovative strategy with the goal of facing the competition through digitalization, and they are very responsive to the challenges of other institutions. Leading-edge firms, particularly within financial technology,

Banks products/ATM, mobile banking, internet etc are also categorized as innovative services. banking, and e-money. Investment strategy and bank corporate are other bank strategies governance, like bank investment strategy in fintech companies and bank to serve as a monitoring system represented by the board of directors.

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