The role of Islamic financial technology in achieving financial inclusion for Islamic banks - A reference to the case of Qatar Islamic Bank-.

دور التكنولوجيا المالية الإسلامية في تحقيق الشمول المالي للمصارف الإسلامية "إشارة إلى حالة مصرف قطر الإسلامي"

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Received: *27/03/2023;* **Accepted :** *12/01/2024;* **Published:** *30/06/2024*;

Abstract:

This research paper aims to determine the extent to which Islamic banks adopt Islamic financial technology as a means of achieving financial inclusion. It also sheds light on the reality of using financial technology in Islamic banks by reviewing the experience of Qatar Islamic Bank. Given the nature of the subject and in order to achieve the objectives of the study and cover its various aspects, the descriptive method was adopted to describe the study's details and development, as well as the analytical method to analyze various data and statistics of the study.

The study concluded with a number of results, including that financial technology effectively contributes to achieving sustainable development of the Islamic financial industry through innovative solutions and new financial products and tools it has created. It also helps reduce financing risks and achieve financial inclusion in the bank under study.

Keywords: *Islamic financial technology; Islamic banks; financial inclusion.*
Jel Classification Codes:*G21;G23.*

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Introduction:

Islamic banks have kept up with most of the technological advances that have been used in the financial and banking sectors before fintech. These include credit cards, ATM platforms, e-banking, mobile banking, and more. They have successfully utilized information and communication technology to execute Islamic banking operations. In the last 50 years, Islamic banks have overcome various challenges, including global and regional financial crises, and have become a strong competitor to traditional banks. They have also adapted to the requirements of the Basel Committee on Banking Supervision and its three stages. Additionally, Islamic banks support and adopt financial inclusion, aiming to provide financial services to as many people as possible. One of the main results of fintech is serving people, especially customers in the financial and banking sectors, in the easiest, fastest, and least costly ways possible. Therefore, Islamic banks should be the fastest to collaborate with fintech companies to adapt their new products and technologies and incorporate Islamic financial engineering products and tools. Fintech can effectively contribute to the sustainable development of the Islamic financial industry by enabling it to find innovative solutions, new financial products, and tools that expand the basket of Islamic financial products and develop existing ones in line with the economic and financial developments witnessed around the world. Moreover, it responds to the aspirations and needs of Islamic finance customers. Fintech also contributes to reducing the risks of Islamic finance through innovative techniques that embody its characteristics and achieve the advantages of the Islamic economy. This is achieved through cooperation and participation between Islamic financial technology platforms, banks, and Islamic financial institutions, under the effective supervision of Shariah supervisory bodies in banks and Islamic financial institutions, to ensure the avoidance of financial technology applications that involve prohibited elements in Islamic financial transactions. They should be characterized by transparency and not include hidden costs or irresponsible or unethical financing, especially since Islamic banks cannot continue or develop in their traditional forms unless they keep up with the evolving priorities of customers, enabled by financial technology.

Study problem:

The problem of this study can be formulated in the following main question:

How does Islamic fintech contribute to enhancing financial inclusion for Islamic banks?

Study Hypothesis:

To answer the main problem and its elements, a main hypothesis was adopted, stating that:

The application of Islamic financial technology in the Islamic banking industry may promote the services and products of Islamic banks and increase their competitiveness in the market.

This leads us to believe that the use of this technology by Islamic banks to achieve financial inclusion is of paramount importance, as it is linked to the demographic economy, poverty reduction, and an indicator of economic growth.

Study objectives:

The aim of this study is to clarify the concepts related to Islamic financial technology and financial inclusion, to demonstrate the reality of Islamic financial technology in the world, and to shed light on the experience of adopting financial technology at Qatar Islamic Bank. The study also aimed to provide results and recommendations that contribute to supporting financial inclusion indicators through Islamic financial technology.

Study Approach:

In order to arrive at a clear answer to the problem at hand and the research questions and to achieve the desired goals in line with this topic, a descriptive methodology was adopted as it is the suitable approach for the study. This approach reviews all theoretical concepts and ideas as well as an analytical methodology that collects, arranges, classifies, analyzes, and interprets information and data and attempts to link them together.

