

The impact of financial technology on strengthening the banking sector

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ABSTRACT

This research aims to study the impact of financial technology on the development of the banking sector, through an analysis of both theoretical and applied aspects. The theoretical aspect addresses the definition of financial technology, its development, and its most prominent tools, such as digital banking services, e-wallets, artificial intelligence technologies, and blockchain.

The results and analysis reveal an improvement in service quality, a reduction in operating costs, and an increase in customer satisfaction. Furthermore, the use of financial technology has accelerated banking operations and expanded the customer base, particularly among previously underserved groups.

Thus, financial technology has become a fundamental pillar in modernizing the banking sector. The study recommends the need for continued investment in digital infrastructure, human resource development, and strengthening partnerships between banks and financial technology companies to achieve integration and innovation.

Keywords: financial technology, banking sector, e-wallets, artificial intelligence.

1 .Introduction:

The twenty-first century has witnessed significant and remarkable developments in the field of technology in general and financial technology in particular. This is primarily due to the aftermath of the 2008 subprime mortgage crisis, when people lost confidence in banks and their policies. Therefore, financial technology found its way during that period, becoming widely used and widespread, providing the security that traditional banks lacked. New organizations emerged in the

field of financial technology, seeking to embrace this development and offer it to their customers, providing easier, faster, and more secure banking services. Today, the global economy in general, and the banking industry in particular, are experiencing intense competition among banks. With the proliferation of smartphones and various internet services, and increased awareness of technology and its advantages, the demand for advanced banks and the adoption of financial technology has increased dramatically due to customers' desire to obtain banking services quickly, conveniently, and securely. Finance technology is one of the solutions that is revitalizing the financial and banking sector, contributing to the provision of all financial and banking needs in the easiest and most cost-effective ways possible.

1.1. Research Problem: The research problem is the fundamental element that determines the direction and orientation of the study. This problem focuses on identifying the causes that led to a particular phenomenon or situation that needs to be studied and analyzed. The research problem relates to the research questions that the researcher seeks to answer. For example, in the field of financial technology, the research problem might be how technological innovations impact the banking sector and how this technology can improve the efficiency of the banking system and enhance the customer experience. The problem could also focus on the challenges associated with implementing this technology in various markets.

1.2. Research Hypothesis: A hypothesis is a proposed explanation for the problem that the researcher seeks to test or refute. It is a possible preliminary answer to the research question, which is validated through data collection and analysis. In the context of financial technology, a hypothesis might be something like: "Fintech improves the efficiency of the banking sector by providing innovative solutions for payments and loans." This hypothesis serves as the starting point for validating the study's findings and guiding the methodology used in the study.

1.3. Significance of the Study: The importance of the study lies in assessing the benefits and impacts this study can have on the banking sector, as well as on society at large. For example, if the role of financial technology in strengthening the banking sector is studied, the study could demonstrate its importance in improving banks' operational efficiency, reducing costs, and enhancing financial security. It could also increase financial inclusion and expand access to banking services for remote areas or groups that do not benefit from traditional financial services. This study could also help in making strategic decisions to develop the financial technology sector and achieve sustainable growth.

1.4. Study Objectives:

-Analyzing the Role of Financial Technology in Enhancing the Efficiency of the Banking Sector: The study aims to explore how financial technology can improve the performance of banks and financial

institutions, including its impact on improving transaction times, reducing operational costs, and increasing security.

-Identifying the Pros and Cons of Financial Technology in the Banking Sector: By analyzing various modern financial tools and technologies, the study seeks to determine how this technology can improve banking services, while also uncovering potential challenges and risks.

-Comparing the impacts of financial technology implementation in developed versus developing countries: By examining financial technology applications in different environments, the study aims to clarify how developing countries can benefit from these technologies to keep pace with developments in the banking sector.

-Exploring the future of financial technology and its impact on the global financial system: The study aims to analyze the future trends of financial technology and how they will impact the financial system in general, and to identify its role in providing new solutions to global economic crises.

2. The Theoretical Framework of Financial Technology:

In recent decades, the world has witnessed a major transformation in many areas thanks to technological advancements, which have provided new opportunities for development and innovation. Among these areas that have been significantly impacted is financial services, where financial technology (also known as fintech) has emerged as one of the most influential areas in the financial and business sector. Financial technology has contributed to transforming the way financial transactions are conducted and has changed the methods of providing financial services, whether for banks, individuals, or companies.

With the acceleration of innovations in this field, various applications have emerged, such as digital payments, digital loans, and smart investing, making access to financial services more flexible and effective. Fintech has become an essential element in developing the financial system, contributing to improving operational efficiency, reducing costs, and enhancing security in financial transactions.

