

# Adoption of Fintech on Digital Banking: Exploring Trends, Prospects and Risk

Dr. Richa Gupta\*

\*Assistant Professor,

D.A.V. P.G. College, Varanasi

**Abstract:** This paper examines the theoretical literature on the development of information and digital technologies in the Indian banking sector. The purpose of this study is to emphasize the function of financial technologies or Fintech in the financial industry, particularly in the banking sector, using information collected from secondary sources on Fintech and Digital Banking. The study reviews the overall idea of Fintech and Digital banking and also the initiatives launched by RBI recently. The published data is used to understand the pattern of fintech and digital banking services in Indian context. This study indicates a direction for Fintech evolution in terms of changing industries and customers. Over the past several years, there has been a significant increase in the usage of fintech in the banking industry. This study gives a thorough review of the new opportunities that FinTech has opened up for the banking industry, as well as the difficulties that may arise throughout the adaptation process.

**Keywords:-** Financial Technology, Digital Banking, Banking services, Digital initiatives, Opportunities and Threats

## I. INTRODUCTION

Globally, the banking industry is now undergoing a possible disruption due to recent advancements in FinTech. A number of variables, including financial globalization, technical development, the need for new business models, and rivalry among service providers in an effort to meet increased consumer expectations, contributed to this transition. The banking industry is moving towards operational innovation as a result of the financial technology industry's fast growth in order to obtain a lasting competitive edge (Zhao et al., 2019).

The word "fintech" refers to the application of technology to a range of financial services. Traditional financial institutions, start-ups, venture investors, and regulators are all involved in fintech (Lee and Shin, 2018). According to Financial Stability Board (FSB) defines Fintech as a "new business models, technologies,

procedures, or products that significantly affect financial markets, institutions, and the provision of financial services". The term "financial technology" refers to a variety of things, from the invention of digital money to double-entry bookkeeping. Fintech firms are designed to compete with and ultimately replace existing traditional financial service providers by being more flexible, catering to an underserved market, or offering quicker and better service (D'Acunto et al., 2019).

### A. Financial Technology (Fintech):

The term "fintech" is not of recent origin. The financial industry, information technology (IT), and innovation are all connected by fintech. The phrase "Fin-Tech" was created by combining the terms "finance" and "technology," and it accurately captures what the acronym truly stands for, which is the advancement of technology and innovation to enhance banking and financial abilities with the most recent technologies. Fin-Tech also refers to the interaction between financial services companies like loans, payments, money transfers, and other banks, and technology like cloud computing and mobile internet. According to (Chenet, al, 2019) Fintech is a process of emerging financial innovation, which has been proved to be valuable yet dangerous in recent evidence that it provides significant value to investors.

### ➤ Fintech Ecosystem:

Fintech ecosystems are groups of businesses that collaborate to accomplish a single objective. This often refers to the creation and acceptance of innovative technologies to enhance or undermine the conventional banking industry in the context of financial services. Additionally, it may imply expanding social inclusion and economic progress for more people globally.

Table 1: Shows the Fintech Ecosystem Components

Clearing and Settlement of Payments	Deposits, Lending and Funding	Investment Management	Provisioning on the market	Risk Assessment and Data Analytics
Distributed cryptocurrency ledger for mobile and internet payments	Decentralized ledger, peer-to-peer lending, crowdfunding, and digital currency	Robotic trading advice for smart contracts	Smart contracts, cloud networking, and e-aggregators	Robotics, artificial intelligence, and big data

Source: World Economic Forum

➤ *Phases of Fintech:*

According to Consumer International (2017) there have been three stages of fintech, and the third stage is what we are presently seeing. The fact that fintech avoids using conventional middlemen when providing financial services

is what drives the current wave of enthusiasm and academic interest.

Following is the phases of Financial Technology.

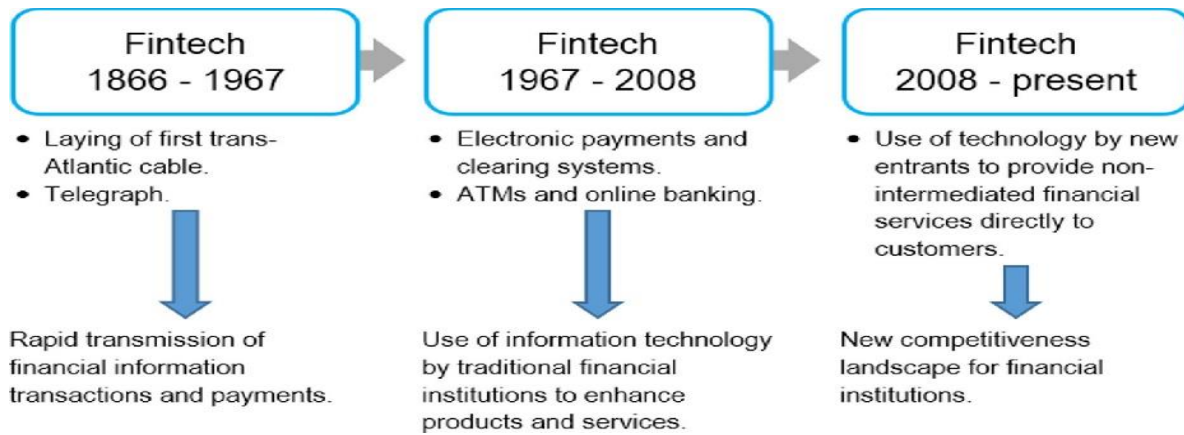


Fig. 1: The three phases of fintech.