Literary review:

Regarding previous studies, we have selected the following studies related to our research topic, as follows:

- A study by Alioui, Maziane Mohammed Tawfik (2022), entitled "Islamic Financial Technology and Its Role in Enhancing the Growth of Islamic Finance", aimed at highlighting the role that Islamic financial technology solutions can play in enhancing the growth of Islamic finance and improving its quality. The study concluded that the Islamic financial industry is growing and expanding, and this growth can be accelerated by regulatory bodies in Islamic countries developing the ecosystem for Islamic financial institutions and aligning it with the developments of the Fourth Industrial Revolution using Islamic Sharia-compliant financial technology tools.
- A study by Gharbi Abdelhalim Ammar (2020), entitled "Towards a Conceptual Framework for Islamic Financial and Banking Inclusion - An Analytical Study of Its Dimensions, Indicators, and Effects", aimed at highlighting the efficiency of access to a safe and formal financial and banking system at reasonable prices in improving the living conditions of financially excluded customers. This study provides guiding principles for researchers and policy makers to measure the spread of Islamic financial services and their impact on individuals, companies, and the economy, and to achieve a balance between inclusion, stability, integrity, and protection.
- A study by Mahajebia Nacira and Brich Rabeh (2022), entitled "The Use of Financial Technology Techniques in the Islamic Financial Industry - A Case Study of OIC Countries", aimed at demonstrating the uses of financial technology techniques in the Islamic financial industry, such as blockchain and cryptocurrencies, and their reality in OIC countries. The study found that financial technology, through its techniques, contributed to the spread and development of Islamic finance, especially in terms of low cost and transaction speed. In reality, Islamic financial technology is still new, and investors are unable to determine the size of investments worthy of investment.

I-Theoretical framework of Islamic financial technology:

I-1- The concept of financial technology and its importance:

FinTech is a concept that refers to the use of technology in financial transactions that contributes to improving traditional financial services and making them accessible to a larger segment of beneficiaries outside traditional financial systems. Researchers have different opinions on defining the concept of FinTech, depending on the subject of their study. FinTech is known as a set of new digital services in the field of financial information such as financial planning, financial consulting, payments, financing, investments, and support for shared operations between customers and banks(Rainer, Roman, Martin, & Smits, 2018, p. 235).

Some people see FinTech as a broad package of electronic financial services that are more convenient, reasonably priced, and less expensive than traditional services, serving low-income individuals and contributing to improving their livelihoods and economic situation (Huma , 2018, p. 02). It can also be defined as innovative services and products provided through technology, such as mobile phones, the use of cryptocurrencies like Bitcoin, and blockchain instead of traditional currencies (Lee David & Teo Gin , 2015, p. 04).

The Financial Stability Board has expressed that FinTech is a technology-supported innovation that can lead to new commercial models, applications, processes, and products that have a material impact on the provision of financial services. The term FinTech also refers to the delivery of financial and banking services through modern technological innovation, driven by computer programs and algorithms (Peterson, 2018, p. 231).

From the above, it can be observed that the concept of FinTech expresses the extent of companies' ability to provide modern financial services that align with the beneficiaries' needs based on their work nature, environment, and financial capacity. Banks that use financial technology work on spreading the culture of financial technology to all those who benefit from financial services. This is in order to achieve their goals, gain the trust of beneficiaries in financial technology products and services, and focus on transitioning from traditional means and services to modern technology services that offer greater benefits, quality, and efficiency at the lowest possible cost and risk.

The importance of financial technology (fintech) is highlighted as one of the main channels in serving beneficiaries through its modern financial products and services, providing large technologies for banks that contribute to financing companies, capital markets, data analysis, financial statements, payments, and also help customers manage their finances. Fintech also contributes to reducing costs and increasing capital in the appropriate quantity and speed for all beneficiaries (Nassiry , 2018, p. 06). The importance of fintech also lies in the fact that it imposes challenges on regulators and market participants to balance the potential returns and risks of modern financial innovations to ensure their continuity and survival in the market. Fintech plays an important role in enhancing the Gross Domestic Product (GDP) of the economy by providing companies and individuals with easy access to a range of financial tools such as credit facilities, overall expenses, and increasing the volume of financial transactions (Peterson, 2018, p. 229). Fintech has become more important when it provided financial services throughout the year and even during official holidays, unlike traditional banks and companies that have limited days in which they stop providing services such as holidays, official holidays, and outside official working hours.