However, this transformation has not only increased innovation; it has also prompted a rethinking of how the financial sector and traditional banking systems are structured, by offering innovative solutions that meet the needs of both individuals and businesses. In addition, the adoption of this technology in different countries varies from place to place depending on the level of technological development and local legislation.

In this chapter, we will present a theoretical framework that includes a set of fundamental topics that contribute to a deeper understanding of financial technology. We will begin by explaining the origins and historical development of financial technology, then define its concept and importance in the

current era. We will then discuss the pros and cons of financial technology in its various applications in the financial sector

2.1. Finances of Financial Technology:

2.1.1. Origins and Historical Development: Financial technology initially emerged as a result of technological innovations in various fields, such as computing and electronics. While the traditional financial transaction system relied primarily on customers' physical presence at bank branches or conducting transactions through traditional banks, technological advances in the 1970s paved the way for the creation of electronic systems that facilitate financial transactions.

Initially, financial technology was limited to basics such as electronic payments and electronic bank transfers.

The history of the development of financial technology dates back to the 1970s, when the first automated teller machines (ATMs) were introduced in the United Kingdom and elsewhere, facilitating round-the-clock access to funds. By the early 1990s, financial technology emerged in the form of digital banking systems, allowing banks to conduct financial transactions online.

The spread of the internet in the 1990s led to the emergence of new solutions, such as online electronic payments. One significant innovation in this context was online money transfers. In the first decade of the new millennium, technological advancements continued to include solutions such as crowdfunding and digital currencies. New tools such as blockchain and artificial intelligence emerged, adding further complexity and innovation to the provision of financial services to consumers. With the increased reliance on modern technologies, many major technology companies began offering solutions in the field of digital finance. The widespread use of smart devices and mobile phones over the past two decades has led to the proliferation of smartphone payment applications, as well as the emergence of digital currencies such as Bitcoin and Ethereum, opening a new door for innovation in the field of financial technology. In recent years, fintech has become an essential part of the financial sector worldwide.

2.1.2. The Concept of Financial Technology: Financial technology (also known as "fintech") plays an important role in the financial and banking services sector, given the remarkable development of modern communication tools such as smartphones, as well as the increasing speed of the internet. The Financial Stability Board has defined fintech as technology-based financial innovations that can create new business models, applications, or products that have a tangible impact on financial markets and institutions, and the provision of financial services. The Basel Committee on Banking Supervision has defined fintech as a financial technology or innovation that results in a new business model, process, or product that has an impact on financial markets and institutions (Abdul Rahim & Qaddour, 2018). The National Centre for Digital Research in Ireland has defined fintech as innovations in services.

Finance has evolved through competition between new investors and existing investors in the financial sector. Technology has also led to the introduction of new financial products and services, such as fiat currencies and modern payment and settlement methods (Abdul-Ridha & Abdul-Karim, 2020).

2.1.3. The importance of financial technology: stems from several key factors that have led to increased reliance on it in the financial sector. The importance of financial technology, both for the financial economy and for the real economy as a whole, can be summarized as follows: (Abdul-Rahim, 2019,P. 3)

- It has enhanced market efficiency and improved the customer experience.
- It has provided new services and created better technical solutions.
- Technology has helped reduce risks, including disclosure risks, transparency risks, and the financial insolvency of other parties.
- It has supported and enabled business models, services, and products that did not previously exist.
- It has helped investors access financial markets at lower costs.

Fintech contributes to reducing the costs associated with banking services. Through digital applications, the need for human intermediaries is reduced, which helps reduce operational costs for banks and companies. Electronic banking applications also help provide banking services faster and more efficiently. Efficiency, which contributes to increased customer satisfaction. . . Analysis of various applications of financial technology in the banking sector.

In addition, financial technology enables improved access to credit and personal finance. Many people in developing countries or rural areas lack access to traditional banking services, but with financial technology, they can obtain digital loans or online banking services. Fintech also contributes to increased financial inclusion. This means improving access to financial services for various segments of society, including those who previously lacked access to traditional banks.

2.1.4. Advantages of Financial Technology: The advantages of financial technology are represented by the many benefits it offers to individuals, businesses, and banks. The most prominent advantages include:

- Low cost: Financial technology reduces the costs associated with financial transactions, whether through online money transfers or digital payments.
- Increased financial inclusion: Financial technology provides an opportunity to reach individuals who were previously outside the traditional financial system, such as those in remote areas or developing countries.
- Improved efficiency: Financial technology speeds up financial transactions and reduces human error. Which leads to improving the operational efficiency of banks and companies.

-Flexibility: Financial technology providesFlexible means of accessing financial services, such as smartphone banking applications, allow customers to conduct transactions anytime, anywhere.