Source: Consumers International (2017)

➤ *Fintech Startups:*

The nature of financial transactions has also altered as a result of Indian fintech start-ups. There is no longer a requirement for you to visit banks for such demands because the bulk of payments are now made using online internet banking or other payment apps.

Following table shows the Fintech startups in India which has been categorized into 6 sub categories. Fintech related to payments, lending tech, investment tech, Insurance tech, fintech saas and cryptocurrency.

Table 2: Shows the list of Fintech startups under various segments

Sr. No.	FinTech Startups in India					
	Payments	Lending Tech	Investment Tech	Insurance Tech	Fintech Saas	Cryptocurrency
1	Paytm	Dripic	Scripbox	Digit	Credgenics	Bitbns
2	Cred	Kreditbee	Sanctum Wealth	Policy Bazar	Zeni	Zebpay
3	Zeta	Leapfinance	Smallcase	RenewBuy	PayMate	Coin DCX
4	PhonePe	UNI	Upstox	Turtlemint	Khata Book	Coinswitch Kuber
5	Mobikwik	Capital Float	Dezerv	Loop Health	Shopse	Unocoin
6	Cashfree	CredAvenue	Sentio	Nova Benefits	Unbound	Wazirx

Source : Author’s Compilation

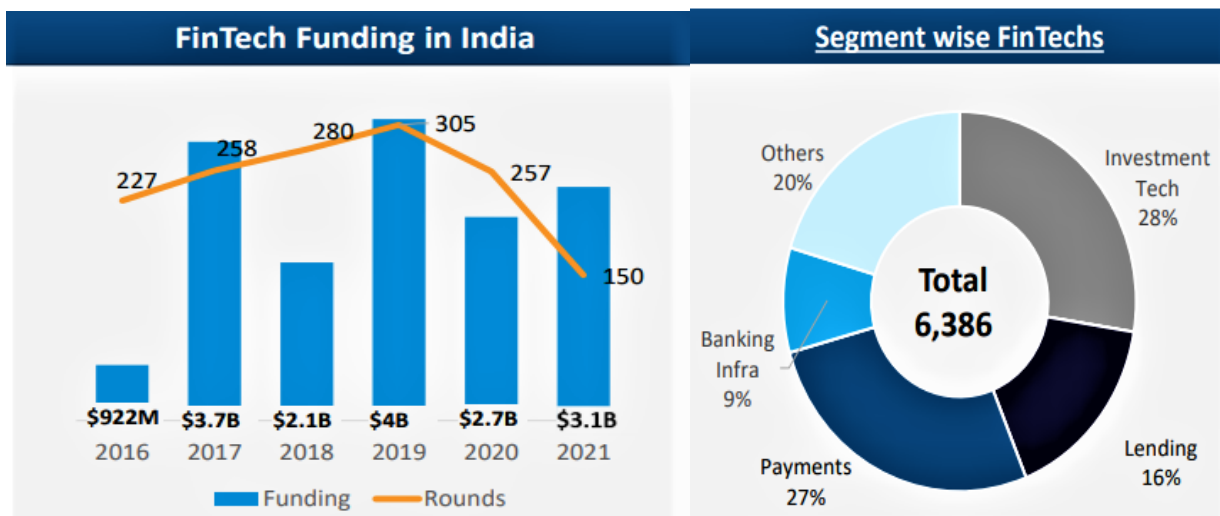


Fig. 2: Market size of India’s Fintech is \$3.1 billion in the year 2021, third largest in world

Source: Economics Times, BFSI

**B. Digital Banking:**

Technology advancements in the banking industry have significant effects on banks' marketing strategies, especially with regard to their Digital Banks (DB) services since they influence how clients utilise them. The financial services sector is revolutionised by information technology, which also gives them the chance to expand their customer base and offer significant advantages for carrying out financial operations (Owusu et al, 2018). People with no bank accounts now have more ways to engage and directly use financial services through mobile phone banking. It provides several practical services, such online bill paying, money transfers, and depositing money without physically going to the local bank (Lenka& Barik, 2018).All services connected to internet banking and financial institutions fall

under the broad category of "digital banking." These services are accessible via the bank's website, a mobile app, or both. Through digital banking, anybody may access their financial services remotely from any location in the globe.

According to Chikoko&Munongo (2015) Digital banking services refer to the use of the internet, mobile devices, and any other electronic mediums as a delivery channel for banking services. This includes both established banking services like balance inquiries, statement printing, transfers to other accounts, and bill payment as well as cutting-edge banking services like electronic bill presentment and payment without having to physically visit a bank.

