

# Blockchain based Enhancement of Digital Revolution in Financial Sector

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**Abstract**—The rapid advancement of newly developed technology has a substantial influence on the progress of the financial industry. Changes to the interactions between enterprises in the financial sector and the structural landscape of the sector are brought about as a result of digitalization, which leads to the creation of new business models, the transformation of value chains, new product delivery channels, and many more. Despite this, academics do not seem to have come to a consensus about the factors that are driving these strategic shifts or the directions in which the financial industry will likely expand in future. One way in which the development of financial technology might be defined as extremely inventive is through the introduction of alternative services and new businesses. Digital innovation is the operational equivalent of commonly used terms such as digital disruption and digital transformation. In the first case, digital innovation emphasizes strategic orientation by developing new products and business models using digital technologies, infrastructures, supply chain, and ecosystems. In the second case, digital innovation transforms traditional models to better address existing loyal customers by providing more usable in the digital ecosystems access channels, solutions, and product options.

**Keywords**— *Digital optimization, Internet connectivity, Digital Revolution, Block Chains, Financial Sectors, Bank*

## I. INTRODUCTION

Due to factors such as customers' ever-shifting wants and demands, the introduction of novel regulations, the widespread use of cutting-edge technology, etc., the competence base upon which financial institutions rely is always developing. There has not been a consensus among academics and industry experts on the strategic shifts, underlying drivers, and expected future developments in the financial sector. This study's primary objective is to understand the driving factors behind the ongoing transformation of the financial industry as a result of digitalization. To further investigate and comprehend the stated issue, both qualitative and quantitative approaches have been used. Research papers were analyzed for their content to determine the effects of new technologies on the growth of the financial industry, the digital transformation of the sector, and the structural shifts that have occurred in the sector. The quantitative study analyzed data from the

financial industry to determine patterns in the landscape's evolution. The present state of the financial industry in regards to technological shifts was investigated via the use of structured interviews. These studies concentrate on the commercial banking sector and the FinTech industry. Fintech businesses, which are startups in the field of financial technology, are accelerating the industry shift by providing services that are similar to those provided by traditional financial institutions. The term "digital transformation" was used by to characterize the phenomenon of applying digital tools to traditional business procedures. The fast advancement of information and communications technology is changing the whole business landscape and ushering in a new age of convergence services, which Shim & Shin fully appreciates. This study intends to fulfil the following objectives:

- To study digital transformation on the stability of the financial sector
- The impact that digital transformation has had on the financial industry
- Features and benefits of financial technologies

A new industry known as "fintech" is one that leverages technological advancements to make financial processes more efficient. Through the use of software and other technological advancements, fintech makes it simpler to carry out financial transactions on digital platforms. At the same time, Fintech refers to the convergence and cooperation of the ecosystems of the financial sector and the technological sector. The term "financial technology," which first came into use with the intention of providing financial services to a greater number of people, has now significantly broadened the scope of its use in light of recent technical advancements in the financial industry. The term "Fintech" refers to the incorporation of various financial services across all industries, such as payment, investment, lending, and other services of a similar kind. Fintech has emerged as a separate industry in its own right, transcending the limitations of conventional economic sectors and business structures. It was determined that the term "Fintech" refers to a new industry in the financial sector that makes use of technology to enhance financial operations.

## II. RELATED WORK

According The Rise of Digital Technology and Its Impact on the Stability of the Financial Sector Not only does the revolution or change brought on by digital technology have an impact on the manner in which conventional financial operations are carried out, but it also has substantial repercussions for the way financial institutions operate financially. The structural and technical transition taking place in the financial sector runs concurrently with the revolutionary changes taking place in the industry. The innovative behavior of large banks during the late 1960s led to the processes of financial instability, and the accumulative effect of that era's innovations resulted in financial instability due to the incoherence and fragility of financial institutions. This was indicated in the study.

Therefore, the combination of competitive advantage and technology may yield benefits, but only under the condition that the facets of new technology and their appropriate implementation are thoroughly comprehended and dealt with in an appropriate manner. Failing to do so may compromise the institutions' capacity to maintain their financial stability. Digital transactional systems accumulate massive intangible capital, which faces valuation problems in capital markets as well as creating significant regulatory, legal, and privacy challenges due to blur industrial boundaries. Despite the fact that digitalization and the technological revolution have the potential to reduce marginal costs and enhance productivity, particularly in financial sectors, the financial stability of institutions is still important. This is because digital transactional systems accumulate massive intangible capital.

There can be little doubt that India's demonetization drive has hastened the country's transition to digital currency and payment systems. Companies can no longer avoid the inevitable: the need to digitize their operations. If anything, it's essential to making it in the current world. Companies that don't keep up with technological advances run the danger of becoming extinct in today's hyper-competitive economic climate. The banking and finance sector is a prime example of an industry that has been swept up in the wave of innovation that is the digital revolution.