I-2- Financial Technology Innovations:

The technologies promoted by fintech are very diverse, and although their classification is still largely variable, they are often related to the following area (Nasira & Brech, 2022, pp. 97-98)s:

- **Big data analytics:** The International Organization for Standardization defines big data as a set of data with unique characteristics such as size, speed, diversity, variability, data accuracy, etc., that cannot be efficiently processed using traditional technology to be utilized.

- **Artificial intelligence:** This technology enables various financial functions to be performed automatically without human intervention, which has led to a significant breakthrough in the financial services industry, making it faster and more accurate in responding to customers.

- **Cryptography:** Cryptocurrencies are produced through mining and exchanged in a decentralized manner. This type of currency has many advantages that have contributed to the development of the payment and global trade sector by facilitating the payment process and settling transactions quickly and at lower costs by transferring money without an intermediary from peer to peer. However, the lack of a central authority raises the issue of protecting money and financial stability, and even the economy as a whole.

- **Distributed ledger technology:** One of the most prominent technologies is blockchain, which is a chain of blocks. This chain is a connected network of people who interact with each other in the form of data blocks in a decentralized manner.

- **Internet of Things:** This technology allows various objects to be connected to the internet through sensors, which constantly provide data. Currently, information plays a pivotal role in the competition process and market expansion. For example, bank cards can be linked to the internet to know their location in case of loss, and to know the locations of money withdrawals and various customer consumption.

- **Cloud computing:** It is a multi-purpose technology that uses data stored on servers over the internet in a network of computer resources characterized by speed and cost-effectiveness. In the future of banking technology, banks are expected to transfer their technology to the cloud.

I-3- The concept of Islamic financial technology and its services:

The term Islamic financial technology (IFinTech) includes two main components: financial technology and Islamic finance. It refers to the integration of technology and Islamic finance, which means that any product or service that arises from financial technology must comply with the rules derived from Islamic law. Products and services that comply with Islamic law are provided through innovative digital channels. Its activities include creating new business models based on technology to enhance economic, environmental, financial, and social goals, which include providing better services through Islamic financial products, achieving broader benefits such as financial inclusion, poverty alleviation, and social justice (Hazik & Hassnian, 2019, p. 70).

The Islamic financial system is characterized by risk-sharing and compliance with Sharia rules. However, since the emergence of Islamic banking in the 1960s and 1970s, this industry has faced many criticisms for imitating the traditional banks' method based on risk transfer. The annual budgets of Islamic banks show a concentration of two products (based on debt), namely Murabaha and Ijara. While we find very low percentages of products based on participation, represented by Mudaraba and Musharaka. This contradicts the fundamental essence of Islamic finance. Islamic financial technology provides an opportunity to adopt and implement a risk-sharing model in

Islamic financial institutions through innovative small start-ups that wish to contribute to the Islamic finance industry. An example of this is Neo Bank, a digital bank that provides opportunities for funders and investors seeking genuine risk-sharing, and interest-free products and services (Abdul Karim & Mezyan, 2022, pp. 91-92).

Islamic financial technology works to democratize financial services and deliver them through new digital channels. It also helps to reduce information asymmetry, fraud, and lack of trust between counterparties. For example, through monitoring with a distributed ledger (blockchain) in smart contract applications, Islamic fintech companies can achieve greater efficiency and transparency in their operations. The Islamic endowment model can also be used on blockchain to contribute to the efficient and effective management of endowments. Islamic financial technology can promote responsible and ethical financing, such as social projects, which often cannot obtain funding through traditional banking and financial institutions. However, through crowdfunding platforms such as Launch Good and Skola, individuals and small businesses in any sector can obtain funding for their social impact projects (Abdul Karim & Mezyan, 2022, pp. 91-92).