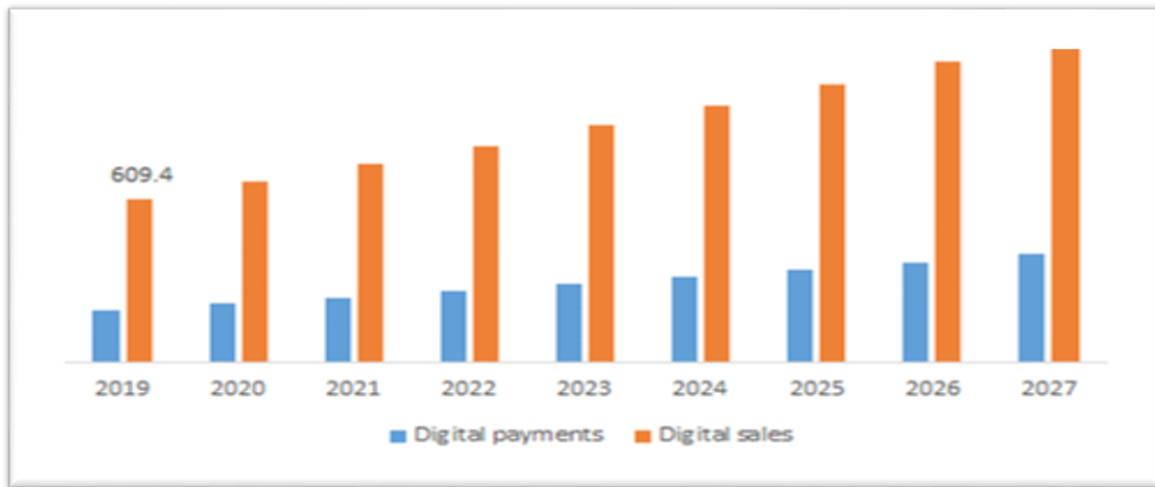
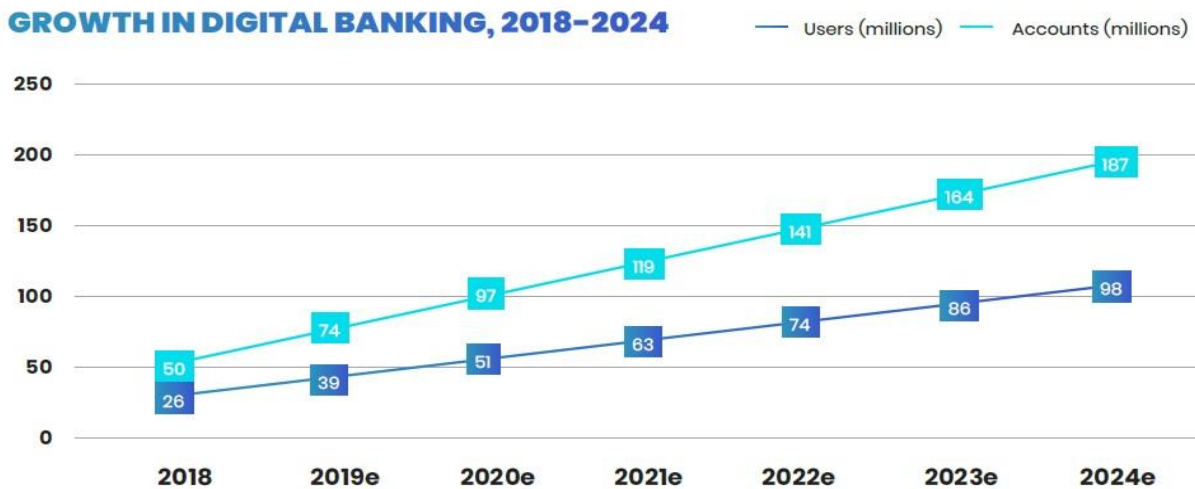


Fig. 3: Graph showing trend of Digital payments and digital sales

Source: Research Dive Analysis

According to the report by Research Dive Analysis, the digital payments and digital sales are projected to significantly increase in the coming years. This is due to the fact that the sector has experience a lot of innovation in the

field of Information Technology. This innovation has lead to more convenience and easy access to the digital payment platforms.



Source: Business Insider

Fig. 4: Shows the growth of Digital Banking over the years

Source: Business Insider

From the above graph, we can interpret that there has been an increasing trend in the growth of digital banking in the last few years. The number of users of digital banking has increased over the years and is projected to experience an upward trend in the coming years. Simultaneously the account holders also shows an increasing trend and is projected to further increase in the coming years.

The various type of digital banking services provided by banks are the use of UPI (Unified Payment Interface), mobile banking, internet banking, mobile wallet etc. According to a report by “National Payment Corporation of India (NPCI)”, the number of UPI transactions from the year 2020 to 2021 has increased with a increasing trends and simultaneously the overall value of the UPI has also increased to a great extend.

Table 3: Shows the number of UPI transactions and their value

Year	UPI transactions	Overall Value
March 2021	2732 million	5,04,886 crore
April 2020	999.6 million	1,51,141 crore

Source: Report by NPCI

C. Key Initiatives launched during the Global Fintech Fest 2022:

In the presence of Biswamohan Mahapatra, Chairman of the National Payments Corporation of India (NPCI), and Nandan Nilekani, Chairman of Infosys and Advisor to the

NPCI, RBI Governor Shaktikanta Das introduced three significant initiatives at the Global Fintech Fest 2022. RuPay Credit Card on UPI, UPI LITE, and Bharat BillPay Cross-Border Bill Payments were launched as a part of initiatives by RBI.



Fig. 5: Initiatives launched during the global fintech fest 2022

Source: NPCI

- RuPay Credit Card on UPI : The Virtual Financial Address (VPA), commonly referred to as a UPI ID, will be linked to RuPay Credit Cards, enabling risk-free and secure financial transactions. The first users of RuPay Credit Cards with UPI and the BHIM App will be those who bank with Punjab National Bank, Union Bank of India, and Indian Bank.
- UPI LITE: Consumers will be able to complete low-value transactions more rapidly because of UPI Lite. Users of the BHIM App who activate UPI Lite will be able to execute low-value transactions almost entirely offline. It is anticipated to reduce the load that debit transactions place on the main banking system, boost transaction success rates, and enhance user experience.
- Bharat BillPay Cross-Border Bill Payments: For people who live outside of India yet own property in India, the governor created the Bharat BillPay Cross-Border Bill Payments, which would make bill payments simpler. NRIs might use the service to cover their Indian relatives' energy, water, and phone costs. Bharat BillPay Cross-Border Bill Payments will be accepted for the first time by Federal Bank in association with the Lulu Exchange in the United Arab Emirates.