.5Security: Applications such as blockchain provide high levels of security and protection against fraud and manipulation, making financial transactions more secure. (Al-Saratwi, 2020, 5).

2.1.5. Disadvantages of Financial Technology: Despite the benefits of financial technology, there are some drawbacks and challenges that should be considered. The most prominent drawbacks are:

-Financial risks: Due to the use of financial technology in financial transactions, financial risks will remain present. However, the type of financial risk will depend on the financial transaction. For example, there have been some recent lawsuits due to the mis-selling of derivative products. Another example of financial risk is counterparty risk faced by financial technology companies that provide financial services such as loans or mortgages (Ebrahim, 2020; 105).

-Liquidity risks and volatility of funding sources: The use of financial technology may create opportunities for customers to automatically switch from one savings account to another in search of a higher return. This affects the volatility of deposits, which increases liquidity risk (Al Ajlouni et al., 2018; 10).

-Operational risks: These risks arise from the failure of internal and external processes, inadequacies, or external events. The most important types are: (Ebrahim, 2020; 105).

-Technology failure: This refers to the delay in transactions caused by weak internet connections. This can lead to data entry errors, implementation failures, and delivery failures.

- Forgery: Illegal activities such as stealing money from customers.

3. Policies to Strengthen the Banking Sector:

The banking system or institution is one of the most important components of the financial system, and the stability of this system is closely linked to achieving stability within the banking system. There are many reasons for the instability of the banking system, including the globalization of financial markets and the emergence of numerous financial innovations that have limited the effectiveness of traditional tools that establish and ensure stability in the banking system. Governance is among the important modern tools and means aimed at maintaining and ensuring stability in the financial system as a whole, and in Egypt in particular. There are many policies that can be adopted to strengthen the banking sector, and these policies are essential for developing the financial and banking system in general, as they play a vital role in achieving economic stability, enhancing financial inclusion, and developing the banking sector in line with growing economic requirements and technological developments. To ensure the effectiveness of the banking sector in meeting the needs of individuals and economic institutions, there is a set of policies that can be adopted at various levels. (Sulaiman, 2018, 23).

One of the most prominent policies is that related to banking supervision and regulation, which is a type of oversight exercised by the country's monetary authorities to verify the integrity of the banking and monetary systems in place and ensure the proper implementation of banking laws, regulations, and instructions issued, on the one hand, and supervision and monitoring, whether represented by the central bank, the monetary authority, or the authority authorized by law to supervise and monitor banks, on the other hand. In other words, it is a set of rules, procedures, and methods followed or adopted by monetary authorities and central banks, with the aim of preserving the soundness of banks' financial positions in order to create a sound banking system that contributes to economic development and protects the rights of depositors and investors, and thus the state's ability and confidence in its performance. (Al-Tarshi, Muhammad Bu Falih Nabil, 2017, 88).

3.1. The Concept of the Banking Sector:

The banking system refers to those banks that deal in credit. The banking system performs its role in the economy by providing credit to institutions and individuals who need it. With the development of the banking system, it began to perform a number of functions through private institutions, which are a type of bank or private banks with specialized banking systems. These functions include capital investment, stimulating production, encouraging savings, providing currency or cash cover, and managing and marketing foreign exchange operations, among others. These are the characteristics of the central bank's work. (Al-Qazwini Shaker ,1992, 49).

3.2. Main Characteristics of the Banking Sector:

The banking sector is characterized by several fundamental characteristics that play a pivotal role in the stability of the financial system and the development of the national economy. These characteristics make the banking sector an integral part of any country's economic structure. Here is a detailed explanation of these characteristics:

- Providing Diverse Financial Services: The banking sector provides a wide range of financial services, including deposits, borrowing, money transfers, and fund management. These services include opening current and savings accounts, issuing credit and debit cards, and providing personal and commercial loans. In addition, banks play a fundamental role in facilitating electronic payments, providing investment loans to institutions, and cross-border money transfer services. These services contribute significantly to facilitating daily financial transactions, thus enhancing overall economic activity.

- An Effective Role in Supporting the National Economy: The banking sector is considered one of the main pillars of supporting national economic growth. By providing the necessary loans for commercial and industrial projects, the banking sector helps finance various economic activities. Banks contribute to improving access to capital, which contributes to the growth of small and

medium-sized enterprises and promoting innovation. This is in addition to their role in supporting foreign investment by financing large projects, which helps improve the country's standard of living and increase productivity.