As for the main types of services provided in Islamic fintech, they include (Nasira & Brech, 2022, pp. 99-100):

- **Peer-to-Peer (P2P) lending:** These platforms bring together lenders and borrowers in a decentralized manner that allows for easy financing and investment at very low costs;
- **Crowdfunding:** These platforms collect funds from the public to finance a specific project and are based on various types (equity-based, donation-based, reward-based, and loan-based);
- **Mobile money transfers and payments:** This is the most active sector, and these services are provided by many financial institutions and even startups;
- **Trading platforms:** Similar to stock trading platforms, these reduce transaction costs and eliminate intermediary costs such as brokers;
- **Wealth management:** By combining technology and wealth, wealth management can be done with the latest technologies;
- **Insurance:** Through the application of various technologies in providing insurance services.

II-Financial inclusion in Islamic financial institutions:

II-1- The concept of financial inclusion and its importance:

The definitions of financial inclusion have varied, the most prominent of which are:

Financial inclusion is defined as the ability of individuals and institutions to access official financial services that meet their needs, including access to credit, bank accounts, payment facilities, insurance, and risk management services (Joseph, Dhanuraj , & Antony , 2017, p. 53).

Financial inclusion is also the state in which any person can use it to access a comprehensive range of high-quality financial services provided at reasonable prices and in a convenient manner while retaining their respect and dignity (Alexandra & Laurent , 2016, p. 46).

The Group of Twenty (G20) and the Alliance for Financial Inclusion (AFI) define financial inclusion as the regulatory actions taken to enhance access and use of financial services and products by all segments of society, including those who are financially excluded or underserved, by providing them with services that meet their needs in a fair, transparent, and affordable manner (Odeh & Salem , 2019, p. 63).

Financial inclusion seeks to provide many services that benefit its beneficiaries (Recep , 2018, p. 248):

- Financial inclusion is a humanitarian activity and an untapped business opportunity that includes a large segment of the population and their welfare.
- Financial inclusion contributes to financial stability by diversifying the deposit portfolio of banks and financial institutions, while achieving levels of concentration that reduce the risks of these institutions. This diversification enhances the stability of the economic system of countries.
- Financial inclusion enables the poor to save, invest, and build their assets in business projects, thus improving their livelihoods and securing their lives against social and economic vulnerabilities.
- Due to the significant disparity in the ability of rural and urban populations to benefit from financial services due to illiteracy and lack of knowledge about financial services, financial inclusion services seek to reach these poor people and provide them with comprehensive financial services.
- Financial inclusion has positive effects on markets by reducing market volatility risks and financial crises, increasing the size and stability of bank deposits, and thus improving the stability of the financial system, overall economy, and economic growth.
- Financial inclusion provides many benefits to society, especially to deprived sectors, by removing barriers in developing countries and providing free access to financial services.
- Financial inclusion promotes modern innovations as the Internet has facilitated opening and using current accounts and mobile phones to perform quick and easy transfer operations.
- The enforcement of compulsory financial inclusion laws contributes to forcing individuals, companies, and bank account holders to use digital financial services by setting limits on cash withdrawals through imposing high fees on withdrawals that exceed certain quantities or limits.

II-2- Islamic-compliant financial inclusion and its relationship with Islamic financial technology:

Many studies emphasize the importance of Islamic financial services that rely on financial technology to enhance financial inclusion for all segments of society. Recently, Islamic-compliant financial inclusion has attracted great attention from regulatory authorities, financial service providers, and other parties concerned with financial inclusion. Despite a fourfold increase in the number of poor clients using Islamic-compliant products in recent years, this emerging sector still struggles to find sustainable business models that meet the diverse financial needs of poor Muslims (Hussein & Matar , 2020, p. 59).

