Resurgence of Indian Economy:

DIGITAL TRANSFORMATION THROUGH FINTECH

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Resurgence of Indian Economy: Digital transformation through FinTech

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The Collision of FinTech and Blockchain Technologies on Financial Services and Banking

Mr. Shubham Rajpal & Dr. Amit Manglani***

Abstract

Worldwide, banks and other financial organisations are making use of new technologies. The rapid development of internet connectivity. information technology and smartphones have had an impact on the banking and financial services sector. The fusion of blockchain services and financial technology (FinTech) has been intentionally modified. This study looks into how blockchain technology and FinTech are used in online finance and banking. According to current research, FinTech and blockchain have a significant impact on digitalization advancements. The research focuses on banking and financial services modernization processes.

Keywords: *Fintech, Blockchain, Finacial Services, Banking.*

Introduction

On a global scale, new technologies are advancing and developing. A wide range of people can now easily access

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high-speed technological advancements thanks to the availability of an internet connection and smartphone-enabled services. Industry 4.0 (Davies and Brettelet 2015; Sheng 2018; Mekinji 2019; BadrMachkour 2020; Yulius et al. 2020) refers to significant changes in the economy and society caused by the reformation of internal and external application models for advantageous interactions in the digital process as a result of global technological advancements.

Rebuilding the banking and financial system requires the combination of blockchain and financial technology (FinTech) (BadrMachkour, 2020). FinTech is regarded as one of the major breakthroughs in the financial sector. In part because of the sharing economy and helpful laws, with developments in information technology, it has moved forward at a breakneck speed (Lee, 2018). Long-term FinTech development based on new technologies has combined finance and technology. Mobile and digital payment platforms remain the primary FinTech delivery channels.Payment systems, asset management, credit solutions, and insurance services are just a few of the various service possibilities that FinTech companies throughout the world are offering. This technology is designed to assist businesses in quickly and inventively changing rules.

Blockchain-based distributed ledger technology has a lot to offer in terms of new financial services. Blockchain is starting to have an impact on internet communications. Networks are intimately tied to the Internet and have the ability to drastically change how things work. Blockchain technology, like information technology-enabled peer-to-peer (P2P) and mass media communications, will fundamentally alter the banking and financial sectors.Hacking is less or impossible with blockchain since it allows for rapid transactions without the need for a middleman. The general public can instantly, safely, and for a low transfer, charge send and receive money. The fourth industrial revolution's other

components have not yet fully digitised banking and financial services. Blockchain networks and financial technology companies' readiness for the digital platform and other services.With improved responsiveness and skill in facilitating simple, safe payment transactions, critically evaluate old, customary business structures and procedures in banking transactions (Mekinji, 2019).

The study's goal is to better understand blockchain and FinTech technology. This essay discusses how blockchain technology and FinTech are being welcomed by the banking and financial industries, and how they are expected to grow rapidly in the coming years. The study conducts a literature review to identify the factors influencing this development and to promote its spread.To find out how FinTech and blockchain are affecting digital banking and financial services, we did a literature review. The study's objective is to identify the variables that affect their advancement and growth. To group technical developments, benefits, and financial and banking barriers.