II. REVIEW OF LITERATURE

The digital revolution of the banking and financial industries depends on fintech or financial technology. Driving digitization in the banking sector involves the fintech sector. Fintech service providers significantly impact markets with their creative business structures and goods. The following literature review is categorized into three categories.

A. Fintech and digitalization:

Fintech has developed as a result of shifting global value chain drivers that have exposed flaws in banks' present business models. This has helped highlight areas that require change and encouraged adaption of such business models for future growth (Thurber, 2012). The survey asserts that in 20 important worldwide regions where fintech adoption is anticipated to reach 52% globally, fintech adoption is more pronounced at the retail level (Ernst & Young, 2017). According to (Kaur and Dogra, 2019) the top 10 Fintech entrepreneurial projects are investigated based on their goals and objectives, and growth analysis is done according to the source of funding. Finance for fintech firms is increasing, which promotes healthy economic growth. India, which has the largest population and the biggest percentage of unbanked and underbanked people, is a potential market for financial disruption. Disruptive innovation in the shape of fintech is revolutionising the established financial markets. For the past five years, fintech has been expanding in India, and experts predict that it will continue to expand quickly in the next years (Priya and Kanagala, 2019). According to (Vijai, 2019), the digitization of financial transactions is offered by the fintech firm. The sought-after benefits of fintech services result in less time and money spent on operations. In terms of worldwide comparison, India has the fastest-growing fintech services. The finance industry in India will undergo major transformation as a result of the new fintech idea. (Gupta and Agrawal 2021) in their study demonstrate the positive connection between end-user adoption of fintech and the worldwide COVID-19 epidemic. It indicates that the rate of fintech adoption has dramatically grown, indicating more financial inclusion and progress. Demir et al (2022) found



that FinTech decreases income inequality and enhances wellbeing through a crucial channel called financial inclusion, with the positive impact being stronger in high-income nations. **Murinde, Rizopoulos&Zachariadis (2022)** in their study shows that banks may not be replaced by fintech lenders since banks are creating their own fintech platforms in collaboration with fintech companies. The future of banking will be shaped by global infrastructure, laws, and geopolitical pressures.

#### B. Digital banking and financial services:

**Vishnoi and Bishla (2021)** the UPI system in India enables the elimination of black money, corruption, and the promotion of green transactions. The analysis indicates that it only took India five years to surpass the United States in terms of real-time financial transactions. **Arner et al (2018)** argued that in order to fully utilise FinTech for financial inclusion, a framework that supports infrastructure and an enabling policy and regulatory environment is required. This framework must be built on a solid foundation of digital identification and electronic payment systems. According to **Baghla. A. (2018)** India is moving more quickly towards a cashless society, but it will take a while before that is fully realised. Through government initiatives, commercial institutions are launching e-wallet apps like Paytm, Phonepe, etc. as a complement to the digital payment system. **Joshi and Desai (2017)** After the subsequent demonetization, people's perceptions about digital payments altered, and they were replaced by alternative payment options including NACH, IMPS, UPI, and BHIM (UPI). Consequently, there is a chance that the nation's digital economy may grow in the future. **Khorshid and Ghane (2009)** in their study examines the privacy, security, and trust of consumers were recognised as difficulties resulting from e-banking challenges for bank management, and further study was undertaken on prioritising these challenges. Customers identified reputation of the bank, compliance with rules and regulations, and ease of access as the primary obstacles to the growth of e-banking. **Uppal and Chawla (2009)** Customers of public sector, private, and foreign banks in the Punjabi district of Ludhiana were found to be interested in e-banking services, but they were also struggling with issues like poor knowledge, a bad network, a lack of infrastructure, an inappropriate location, misuse of ATM cards, and difficulties opening accounts. **Sharma and Avasthi (2001)** According to a research, technological advancements will revolutionise how the banking industry operates. The distribution methods used by banks for retail banking have changed as a result of technology. Additionally, it has an effect on bank markets. The report also looked at the problems that the banking sector and its regulator have. **Shukla and Shukla (2011)** said that using e-banking provides a better level of ease for handling accounts, even from a person's bed. However, it still poses threats to one's financial security and private life.

#### C. Fintech and Banking Industry:

**Yudhira (2021)** Banks employ the fintech system known as "digital banking" to address the demands of their consumers by offering services via the use of digital and internet technologies. Digital banking examples include SMS banking, internet banking, phone banking, mobile banking, video banking, and ATMs and EDC/Electronic Data Capture, which are the most well-known to the general public.

**(Kholis, 2018)** Several items that can simplify and expedite financial transactions have been developed as operational advances for the banking sector in Indonesia. One of them is digital banking, which is a service for doing financial business via electronic or digital methods. Services through this facility, independent actions can be taken to gather information, communicate, register, open accounts, conduct banking transactions, and close accounts.