The World Bank's Global Financial Development Report indicates that introducing Shariah-compliant financial instruments is a positive factor in stimulating financial inclusion among the population of the Organization of Islamic Cooperation member states. A joint report by the Islamic Development Bank Group and the World Bank also states that Islamic financing is a potential incentive for improving access to the formal financial system. It can effectively address financial inclusion by encouraging the use of profit-and-loss sharing contracts, which are a practical alternative to debt-based traditional financing. These financing instruments, which involve risk sharing and asset-based financing, can provide Islamic-compliant microfinance and takaful insurance to enhance access to financing.Islamic financing is a good alternative for companies and individuals who refrain from using traditional financial services for religious or financial reasons (Gharbi, 2020, pp. 12-13).

As the role of financial technology companies in providing financial and banking services and improving digital financial inclusion levels in many countries grows in recent years, the true measure of the success of financial technology as an industry or sector does not lie in developing another tool for the comfort of bank customers, but in its contribution to enhancing financial inclusion for financially excluded groups and improving access (Union of Arab Banks, 2019, p. 20), use, and quality of financial and banking services. Financial technology also helps overcome the challenges of expanding financial services, which helps increase the efficiency of these services by reducing the time and cost required to complete financial transactions. Additionally, digital channels deployed by banks, telecommunications companies, and other service providers have helped millions of people with mobile phones access digital financial services in recent years, linking them not only to payment services, but also to savings, insurance, investment, credit facilities, and loans. Furthermore, financial services through mobile phones have helped access basic payment services (Arab Monetary Fund, 2019, p. 18). Modern financial technologies also contribute to achieving financial stability, using technology to ensure compliance with regulatory rules and risk management, facilitating international trade and transfers by providing efficient and effective mechanisms for cross-border payments. The widespread use of electronic payment methods can also improve the efficiency of government administrative processes. Therefore, financial technology plays an important role in addressing critical challenges in promoting financial inclusion and diversifying activity through innovations that help provide financial services to a large segment of the population who do not deal with traditional banks (Union of Arab Banks, 2018, p. 39).

III-Financial technology as a mechanism for enhancing financial inclusion for Islamic banks:

III-1- The development of global investment activity in financial technology:

The global investment activity in financial technology has seen rapid growth following the 2008 crisis. This field has achieved a clear leap forward in the aftermath of the COVID-19 pandemic due to the conditions that facilitated the use of technology in various fields, not to mention the financial services sector. Global investment in financial technology in the first half of 2021 was estimated at $98 billion, including mergers and acquisitions, private equity, and venture capital, compared to $87 billion in the second half of 2020. In the first half of 2021, 163 unicorn companies were established. The low-risk and liquid securities reserves, as well as the diversification of positions and sub-sectors in this revival of the financial technology sector, contributed to this growth. It can be said that despite the spread of the COVID-19 pandemic, global investment activity in financial technology remained strong and flexible throughout the pandemic, and 2021 was a year of prosperity and recovery for the financial technology sector (KMPG, 2021, p. 04).

As for the qualitative development of global investment in financial technology, global venture capital investment reached $523 billion in the first half of 2021, approaching the annual record of $54 billion in 2018. Private equity investment remained relatively stable, reaching $3.1 billion through 63 deals in the first half of 2021, despite the spread of the COVID-19 pandemic. Investment in venture capital and private equity maintained their flexibility throughout the pandemic period. Companies have become more active in pursuing venture capital deals due to the increasing pressure to accelerate digital transformation and enhance their digital capabilities. They participated in deals valued at $21 billion in more than 600 deals worldwide. Companies have realized that they can achieve their goals faster by merging with, investing in, or acquiring companies operating in the fintech sector. The value of merger and acquisition deals reached $40.7 billion through 353 deals in the first half of 2021, compared to $74 billion through 502 deals in 2020. The value of cross-border merger and acquisition deals also increased significantly from $10.3 billion in 2020 to $27.7 billion in the first half of 2021 (KMPG, 2021, p. 08).