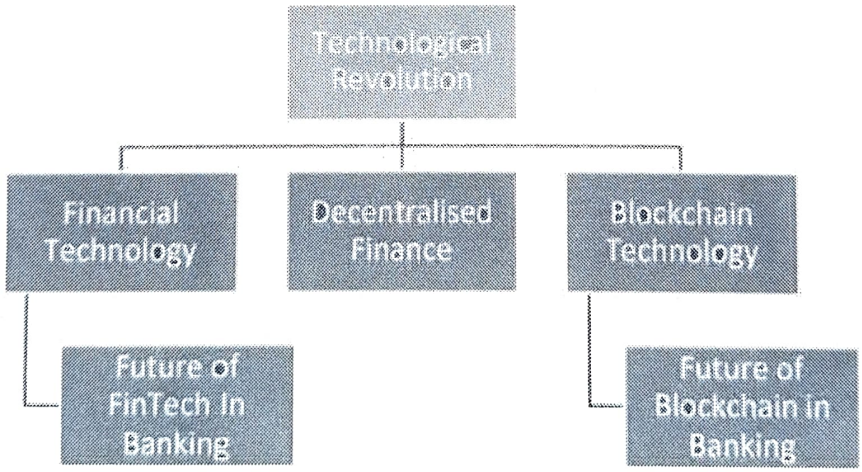

Figure 1: Conceptual Framework of the Study

Exploration in Financial Technology (FinTech)

FinTech has changed the way banks collaborate and compete over the last few decades. Today, the FinTech industry makes a substantial contribution to the digital

finance market. The financial industry is driving transformation in digital innovation. Financial technology has an excellent opportunity to provide private clients with secure, practical, and economical banking services (Ozili, 2018). With the advent of digital money, banks have already begun to improve their digital banking services for customers. The existing economic system has changed as a result of digitalization with the aid of contemporary technologies (North, 2020). FinTech businesses are developing new services and goods for their clients that combine bank capabilities (Ozili, 2018). If successful, this will surely change the current business environment for the financial services sector.

Modernizing Payments and Deposits

FinTech businesses have suggested mobile wallet solutions for convenient, secure payments. FinTech provides a digital web platform that can make accessing these easier. An e-wallet uses only the user's mobile number as their primary form of identification.The direct transfer of funds from one wallet to another is made possible by blockchain technology in banking. No account information is required to transfer money.

The New Lending Strategy

Compared to banks and other lending institutions, FinTech solutions are better positioned to provide those with low or no income with instant access to reserve cash and loans (Ozili, 2018). Digital lending platforms that are peer-to-peer (P2P) serve as a medium for transactions between creditors and shareholders. A person with chargeable funds may lend them directly to an insolvent party on a digital platform and earn interest.

Investments in an Advice-Giving Website

FinTech has also changed the traditional job of the financial investment advisor. The financial sector is

transformed by digital finance as a result of this system was prepared. FinTech companies in this position can help customers invest in financial goods while offering cutting-edge financial consulting services via a digital platform. These online platforms are usually referred to as Robo-advisors and digital advising platforms because they promote investment in automatic mode.

The banking and finance business is an energetic industry with fierce competition for both products and services.

In order to compete effectively, banks are persistently devoted to growing and modernising. Currently, there is competition for a digital banking platform that enables service delivery via digital signals. As a result of the digital transition, new products and services are becoming available via electronic payment systems, making this possible (Karaçallk, 2018).

Digitalized banking procedures unquestionably bring in new players, expectations for the extension of financial services, and better business results, including larger bank profits. Future banks should be fast, technologically sophisticated, and bottleneck-free locations where customers can self-serve their needs.

Online services will focus on consumers because providing excellent customer service is the bank's main goal. The primary focus for banks that must implement full digital transformation should be on familiarising their current services with new industry norms and providing an overview. Consumers will engage with future digital bank branches in a banking environment supported by innovations that make it simple for customers to access the data they need. Future banks will be able to switch from traditional to digital banking thanks to digital technologies. Relationships with clients and banking will remain the priority (Mekinji, 2019). Customers can use digital banking platforms, which provide a range of services, to access all online banking services.

Historically, traditional banks and other financial organisations have been at the forefront of the use of digital technology to improve their capabilities and knowledge (Iman, 2019). (Iman, 2019). Regular transactions have altered as a result of the recent surge in Financial technology. It facilitates the transition to cashless societies in cash-dependent nations. FinTech customers must modify their morals and beliefs in order to adopt new digital techniques (Poustchi,2018).

Financial Services

FinTech has mostly affected financial services in terms of payments and the way transactions are executed. In order to avoid having to travel to bank locations for such time-consuming, to persuade customers to switch to digital payment services, mobile banking, and electronic banking operations. FinTech seeks to alter how companies can generate revenue in all spheres of the economy using online payments.