### III. NEED OF THE STUDY

The emergence of financial technology has both benefits and drawbacks for the banking industry. On the one hand, it offers ways to improve the services that banks offer to their clients, with chatbots enhancing customer experience, mobile apps giving clients a real-time view of their bank accounts, and machine learning securing against fraud. On the other hand, fintech is putting traditional banking and financial services under intense pressure from all sides, endangering the long-term viability of some of our most recognisable institutions. Fintech aids in resource management and finding useful applications for financial accounting data. Banks and other financial organisations that frequently need to maintain high operational efficiency across many industries benefit greatly from fintech.

### IV. OBJECTIVE OF THE STUDY

- To understand the concept of Fintech and digital banking and its emergence in the today's digitalized world.
- To analyse and interpret the trends associated with digital financial services
- To explore various opportunities and threats of Financial Technology (Fintech) on the Banking and financial services.

### V. RESEARCH METHODOLOGY

The research design used in our study is exploratory cum descriptive research. The data collection used in our study is from secondary sources collected using annual reports of RBI, NPCL, articles, research papers, magazines and websites. For the study of trend in financial services, data has been collected for 5 years to interpret the results.

## VI. TRENDS OF DIGITAL FINANCIAL SERVICES

Table 4: The Volume and Value of the services like RTGS (Real Time Gross Settlement), NEFT(National Electronic Funds Transfer) and Mobile Banking are stated below:

December month of every year	RTGS (Crores)		NEFT		MOBILE BANKING	
	Volume (Lakhs)	Value (Crore)	No. of transactions (Lakhs)	Amount (Crore)	Volume (Lakh)	Value (Crore)
2022	21503150	13736057.18	4854.8	2981681.2	7465027.275	1991760.73
2021	19278396	12966990.79	3763.4	2724980.1	45286	1359381
2020	16347917	10659120.35	3076.1	2558304.2	25199	899401
2019	13601582	10316936.81	2336.9	1942230.7	14322.09	493143.67
2018	11317114	116423.73	194.8	19570.4	6614.30	277633

Source: RBI Annual Report

(The data is taken for the month of December only including all the types of banks for five years)

• **Interpretation:** The above table shows the digital transactions that occurred in the month of December every year for 5 years. The study depicts that there has been an increasing trend in all the three digital banking. RTGS/NEFT and mobile banking has experienced an

increasing trends in both the volume and value. This shows that the digital transactions gives a favourable results in the digitalization of banking industry. The study analyse a positive relationship of digital transactions in banking industry.

Table 5: The volume and Value of Digital Transaction and credit card transaction

Year	Digital Transactions		Credit Card Transactions	
	No. of transactions (crore)	Value in lakhs crore	Volume (billion)	Value(trillion)
21-22	8840	3021	1.89	7.3
20-21	5554	3000	1.76	6.3
20-19	4572	2953	2.18	7.31
19-18	3134	2482	1.76	6.03
18-17	2071	1962	1.89	4.59

Source: RBI, NPCI

• **Interpretation:** The table above shows the comparison between digital transactions and the credit card transactions for 5year duration. The study clearly shows an upward trend in the no. of digital transactions and the value of digital transaction has increased every year. Whereas the credit card transaction shows an decreasing trend except the year 20-21. The main reason for the downfall in the year 2020-21 is due to the pandemic. Soon after the pandemic, we can observe a rise in the credit card transactions again.

name a few. AI and machine learning are being used by banks in a variety of contexts. The public is most familiar with chatbots, but artificial intelligence also affects back-office operations, product delivery, risk management, marketing, and security. (Truby et al. 2020) New technologies affect how individuals handle and move money and reset customer expectations. A large shift in financial services from traditional banks to neo-banks is referred to as a fintech disruption. Retail banking products and services are directly impacted by a number of developing technologies in the Fintech sector. (KPMG 2019) Although it is still in the early stages of implementation, blockchain is a new financial services technology trend that is revolutionising the financial world as we know it. We choose to concentrate primarily on how blockchain technologies impact banking in our study because of this. Blockchain definitely has a substantial influence on the finance function, and most businesses will progressively incorporate the technology as they anticipate a new operating model for finance, according to a report by KPMG.

## VII. EMERGING TECHNOLOGIES IN BANKING INDUSTRY

(Chonsawat and Sopadang 2020) Emerging technology must have the capacity to completely change a particular market or industry, even if it is neither innovative or revolutionary. This type of technology is used in many industries, from agriculture to education. (Schulte and Liu 2017) Emerging technologies employed in the banking sector include blockchain, cryptocurrencies, AI, IoT, cloud computing, virtual/augmented reality, and e-commerce, to



## Top deals in Indian fintech in 2022

■ Round size (\$ million)