Regarding the development of global investment in financial technology by sector, global investment in wealth technology reached $1.4 billion in 2021, exceeding the $0.8 billion investment in 2020. Additionally, we note significant growth in investment in cybersecurity, rising from $0.5 billion in 2018 to $3.7 billion in the first half of 2021. In the first quarter of 2021, investment in insurance technology remained strong, including mergers and acquisitions for special purposes totaling $828 million, as well as the merger of Clover Health in the United States and Futur PLC's acquisition of GOCO in the United Kingdom for $818 million. On the other hand, major technology companies continued to focus on establishing partnerships that include technological insurance offerings on their platforms. Google announced partnerships with MunichRe and Allianz to provide electronic insurance to Google Cloud customers. Investment in the cryptocurrency and blockchain sector also grew during the first half of 2021 to $8.7 billion, more than double the $4.3 billion observed in 2020. The cryptocurrency sector has become more mature, and investors are more aware and knowledgeable about the assets and operational and financial aspects of the sector. Investment in the payments sector decreased in the first half of 2021 to $19 billion. As for regulatory technology, investment in this sector reached $6.6 billion in the first half of 2021, with investment particularly high in the Americas and European countries. Regulatory regulations for this technology contributed to this growth, as did the increase in financial activities online due to the COVID-19 pandemic, leading to a recovery in investment in this sector (Khawla, 2022, pp. 406-407).

III-2- Developments in the Islamic fintech market:

The Global Islamic Fintech Report for 2021 highlights leading insights into the thriving Islamic fintech landscape, which has seen 241 fintech companies emerge worldwide. The report indicates that the largest number of companies are in the crowdfunding and peer-to-peer lending sector with 44 emerging companies, followed by the deposits and loans sector with 40 emerging companies, including Insha, based in Germany, which targets financially excluded segments of society and uses banking services as a service provider to accelerate access to markets and individuals. Algebra is another emerging company that provides services related to customers' financial needs. In the payments and remittances sector, there are 37 emerging companies that provide services related to payment settlement and digital money transfer between parties, leading to cost reduction and faster execution. The alternative finance sector has 32 emerging companies from various countries. The wealth management sector includes 32 companies such as Wahed, located in the UAE, which provides robo-advisory services and funds early-stage institutions. The digital assets sector includes 20 companies that provide their clients with digital currency trading platforms, blockchain platforms, digital wallets, such as Rain in Bahrain and Fasset in the United Kingdom (Standard, 2021, pp. 05-11).

As of 2020, the estimated size of the Islamic financial technology (Fintech) market in the Organization of Islamic Cooperation (OIC) countries reached $49 billion, which represents 0.72% of the global Fintech market size based on transaction volume. Forecasts indicate that the Islamic Fintech market will continue to grow at an annual rate of 21% to reach a level of $128 billion by 2025. This is a positive indicator compared to the estimated CAGR of traditional Fintech at 15%. The top five markets, Saudi Arabia, Iran, the United Arab Emirates, Malaysia, and Indonesia, control 75% of the Islamic Fintech market in the OIC, indicating a high concentration of market activity among these leading countries. Saudi Arabia, the United Arab Emirates, Malaysia, Turkey, and Kuwait are the top five markets in the OIC for Islamic Fintech based on transaction volume, indicating a strong dominance by countries in the Middle East, North Africa, and Turkey. 77% of Islamic Fintech companies are active in fundraising, deposits, lending, wealth management, alternative finance, and payments (Standard, 2021, p. 26).

Despite the increasing number of countries experiencing Islamic fintech activity, or in a good position to facilitate such activity, there is no standardized classification or index for comparing these countries in the field of Islamic fintech. It was necessary to have such a classification, and this report presents the GIFT index for Islamic fintech, which is an index created to measure the growth rate of the Islamic fintech market in Islamic countries, as well as the development of the ecosystem in these countries. In the top 10 list of a group of 64 countries, we have nine countries out of ten, or 90%, belonging to the Organization of Islamic Cooperation, most of which are Muslim. The only exception is the United Kingdom, which has a thriving Islamic fintech system, due to several factors including an active Islamic fintech market and the presence of many Islamic fintech companies, supportive regulatory frameworks, and advanced financial and technology sectors. Islamic fintech companies focus on areas such as crowdfunding, deposits and lending, payments, alternative financing, and wealth management with a growth rate of over 10%, and between 5% and 10% in digital asset sectors and insurance. Their activity in other sectors is limited to between 1% and 3%, such as social finance, operations, and capital markets (Standard, 2021, p. 10).