Enhanced Client Services

FinTech develops new products and services to meet consumer needs that traditional financial institutions cannot.Performers in the FinTech sector have sworn to employ business practices that are responsible for protecting consumers. FinTech will ensure that consumers may still access financial services. Banks must focus on providing safer transactions because hackers can access customer data privately.

Smart Solutions

Banks and other financial service providers are already receiving efficient and cutting-edge solutions from FinTech for things like loans, transfers, insurance, and remittances. Banks and other financial institutions are under more and more pressure to provide reliable, efficient, and adaptable. FinTech companies rely on the financial sector

to manage technology and market disruption while concentrating on customer service.

Increased Accessibility

FinTech in banking lays a focus on data analytics to govern the delivery of personalised financial products and services provided to clients via the internet and smartphone devices, ensuring flawless execution.The banking and financial industry is focusing on using its regulations through the most recent technologies. The use of open banking solutions, as well as important protocols and technologies, is required when developing software and applications. They broaden the understanding of FinTech's significance in the banking and financial services industries.

Big Data and Blockchain

The best aspects of FinTech are performed by parallel technologies. Without the involvement of a trusted party or centralised authority, Blockchain technology enables a distributed peer-to-peer network among all transaction series counterparties.Blockchain technology will make transactions safer and help to decrease fraud and phishing assaults. The success of digital payment systems in terms of banking practices, user requirements, and personalised product and service offers will be supported by big data, machine learning, and artificial intelligence (North,2019).

Blockchain Technology

Blockchain technology is now being considered for its impact on financial services and banking in a broader context with other businesses and sectors. Blockchain technology is transparent, decentralised, anonymous (or pseudonymous), and unchangeable. Blockchain technology is used to create digital currencies, a useful new form of exchange that is more secure than cash.Today's digital transaction ledgers are maintained

using blockchain as the underlying technology. In recent years, blockchain technology has found use cases in a wide range of industries, including manufacturing, supply chain management, and financial services. The financial services and banking industry might be significantly disrupted by blockchain technology in several ways. In several areas of financial technology services, this technology may without a doubt lessen problems, diseases, and setbacks. Therefore, we view blockchain as a potentially useful technology to address significant issues that have long been hindering the banking and finance sector (Nasscom, 2020).

Theft of Identity

Identity theft is a significant problem in the banking and financial sector. Identity theft issues in financial services can be eliminated through blockchain. The system's distributed ledger allows for the execution of network-based transactions while protecting digital individuals within it. Blockchain promises to enable safe trusted transactions through an irreversible network between parties who do not already trust or even know one another, without the need for trusted party intervention to verify user identity.

Anti-money Laundering and Fraud Detection

To detect fraud, such as money laundering, transactional logs, time-series data, a location-based approach, and transaction terms conveying relational data are typically required (Krishnapriya, 2020). Financial fraud and money laundering, which affect the entire world, are two of the industry's major challenges. Because financial institutions are looking for confusing financial transactions that include trades between multiple parties, with differences in currency denominations and settlement times, distributed ledger systems can be held liable for fraud prevention skills.

Auditing and Accounting

Effective and trustworthy recordkeeping, auditing, and accounting represent another set of enduring difficulties for the banking and financial sector. Blockchain technology offers disruptive innovation that can erase outdated data and make financial statement audits and reporting visible in real-time via a distributed ledger system protected by cryptography. Blockchain technology fundamentally alters the nature of accounting and auditing in today's commercial services.

Operational Deficits

Blockchain transactions employ a cryptographic protocol. As the banking industry historically had lengthy transaction clearance and settlement timeframes as well as significant operational costs, the banking and finance industries operate similarly. Transactions can be considerably sped up using blockchain technology. Although blockchain eliminates the need for intermediaries and different ledgers, it is time-consuming, costly, and prone to error.failures in transactions Distributed ledger networks based on cryptocurrencies provide quicker cross-border transaction clearing. Compared to the customary one to two-week clearing period, is unlikely that transactions will take less than ten minutes on previous systems.