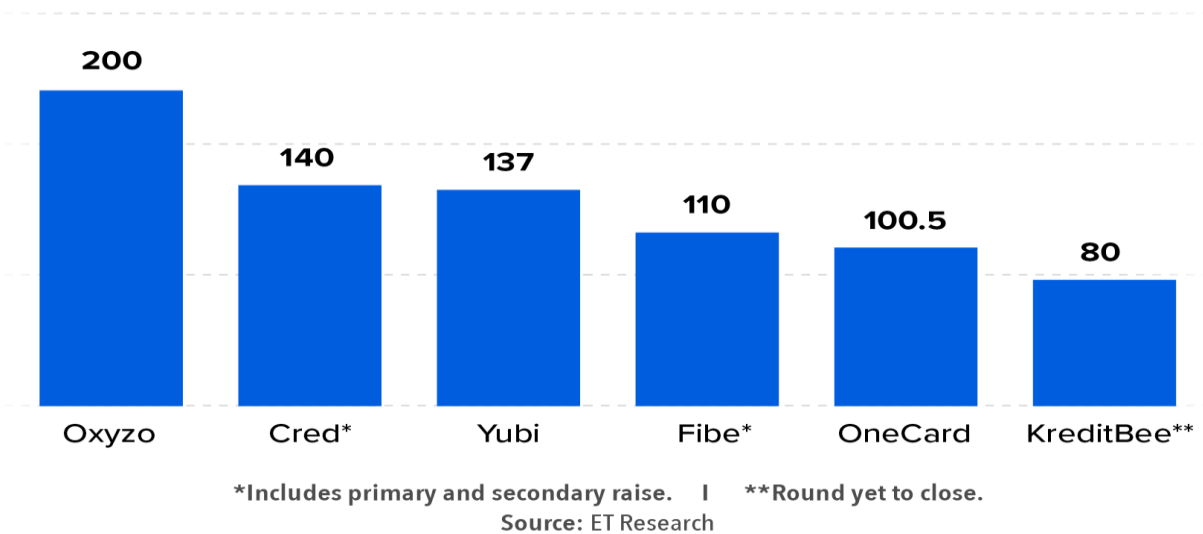


Fig. 6: Top Deals in Indian Fintech in 2022

Source: Economics Times

### VIII. PROSPECTS AND CHALLENGES OF FINTECH FOR BANKING AND FINANCIAL SYSTEMS

Efficiency is one of the several fronts on which FinTech companies, who are seen as a genuine threat to the established banking system, must compete with banks. New technologies like "BlockChain" increase effectiveness (Peters & Panayi, 2016). These advancements are anticipated to help FinTech businesses more since banks are often less inclined to embrace new technology rapidly owing to the regulatory environment and frequently rely on decades IT infrastructure.

#### A. Prospects/ Opportunities:

- Financial Inclusion: People with limited resources now have easier access to financial services because to digital banking. FinTech platforms are changing to firm and executable orders and focusing more on larger-sized deals. Another aspect of this opportunity is the inclusion of new asset classes. For instance, many Distributed Ledger Technologies (DLT) experts point out that one advantage of DLT is the ability to "tokenize" for securitization assets that are expensive to source, transact, and deliver, such as commodities, energy products, works of art, real estate, and private equities, making them available for trading and as collateral.
- Positive impacts on financial stability driven on by enhanced competition: The emergence of new competitors for established banks may eventually cause the market for banking services to become more fragmented and lower the systemic risk posed by businesses with systemic scale.
- The Regulation of Technology (Regtech): Financial institutions can achieve regulatory goals (such as

prudential standards involving reporting and consumer protection) and comply with regulatory requirements with the use of modern, innovative technology. RegTech provides banks with more efficient solutions to enhance their compliance and risk management. It may also be a way to manage regulatory environment change and reduce the expenses associated with fulfilling the necessary standards.

- Upliftment in Security and increased compliance of cloud-based data: Security is included into the blockchain for one of the key breakthroughs in FinTech through encryption of the blocks and the connections between the blocks. With current technology, it is also more difficult to attack every node in a blockchain than it is to attack a central database. FinTech platforms also provide a number of ways to safeguard privacy and stop data leaking.
- Cost benefit using blockchain technology: Fintech companies provide quicker and more affordable financial services. In the case of cross-border transfers, fintech businesses can offer speedier banking services at a cheaper cost. Fintech players may speed up transfers and payments and reduce their expenses. Shortening the settlement cycle from three days to two days has been beneficial for some markets, and blockchain technologies have the potential to result in almost immediate settlement. A distributed ledger using blockchain technology allows for the real-time, chronological, and secure recording and transmission of data (Jani & Shah, 2018).
- Big data and fog computing to provide clients with individualised services:
- Using big data, banks may divide their clients based on their income levels, spending habits, and transactional

behaviours. Using this client segmentation as a foundation, it is possible to create and successfully advertise reasonably customised items that address their demands. Big data analytics is the computer process of gathering and analysing enormous, more diverse datasets to find specific trends (Riahi 2018). Additionally, data obtained from mobile devices is collected and analysed via fog computing technology. When offering personalised customer support and product suggestions, these technologies use predictive systems (Nieves et.al 2019)

**B. Challenges/ Threats:**

FinTech has advantages and possibilities, but it also comes with a number of potential hazards.

- Volatility of bank financing and liquidity risk: Customers now have the option to automatically switch between several savings accounts or mutual funds to get a better return thanks to the usage of modern technologies and aggregators. While this can boost productivity, it might also diminish consumer loyalty and make deposits more erratic. This might consequently expose banks to greater liquidity risk.
- Concerning data privacy compliance risk: With the expansion of big data, more outsourcing as a result of partnerships with fintech companies, and the ensuing rivalry for control of the customer relationship, the danger of not adhering to data privacy regulations may rise. This danger might be increased by the availability of platforms run by unregistered organisations.
- Increased challenges in fulfilling compliance duties, particularly those related to anti-money laundering and combating the financing of terrorism: Less transparency on how transactions are carried out and who is

responsible for compliance may come from the product or service's increased level of automation and spread among banks and fintech firms. The risk of engaging in broad solicitation/unlicensed operations is now greater than it was previously. Furthermore, compared to securities on the public markets, many FinTech platforms could lack standardisation and offer less information.