III-3- Financial Technology Applications in Qatar Islamic Bank:

Many Islamic banks have sought to apply financial technology to their services in order to ensure the continuity of their activity. In order to study the extent to which Islamic banks adopt this feature, we will analyze the data of Qatar Islamic Bank as a model for study. Qatar Islamic Bank was established in 1982 as the first Islamic financial institution in Qatar and is one of the largest banks in the country, accounting for 40% of the market share of the Islamic banking sector. As for the digital services provided by the bank, we find(Qatar Islamic Bank, 2021):

- Developing an online banking portal for companies;

- Launching a digital account service for domestic workers, a service to support financial inclusion efforts that allows domestic workers to open digital accounts without fees;
- Launching a direct digital money transfer service;
- A digital wallet service called mPay;
- A campaign to complete your transactions from your home while feeling secure;
- Launching new touchless payment technology Taman cards, which came as an immediate response to the symptoms of the COVID-19 virus transmission.

Regarding the bank's contribution to financial inclusion through digitization, the positive numbers recorded in digital financial services during the COVID-19 pandemic related to the bank's mobile application, which targets smartphone users and has become a benchmark for reach and inclusivity. The application recorded 1.5 million monthly users, an increase of 50% compared to 2019. As for digital financial transfers, 90% of digital transactions were done through the mobile application.Regarding the ratio of digital services to traditional (non-digital) services in 2020, the bank recorded 68% of new customers through digital channels, including some who joined directly through branches. As an indicator of the bank's activity in financial inclusion, the percentage of new accounts opened digitally reached 78%, while only 22% were opened through traditional branches. For completed credit card applications, the digital percentage was 38%, which is lower than the traditional method due to the need for documentation and verification. In terms of corporate financing, 84% was distributed through digital services, while 16% was distributed through traditional services(Qatar Islamic Bank, 2021).

Estimates indicate that the total size of the Islamic financial technology market in Qatar will reach around 2.077 billion US dollars by 2025, equivalent to approximately 7.56 billion Qatari riyals, achieving a compound growth rate of approximately 19.59% over the five years. This reflects the continued investment flows towards the development of financial technology and the unlimited support that financial technology generally receives in Qatar, whether from regulatory and supervisory authorities in the financial and banking sector, Islamic banks operating in the country, or companies operating in this field. This is according to a report that sheds light on Islamic financial technology for the year 2021.Qatar is one of the leading countries in the field of Islamic finance, where Islamic banking assets account for more than 90% of total local Islamic banking assets and approximately 6% of global Islamic banking assets in 2019. Qatar is striving to create a conducive environment for Islamic financial technology (fintech) in the presence of multiple financing sources that rely on different Islamic channels. Thus, fintech companies can succeed in developing Islamic fintech, emphasizing that a range of factors will contribute to the expansion of Islamic fintech solutions, making Qatar at the forefront of countries working to develop this field. The report also highlighted that Qatar is working to provide the necessary legislative, logistical, and competitive infrastructure for Sharia-compliant financial companies, ensuring their success both inside and outside the country. The report pointed to several foundations that are relied upon to achieve this success, including creating a favorable environment with abundant funding sources, a variety of mechanisms to support talent and expertise to enhance innovation and participation to ensure the sustainability of companies and partnerships to enable the scalability of Islamic fintech solutions. The report also mentioned the mergers taking place in Qatar's banking system, which have produced and continue to produce huge Islamic banking entities. It is likely that the strength of Islamic banks will increase in terms of their capital and financing in general, thus providing more opportunities for innovation and supporting fintech companies, especially those specialized in Islamic fintech. In the same context, the report discussed the efforts of the Qatar Central Bank to establish a centralized Sharia supervisory authority as part of the second strategy to regulate the financial sector. Additionally, the Qatar Financial Centre is leading initiatives to support Islamic finance and fintech by providing a suitable climate and environment for the development of Islamic banking and fintech activities, by attracting many companies from both the local market and abroad (Fatna, 2022, pp. 114-115).