Banking Services and Products Innovation

Most banks today don't provide any distinctive products or services. However, there is now a new way for them to give their customers more value through the exchange of digital assets, with amazing service given by blockchains. Distributed ledger technology can solve long-standing problems with business services by enabling various institutions to greatly enhance the banking experience for their customers. Banks may also offer those

customers the option to trade a variety of other financial assets on or through a blockchain network over time.

Blockchain's Potential in Digital Banking

As it continues to disrupt the banking and financial industries, blockchain as a foundational technology will have an impact on the financial technology landscape. Current preferred techniques include consensus-building, distributed ledger databases, and cryptographic hashes of each block.Blockchain solutions can now provide a potent new type of data exchange due to the removal of intermediaries, simplified asset transfer, and expedited reconciliation procedures. Clients can get payments more quickly by utilising blockchain technology and skilled financial systems.

The convenience of cross-border transactions and other operations will increase as a result of blockchain technology. Real-time, peer-to-peer lending, and peer-to-peer insurance are just a few of the use cases in financial services that the global banking industry is experimenting with using blockchain technologies to address. For a variety of financial services use cases, including peer-to-peer lending, peer-to-peer insurance, real-time payments, cross-border payments, trade finance, auditing, compliance reporting, and core banking solutions, the global banking sector has recently been experimenting with the adoption of blockchain technologies.It started with the bitcoin cryptocurrency and evolved into a technology that can influence a number of settlement procedures used in the financial sector. The estimates of typical cost savings from financial transactions are positive. Settlements have historically been challenging because they include many trustworthy parties, which makes them measured. There are two hazards involved with the settlement: high operational risk and the possibility of fraud. Blockchain technology implementation in this sector may lower settlement costs while also boosting efficiency and safety.

In addition to quick and rising adoption, the future of blockchain technology adoption appears to revolve around envisioning business models with interconnected producer-consumer networks and coding code agreements on trade incentives to sustain governance (Doshi, 2021). The financial sector has been among the leaders in adoption of blockchain technology, despite the fact that many other industries use it. A new digital financial services platform is now being developed using blockchain technology by close to 30% of banking institutions. Banks began investing a significant amount of money in the study and creation of blockchain-based dispute resolution techniques.

Figure 2: Blockchain Adoption-Overview

Decentralised Finance (DeFi)

As a security and protection measure, decentralised finance (Defi) has relied on public trust. Following that, bitcoin wallets served as the intermediary for all transactions involving digital assets. The DeFi community has been able to introduce owners to a wider range of DeFi use cases by polling owners and taking the findings into account. Cryptocurrencies are bringing money online and opening up new revenue streams for consumers through decentralised applications. For viewers, it is

fascinating since everybody who can create or download programmes has access to decentralised finance and the future of money (Bharadwaj,2020).

Banking and Finance's classification of FinTech

Banking and Finance

The industrial-based business services offered by FinTech, which is mostly still in its infancy, are now provided by a number of established conventional financial institutions, such as banks, asset management companies, etc. FinTech often uses applications, products, business models, and operational procedures to provide services in the banking and finance industry. Payments and lending to businesses and consumers are the two primary FinTech object segments for the banking sector.

Technological Advancement

Digital technologies are becoming more prevalent in both developed and underdeveloped countries. It developed steadily and is currently moving in a new banking path from internet banking to mobile banking.An increase in the usage of smartphones, reasonably priced telecommunications, and internet services have led to the emergence of a new technical environment. As a result, secure electronic commerce platforms are created, the introduction of new players into the market, and increased consumer knowledge, and prospects in the financial industry.

Benefits

The expansion of FinTech shows that the financial services sector is getting better all the time.FinTech provides banks with high-value advantages from a business standpoint in the managerial, operational, and strategic areas, along with reduced transaction costs, modified service delivery, and innovation. As a result of information flows, FinTech

offers customers better service, more options, more cheap prices, simpler transaction chains, and more efficient operational costs.