- Cyber Threat: The financial system may become more exposed to cyber threats and expose substantial amounts of sensitive data to possible breaches if it relies more heavily on application programming interfaces (APIs), cloud computing, and other emerging technologies enabling higher interconnection.
- Conflict for market share: Risks to the profitability of individual banks are increased by the possibility of fast unbundling of bank services to non-bank fintech or BigTech companies. If new entrants are able to exploit innovation more effectively and produce less priced services that better satisfy client expectations, existing financial institutions are at risk of losing a significant portion of their market share or profit margin.
- Regulation Risk: Since many of the FinTech solutions, such as blockchain, crowdsourcing, crypto currencies, etc., are new to the banking industry, central banks around the world have been attempting to keep up with these innovations by providing them with the necessary regulations; however, there is a risk in the event that a regulation is delayed or does not exist. Since P2P lending is not technically lending, lending restrictions that are often based on the capital of financial institutions may not apply to FinTech firms who perform it. A P2P lending service connects lenders and borrowers online (Lee &Shin, 2018)

Table 6: Shows the impact of Fintech on bank and banking system

	<b>Opportunities</b>	<b>Threats</b>
Impact of Fintech on Bank and Banking System	<ul style="list-style-type: none"> <li>• Financial Inclusion</li> <li>• Positive impacts on financial stability</li> <li>• Regulation Technology (Regtech)</li> <li>• Upliftment in Security</li> <li>• Cost benefit using block chain technology</li> <li>• Big data and fog computing to provide clients with individualized services</li> </ul>	<ul style="list-style-type: none"> <li>• Volatility of bank financing and liquidity risk:</li> <li>• Data privacy compliance risk</li> <li>• challenges in fulfilling compliance duties related to anti money laundering</li> <li>• Cyber Threat</li> <li>• Conflict for market share</li> <li>• Regulation Risk</li> </ul>

Source : Author Compilation

**IX. THE FUTURE OF FINTECH AND DIGITAL BANKING IN INDIA**

Sironi (2016) in a book contrasted the futures of traditional banking with those of other Fintech-based businesses. Currently, 87 percent of people still pay in cash and 40% of the population lacks access to financial services. India might so serve as a breeding ground for new financial technologies start-ups in technology. According to predictions, mobile usage will rise from 64% in 2018 to 70% in 2019, and increased Internet usage will help Fintech in India grow. Ahern (2018) in his study examines that Crowdfunding makes it quick and simple to raise money from donors all around the world. Finding startup resources

has become quicker as a result of it, meeting times have gone from months to weeks. The latest statistics from the RBI show that there were 1.06 billion digital transactions in 2017, an increase of 6.05 percent. (Ravindra and Tejashwini 2022) in their study highlighted the role of fintech in digital banking. The study highlighted that the government and regulatory bodies' initiatives, all of which are keen to go above and beyond to assist growth in the banking industry, also contribute to the Fintech revolution. To advance fintech in India, banks and financial institutions must work successfully with creative businesses.



## X. CONCLUSION

In India, a paradigm shift from banking to a relatively young industry has been welcomed in by fintech. The growth of fintech has created new opportunities for future results. Since they may aid in the development of businesses and provide owners a fresh perspective on how to compete in the market today, entrepreneurs should be more informed of the newest financial technology possibilities and breakthroughs. In India, a lot of Fintech start-ups are emerging throughout the range of financial services. New innovative financial technology has overcome the old financial practises by increasing financial stability, assuring effective financial service delivery, and maintaining competitiveness in the business (Philippon, 2017). When it comes to incorporating technology into the banking industry, fintech has a wide range of prospects to offer. This may significantly boost a bank's operational effectiveness, help it to stay competitive, preserve its sustainability, develop new goods and services, and raise customer satisfaction levels. The banks must make a significant effort to meet the obstacles and surmount the roadblocks in order to successfully execute this.