In the Financial Services industry, cash and other non-digital modes of payment were still commonly utilized, particularly in the Indian subcontinent. The rapid use of digital technologies has caused a tidal shift in the financial industry. The advantages of technology have hastened the pace of monetary globalization. So, it's important to be able to handle a lot of transactions while also being flexible enough to deal with the occasional curveball. Being "agile" is one of the greatest methods to adopt new technology since it enables a quick and flexible strategy for incorporating digital into the existing financial infrastructure.

The ability to be more compliant and have enhanced transparency of operations are two significant benefits of digitizing financial processes. It is important to include strategies into the system that help ensure activities run

smoothly while also adhering to all relevant regulations and legal requirements. When it comes to handling its finances and other associated activities, Caltech has always been ahead of the curve when it comes to adopting new technical tools and platforms. With a firm commitment to aligning its financial operations with the newest technology to facilitate seamless and transparent company operations and a strong dependence on cutting-edge IT to optimize business processes and interactions with customers. Managing all of your company's vital records and files has never been easier thanks to automated procedures. Caltech is able to automatically gather data that can be mined to better understand process performance, cost drivers, predict and manage likely hazards thanks to the replacement of old paper and manual procedures with high-end software. Utilizing digital workflows, managers are able to resolve issues in real time, rather than waiting until they reach a critical stage.

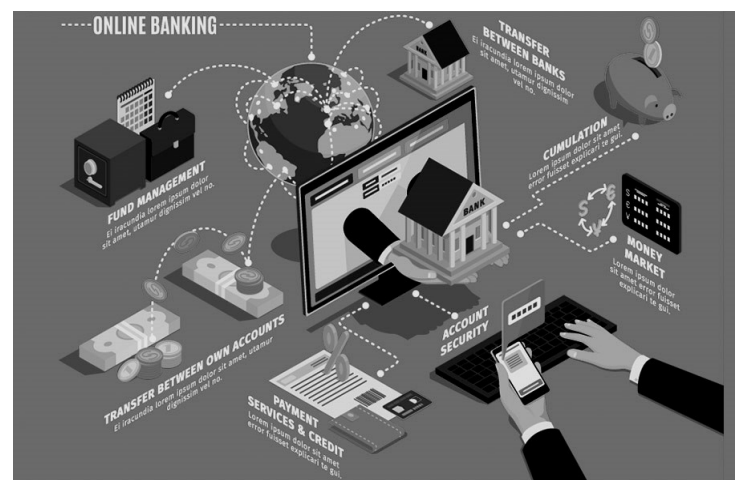


Figure 1. Digital Revolution in Finance

## III. PROPOSED SYSTEM

### *The Impact of Digital Transformation on the Financial Industry*

The shift brought on by digital technology has had a significant impact on many routines and practices seen in the professional sector. Customers and financial institutions alike may reap numerous advantages from technology when it is integrated with mobile devices such as smartphones and the internet. People in the past were hesitant about making the move to the digital world, which is one reason why the repercussions of the digital revolution were not felt to the same degree. But things are different today than they were before. The significance of technological advancements in the financial sector is gradually becoming more apparent even as the number of people and businesses that are able to keep up with the pace of digital transformation continues to rise. The pace of technological advancement in financial apps and systems has increased in tandem with the tightening of rules and the shifting priorities of customers. In recent years, digital transformation has become an increasingly important development that has continued to acquire relevance. Up to this point, the advantages of digital

transformation have been emphasized, and the requirements of digital transformation have been clarified. It is anticipated that by the year 2022, digital transformation would be one of the primary goals of businesses. In particular, at the time of the epidemic, it was necessary for companies to halt the business processes they had been attempting to keep analogue up to this point in time, even though they had been successful in doing so. On the other side, companies who run their business operations using digital technologies that are independent of the physical environment saw very little disturbance in their business processes as a result of this approach.

As a result of this, the role that Fintech solutions play in organizations has grown more significant. By the middle of the year 2020, enterprises had begun to perform a significant number of their operational tasks from inside the digital environment, independent of their physical location, thanks to the implementation of Fintech solutions. Because of this, digital transformation and the implementation of Fintech solutions may quickly become essential in the time that is to come. The translation of paper documents into digital formats not only boosts the productivity and effectiveness of digital instruments, but it also makes the papers more trustworthy. Smartphones and other readily portable gadgets that display information in an easy-to-read manner have recently become standard equipment for field workers and sales professionals. A significant number of companies that offer financial services have embraced digital transformation. On the other hand, many businesses have adopted the strategy of keeping an eye on how things are progressing before making the decision to engage in digitalization. The consequences of digital transformation on financial functions are as follows:

- a) Higher levels of standardization and performance
- b) More automated functions
- c) Faster performance
- d) More efficient service delivery to consumers

Putting the emphasis on generating insights about upcoming data by using previously collected data, enhanced experiences for both customers and employees, and increased levels of customer satisfaction, it is a challenging task for both traditional financial institutions and fintech startups to be able to respond to the changing needs of customers who are part of the digital generation. It is possible to predict that those who are successful in accomplishing this task will gain an advantage over their competitors in the field of providing a more personalized experience for customers by utilizing more advanced analytical methods.