- **A Pivotal Role in Stimulating Capital Movement:** The banking sector is one of the main drivers of capital movement within the economy. By attracting deposits from individuals and companies, banks redirect these funds to other sectors such as industry, trade, and services. Banks can provide loans to companies to expand their businesses or implement new projects, which enhances capital movement in the markets. Furthermore, banks play a significant role in encouraging investment by providing flexible investment vehicles such as investment funds, fixed deposits, and financial markets.
- **Direct Impact on Monetary Policy and Inflation:** The banking sector has a significant influence on monetary policy in any country, as central banks rely on banking institutions to implement their monetary policies. For example, by setting interest rates and imposing restrictions on the amount of credit, the central bank can direct liquidity in the economy. This directly affects inflation levels. When there is an increase in loans and credit, this can lead to increased demand for goods and services, contributing to higher price levels and thus increasing inflation. Conversely, when credit is restricted, liquidity in the economy is reduced, contributing to a reduction in inflationary pressure. (Bosbatat Ryan 2020, 10).

3.3. Types of Banks: There are several types of banks that differ in terms of the services and functions they perform in the financial system. Some banks focus on individuals and consumers, while others focus on institutions and companies. The main types include:

- **Commercial banks:** These banks provide banking services to ordinary consumers, such as current and savings accounts, in addition to providing small and large loans to individuals.
- **Investment banks:** These banks provide financial services, including facilitating the purchase and sale of stocks, financing large companies, and organizing initial public offerings (IPOS).
- **Central banks:** These banks manage the country's monetary policy, issue the national currency, and regulate the banking system in general.
- **Cooperative banks:** These are financial institutions that involve a group of individuals for financial or social purposes. They differ from commercial banks in that they aim to provide banking services at low interest rates.
- **Islamic banks:** These operate in accordance with the provisions of Islamic Sharia and provide financial services that do not involve interest.

Each of these types of banks offers specialized services to meet the needs of specific customer segments. For example, commercial banks aim to meet the needs of individuals in daily transactions,

while investment banks provide complex financial solutions to large institutions.(Bakour Hanan 2014, 7).

4. The Relationship Between FinTech and the Banking Sector:

Central banks have sought to leverage fintech technologies to improve the banking sector's operating environment in countries and prepare them for global competition. These banks have launched electronic payment gateways that allow users to conduct most of their transactions electronically. They have also allowed many fintech institutions to engage with banks to facilitate their work.

Central banks have also sought to leverage fintech technologies to develop payment systems, settlement methods and tools, and clearing operations, leveraging the latest information technologies. Therefore, they have granted licenses to a group of companies offering digital financial services. Regarding electronic payments and electronic money transfers, among the channels providing digital financial services are automated teller machines (ATMs), which have evolved to allow for withdrawals, deposits, and balance checks. They have also allowed for electronic services provided via mobile phones, such as balance monitoring, submitting checkbook requests, and making instant cash transfers via the bank's mobile application. Fintech and its technologies have become a means of completing transactions and banking services that previously could only be performed in person by visiting a bank branch.

Therefore, highlighting the role of financial technology in developing and innovating banking services, its role in diversifying products and operational efficiency, and its role in achieving financial stability and preserving customer data are highlighted below (Boumoud et al., 2020).

Financial technology and the development and innovation of banking services: Financial technology has contributed to the diversification of services provided by banks, such as mobile payments, the provision of digital credit services, and the acceptance of electronic deposits.

The role of financial technology in increasing banks' operational efficiency: It has significantly contributed to reducing the costs of financial, credit, and investment transactions, enhancing their competitive advantage.

The role of financial technology in achieving bank stability can be summarized as follows

- Financial technology has contributed to increasing banks' financial stability, reducing credit, liquidity, and operational risks, and increasing profitability rates.
- The role of financial technology in protecting customer data: Financial technology has been able to reduce the risk of customer data theft and protect customer confidentiality and privacy.
- The role of financial technology in improving the efficiency of banking operations: New innovations in the field of financial technology have contributed to improving the efficiency of banking

operations, due to the use of encryption technologies and interoperable ecosystems. This leads to. (Nagham H. Neam And Safa A. Hussein, 2025.113)

5. Conclusions and Recommendations

5.1. Conclusions:

- The possibility of adopting financial technology methods, as they are innovative and improve traditional banking services.
- The digital transformation towards financial technology in the Iraqi banking sector integrates banking operations and contributes to providing higher-quality banking services.
- The transition towards financial technology is possible in the Iraqi environment, given the availability of infrastructure and human and material capabilities.

5.2. Recommendations:

The research yielded a number of recommendations, the most prominent of which are:

- Activating digital work in the Iraqi banking sector through support and encouragement from the Central Bank of Iraq.
- Encouraging employees in the Iraqi banking sector to enhance their digital skills by implementing the FinTech Problems Program across all banking services.
- Financial technology is a promising and fertile research area for many future research projects by researchers. This is achieved by encouraging graduate students to delve into this field.

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The author(s) declare that it is not applicable.

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