## REFERENCES

- [1.] Ahern, D. M. (2018). Regulatory arbitrage in a FinTech world: devising an optimal EU regulatory response to crowdlending.
- [2.] Al-Ajlouni, A. (2018, April). Financial technology in banking industry: Challenges and opportunities. In *e International Conference on Economics and Administrative Sciences ICEAS2018*.
- [3.] Baghla, A. (2018). A study on the future of digital payments in India. *International Journal of Research and Analytical Reviews*, 5(4), 85-89.
- [4.] Chen, M. A., Wu, Q., & Yang, B. (2019). How valuable is FinTech innovation?. *The Review of Financial Studies*, 32(5), 2062-2106.
- [5.] Chitungo, S. K., & Munongo, S. (2013). Extending the technology acceptance model to mobile banking adoption in rural Zimbabwe. *Journal of business administration and education*, 3(1).
- [6.] Chonsawat, N., & Sopadang, A. (2020). Defining SMEs' 4.0 readiness indicators. *Applied sciences*, 10(24), 8998.
- [7.] D'Acunto, F., Hoang, D., Paloviita, M., & Weber, M. (2019, May). Cognitive abilities and inflation expectations. In *AEA Papers and Proceedings* (Vol. 109, pp. 562-566). 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association.
- [8.] Demir, A., Pesqué-Cela, V., Altunbas, Y., & Murinde, V. (2022). Fintech, financial inclusion and income inequality: a quantile regression approach. *The European Journal of Finance*, 28(1), 86-107.
- [9.] Ernst & Young (2016) UK FinTech on the cutting edge—an evaluation of the international
- [10.] Gupta, S., & Agrawal, A. (2021). Analytical study of fintech in India: Pre & Post Pandemic covid-19. *Indian Journal of Economics and Business*, 20(3), 33-71.
- [11.] Hernández-Nieves, E., Hernández, G., Gil-González, A. B., Rodríguez-González, S., & Corchado, J. M. (2020). Fog computing architecture for personalized recommendation of banking products. *Expert Systems with Applications*, 140, 112900.
- [12.] Joshi, M. (2017). Digital Payment System: A Feat Forward of India. *Research Dimension (ISSN: 2249-3867)*.
- [13.] Joshi, M. C., & Desai, J. N. (2017). Digital Payment System: Before, During and After Demonetisation. *Research Dimension*, 2(5), 18-28.
- [14.] Kaur, J., & Dogra, M. (2019). FinTech companies in India: a study of growth analysis. *Abhigyan*, 37(1), 21.
- [15.] KC, M. R., & KC, M. T. *International Journal of Engineering Technology Research & Management*.
- [16.] Kholis, N. (2018). Perbankandalam era baru digital. *Economicus*, 12(1), 80-88.
- [17.] Khorshid, S., & Ghane, H. (2009). Ranking the challenges of e-banking with the help of AHP model. *Journal of Modiriyatesanatiad University of Sanandaj*, 4(9), 89-106.
- [18.] KPMG. 2019. Blockchain and the Future of Finance. Available online:
- [19.] Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business horizons*, 61(1), 35-46.
- [20.] Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, Business Models, Investment Decisions, and Challenges. *Business Horizons*, 61(1), 35-46.
- [21.] Lenka, S. K., & Barik, R. (2018). Has expansion of mobile phone and internet use spurred financial inclusion in the SAARC countries?. *Financial Innovation*, 4(1), 1-19.
- [22.] Murinde, V., Rizopoulos, E., & Zachariadis, M. (2022). The impact of the FinTech revolution on the future of banking: Opportunities and risks. *International Review of Financial Analysis*, 81, 102103.
- [23.] Owusu Kwateng, K., Osei-Wusu, E. E., & Amanor, K. (2020). Exploring the effect of online banking on bank performance using data envelopment analysis. *Benchmarking: An International Journal*, 27(1), 137-165.
- [24.] Owusu, B., Abiew, N., Ben, J., & Vormawor, C. J. I. J. o. C. A. (2018). Improving Electronic Banking in Ghana using USSD. 975, 8887.
- [25.] Peters, G. W., & Panayi, E. (2016). *Understanding modern banking ledgers through blockchain technologies: Future of transaction processing and smart contracts on the internet of money* (pp. 239-278). Springer International Publishing.
- [26.] Priya, P. K., & Anusha, K. (2019). Fintech issues and challenges in India. *International Journal of Recent Technology and Engineering*, 8(3), 904-908.
- [27.] Riahi, Y., & Riahi, S. (2018). Big data and big data analytics: Concepts, types and technologies. *International Journal of Research and Engineering*, 5(9), 524-528.
- [28.] Schulte, P., & Liu, G. (2017). FinTech is merging with IoT and AI to challenge banks: how entrenched

- interests can prepare. *The Journal of alternative investments*, 20(3), 41-57.
- [29.] Shah, T., & Jani, S. (2018). Applications of blockchain technology in banking & finance. *Parul CUniversity, Vadodara, India*.
- [30.] Sharma, M., & Avasthi, G. P. (2001). Information technology in banking: Challenges for regulators.
- [31.] Shukla, R., & Shukla, P. (2011). E-banking: Problems and Prospects. *International Journal of Management & Business Studies*, 1(1), 23-25.
- [32.] Thurber, K. J. (2012). *Do Not Invent Buggy Whips: Create! Reinvent! Position! Disrupt!*. Digital Systems Press.
- [33.] Truby, J. (2020). Governing artificial intelligence to benefit the UN sustainable development goals. *Sustainable Development*, 28(4), 946-959.
- [34.] Uppal, R. K., & Chawla, R. (2009). Indian banking in competitive age: need to meet customer expectations. (*No Title*).
- [35.] Vijai, C. (2019). FinTech in India—opportunities and challenges. *SAARJ Journal on Banking & Insurance Research (SJBIR) Vol, 8*.
- [36.] Vishnoi, Y. C., & Bishla, K. (2021). Critical Study of Unified Payment Interface (UPI): E-Payment Mode of Digital Revolution. *Academic Social Research:(P),(E) ISSN: 2456-2645, Impact Factor: 5.128, Peer-Reviewed, International Refereed Journal*, 7(4).
- [37.] Yudhira, A. (2021). Analisis Perkembangan Financial Technology (Fintech) Syariah Pada Masa Pandemi Covid-19 Di Indonesia. *Value*, 1(2), 13-28.
- [38.] Zhao, Q., Tsai, P. H., & Wang, J. L. (2019). Improving financial service innovation strategies for enhancing china's banking industry competitive advantage during the fintech revolution: A Hybrid MCDM model. *Sustainability*, 11(5), 1419.

**Website:**

- [39.] <https://www.consumersinternational.org/>
- [40.] <https://www.researchdive.com/>
- [41.] World Economic Forum
- [42.] Economics Times
- [43.] <https://www.businessinsider.in/>
- [44.] <https://www.npci.org.in/>