Challenges

This review discovered issues with FinTech services. Opposition to establishing standards, rules, and restrictions for access to banking systems complicates coordination between rival financial firms. A company needs a strong technical foundation, adaptability, and security to increase the stability of a system.Because of this, organisations that are thinking about learning more about FinTech and investing in cutting-edge technology need to be aware of their operational issues. Collaboration is a major roadblock for the FinTech sector. For every new business initiative, it can be challenging and time-consuming to find a new and appropriate partner.

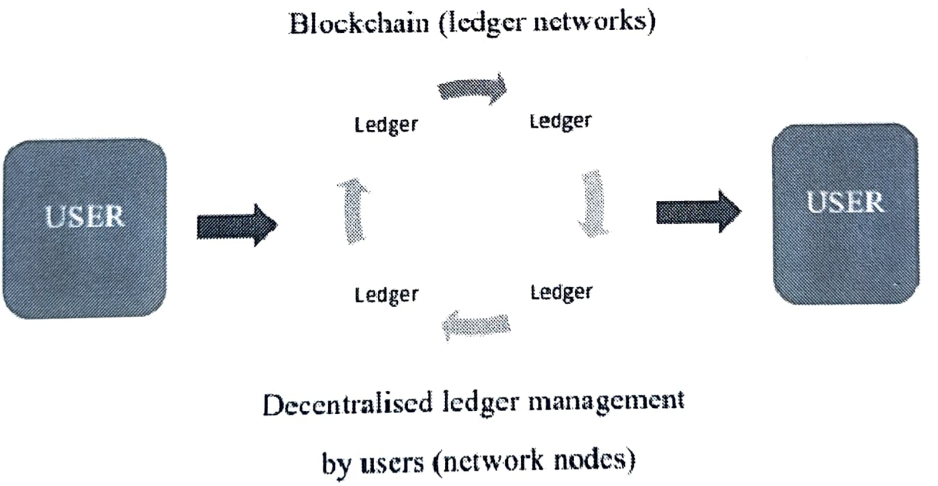

Figure 3: Decentralised Payment System

FinTech more successfully offers online banking services (Yulius et al., 2019). Modern organisations handle the tension between the pressure of innovation and how they respond to technological advances in a methodical way (Wonglimpiyarat, 2017). Payment options, insurance, loans, and community investments are all accessible through digital banking and financial services. FinTech

makes better and more innovative use of technology to deliver financial services (Mohanasundaram et al., 2021).FinTech businesses that put a strong emphasis on technology advance through stages to develop unique business models with state-of-the-art consumer profiling, marketing, and security features. FinTech companies have significantly raised the strain of competition by interacting directly with customers.

A user's account with a financial institution is regularly used to start a transaction in the FinTech space, and many FinTech companies still store their data and process payments through banks. To compete with FinTech and large technology companies, incumbents of all sizes are embracing digital transformation throughout the value chain (Erik et al., 2021).

With no upfront capital commitment, the new P2P lending and borrowing model from FinTech companies makes money by bringing together lenders and borrowers through fees from all interested parties. The consumers are the ones that accept new commercial products and services in terms of technology, even though the regulations that support them attempt to assure secure transactions on these electronic platforms. Banks and other financial organisations have made it feasible for their customers to conduct a variety of payment activities by providing these services. In assessing other business areas of banks, the technology that permeates payments has shown to be both advantageous and detrimental.

Classification of Blockchain in Banking and Finance

Finance and banking

Banking and finance are currently being transformed by blockchain technology. It is a potent technological advancement that makes it possible to use bitcoins while maintaining privacy and security. By drastically lowering processing costs, distributed ledgers have the potential to save banks billions of dollars. It is projected that the

ongoing use of blockchain technology will boost banks' profitability and value. Blockchain is now being tested by all of the major banks and financial organisations for use cases like recordkeeping, money transfers, and other back-end functions. Blockchain technology's ability to create a decentralised database of digital assets will have a significant impact on the financial services industry. A company can use blockchain technology to become more decentralised, efficient, and compliant with regulatory standards while spending less while doing so.