#### IV. FEATURES AND BENEFITS OF FINANCIAL TECHNOLOGIES

The use of digital technology in the financial sector has made it possible to automate repetitive work and

significantly speed up procedures such as reporting, computation, and archiving. Additionally, the probability of cyber risk is decreased, and fewer mistakes are made as a result of the adoption of effective methods thanks to digitization. Investors are drawn to FinTech on a global scale, particularly in the fields of payments, mobile banking, wealth management, debt settlement, Insures (insurance), capital markets (financial modeling and analytical software), and Blockchain-Bitcoin. Other areas of interest include Insures.

It is anticipated that blockchain technology will have an effect on a variety of domains, particularly on platforms geared for mobile access, such as contactless payment systems and the Internet of Things (IoT). One definition of fintech is "any new concept that enhances financial service operations by offering technological solutions according to varied company scenarios." This definition encompasses a wide range of potential applications. When we look at this information, we can see that the business world of finance is experiencing significant shifts at the same time that it is making daily advances in the form of new discoveries and innovations. The primary focus of Fintech companies is on adapting to shifting patterns of customer behavior brought on by widespread increases in internet and mobile phone/computer/tablet use throughout the globe. "Easy access" and "quick integration" are, without a doubt, two of the phrases that are brought up the most often in discussions on the financial technology of the 21st century. It is essential for financial technology solutions to be user-friendly and simple to implement.

Organizations start to gain efficiency in a very short amount of time as a result of the quick integration of fintech solutions that supply these tasks into the business operations of businesses. Fintech not only offers a more personalized service but also reaches those who are unable to use traditional financial services. This includes rural places that are difficult to access by financial institutions. On the other hand, the banking business is less efficient, and as a consequence, it places a significant operational weight that must be addressed in comparison to the outcomes of operating income. developments in the field of financial technology; To capitalize on the potential expansion of the fintech business, it will be essential to determine who the winners and losers of tomorrow will be in this environment, which is more competitive than it has ever been.

The number of daily financial transactions has seen a steady growth over the last several years, and this trend has continued. The use of digital payment methods is becoming more common in everyday business dealings. The idea that consumers would soon be able to shop on social media platforms, send and receive money using messaging applications, and make payments using just their voices in their vehicles is now a vision rather than a prediction of the future, and the rate of innovation is quickening. Customers want to be able to conduct financially secure transactions whenever, wherever, and on whatever platform they choose. The speed with which customers' behaviors are shifting is something that the financial services industry is well aware of.

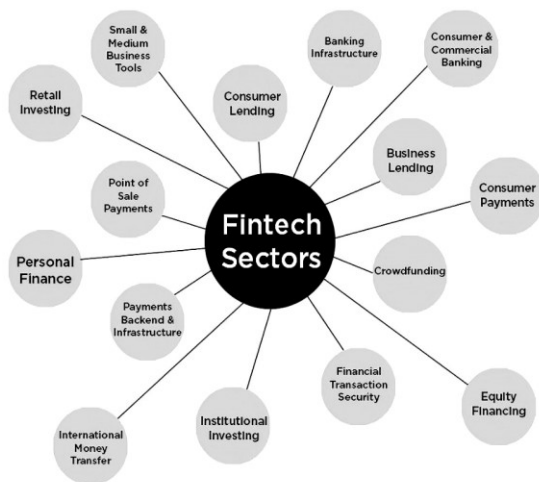


Figure 2. The Fintech Sectors

#### IV. CONCLUSION

Rapid technological advancement in the present has resulted in several improvements that will make our life less difficult. Recent technological advancements have allowed for the formation of new kinds of financial institutions that don't look like banks or other financial organizations in the conventional sense, but which provide the same services (and more) as conventional financial institutions. Fintech firms are those who have developed technological solutions to address the need for financial services. These organizations are nimbler and more entrepreneurial, allowing them to respond swiftly to changes in the financial services landscape. As a result, they are able to meet the demands of their customers more rapidly. The participants in the Fintech Ecosystem, as well as the cultural and economic features of the nations, may affect the relative importance of the actors and the roles they play. Still, the interdependence of all these players' operations remains a constant. The interplay between these factors is what gives the ecosystem its strength. Fintech is a new way of thinking about money that has altered the norms of the industry. Expanding people's access to financial resources on a national scale, fostering collaboration between established institutions and new ventures, and creating ground-breaking financial products and services. Thus, the most significant possibilities a nation may give with Fintech are to improve service and user experience for consumers, to reduce informality, to increase financial inclusion and financial literacy, and to attract investment.

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