Blockchain technology's end-to-end encryption produces an irreversible record of transactions, reducing or completely eliminating theft and other forms of criminal activity.The development of blockchain technology has had a profound impact on traditional financial services. However, despite the potential of blockchain, real-time implementations are still uncommon. The benefits and strengths of blockchain applications are continually evolving.

Benefits

From a business perspective, blockchain technology benefits banks in terms of operations, management, strategy, and infrastructure. Blockchain increases identity management, recordkeeping accuracy, transparency, fraud reduction, privacy improvement, and the effectiveness of financial services. The physical infrastructure needed to carry goods and services is also reduced. Blockchain also provides better security, similar to keeping data in a database to prevent attacks on the primary database (Park & Park, 2017). According to Wamba et al. (2019), the transparency of blockchain technology significantly predicts users' inclination to use it. Transparency is supported since all nodes share the transactions, which boosts user community confidence (Osmani et al., 2020).

Challenges

Blockchain technology users should be aware that it is still in its early stages of development and only has a few rules and laws. Regulation-related issues still exist, and blockchain calls for pricey IT infrastructure, processing power, and transaction security.Due to challenges with identity verification, scalability, energy consumption, consensus process, adoption cost, and setup in the banking industry, the application of blockchain technology takes longer.

Despite being long viewed as the cornerstone of economic stability, the banking industry is currently going through a lot of change. All transactions might be encrypted using blockchain technology to protect the privacy and integrity of all participants. Banks are interested in learning how blockchain could be applied to address problems in the current financial system.

Cryptocurrencies like Bitcoin and Ethereum are no longer the only applications for distributed ledger technology. Since distributed ledgers are immutable, there are several concurrent truth shares in a network for each transaction.

In the global economy, blockchain technology is being utilised to streamline product features, improve the customer experience, and reorganise market activities.The exchange of products and services will eventually become more secure and economical thanks to blockchain technology. Banks and other financial institutions can transfer money from one bank to another and internationally at a reduced cost and in fewer time thanks to blockchain technology.

A decentralised client identity system might be developed with the use of blockchain technology; however, this is still just a notion at this moment (Hershkovitz, 2021). The fact that banks have acknowledged their rising interest in deploying this technology demonstrates that blockchain has many useful applications.

Conclusion

The literature on blockchain technology and FinTech in the banking and finance sector was evaluated for this study. Banks and other financial institutions were found to be undergoing a considerable shift in order to stay up with the development of digital technology. The study's findings indicate that FinTech will significantly improve investment practices by supporting blockchain technology and providing superior client information.

Blockchain in FinTech can offer a significantly more efficient financial alternative than what we currently have because it is built on equity and decentralization.Thus, this study contributes to the dissemination of information about the blockchain-based FinTech sector, which provides speedy money transfers, first-rate security, and open financial tracking.

Due to the necessity for technological advancement, cooperation, and corporate savings, traditional banks will join the online banking portal. In order to improve consumer experiences, modern technology is continuously being sought after in banking and financial services. Demand in the financial sector is being driven by new technological advancements and rising consumer expectations, while the growth of consumers is dependent on digital transformation. FinTech technologies will fundamentally change how business and financial services are provided. Even though it continues to be the most promising technology in the banking and finance industry, blockchain technology still faces a number of difficulties.Blockchain is not thought to be a tool that can rival cryptocurrencies or major financial institutions. The future of blockchain technology can only be better as a result.

Yes, there are some limitations to this study. To promote blockchain and FinTech solutions, future researchers must acquire relevant data regarding cryptocurrencies in

various industries.In order to fix the errors committed in the introduction of blockchain and FinTech inelectronic banking services Future scholars ought to endeavour to develop a new conceptual framework andexecute organised research for business applications in light of the study's conclusions.

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