Conclusion:

The adoption of digital banking services by Islamic banks has contributed to the innovation of many financial services based on advanced financial technology, allowing them to modernize and enhance their competitive capabilities, and contribute to promoting the inclusiveness of Islamic banking. Financial technology has been able to change the nature of Islamic banking, where it has become a new field that includes technological skills and financial techniques, provided accurately and in the shortest possible time. This has led to an interest in financial technology and investment in it by various sectors, including the Islamic banking industry, to keep pace with its rapid developments. Islamic banks have also worked to provide a suitable environment that aligns with their nature of work. Many countries, particularly Gulf countries, Asian countries, and Britain, have succeeded in introducing financial technology in Islamic banks, which has led to the distinction of these banks. This is evident in the assets of these banks and the type of service they provide.

The study has arrived at a set of results that can be summarized in the following elements:

- Despite the prevalence of Islamic fintech companies in a number of countries, they are still in the early stages of growth in Islamic countries. Embracing fintech will contribute to enhancing the level of financial inclusion of financial services by providing sustainable digital and technological financial services that are faster, cheaper, and easier, while combining Shariah controls and economic efficiency considerations. Despite the existence of different technologies for fintech, its entry into the world of Islamic finance is still in its early stages.

- Financial inclusion is an essential component in achieving equality among different segments of society by enabling them to access necessary financial and banking services to settle their financial transactions, establish their projects, save their financial surpluses without discrimination. This helps fight poverty and hunger, provide job opportunities, universal healthcare, education, achieve social justice, and empower them economically and socially, thereby contributing to achieving comprehensive and sustainable economic growth.

- Islamic fintech has witnessed several developments, including the rise of 241 Islamic fintech companies and the Islamic fintech market size reaching $49 billion. Additionally, Islamic fintech companies' activities were concentrated in several sectors.

- Qatar Islamic Bank was able to create digital financial services based on Islamic fintech, which contributed to achieving encouraging numbers in financial inclusion indicators.

Based on these results, we can extract a set of recommendations summarized as follows:

- Central banks and regulatory authorities should enact new rules aimed at removing obstacles to financial technology, particularly electronic payments, and recognizing mobile companies as providers of financial services rather than just financial intermediaries. Allowing mobile companies to offer digital banking services will provide banks with wider coverage, especially in remote areas, and reduce financial allocations for branch establishment.

- Providing the necessary infrastructure for expanding financial inclusion, creating a favorable regulatory and legal oversight environment, raising awareness of financial risks and opportunities.

- Emphasizing electronic systems and maximizing the benefits of the significant development of innovative financial services and products, developing the infrastructure of the Arab financial system, improving credit reporting systems, protecting creditor rights, and facilitating guarantee systems.

- Expanding the range of Islamic financial services and products to meet the needs and demands of Islamic finance, by enhancing access and entry to small and medium-sized projects and individuals who prefer Shariah-compliant banking and financial transactions.

- Increasing awareness and knowledge of Islamic products, their application mechanisms, and clarification to all parties, significantly contributing to achieving financial inclusion for sectors and strengthening the role of financial institutions.

- Enhancing the role of Islamic financial instruments and wealth distribution tools in financial inclusion, by limiting the receipt and distribution of these tools in the official financial system through bank accounts, increasing the number of financially included, especially those with limited income and access to financing.

- Minimizing the simulation of traditional financing in financial engineering and focusing on highlighting the fundamental characteristic of Islamic finance, which relies on risk-sharing mechanisms, and Islamic financial technology provides a promising opportunity to achieve this goal.

- The necessity of benefiting from the experiences of Islamic banks that have applied financial technology techniques and identifying the factors of success in them, especially the experiences of Malaysia, Indonesia, Bahrain, and other countries.

- The necessity of scientific and practical qualification of workers in the Islamic financial industry and their acquisition of skills that are in line with the requirements of customers for digital financial services that are compatible with Islamic Sharia.

Referrals and references:

1. Hussein, N., & Matar , A. (2020). *Financial Inclusion, Application Requirements and Measurement Indicators.* Amman: Dar Al-Ayyam for Publishing and Distribution.
2. Recep , Y. (2018). An Analysis Of Constructing Global Financial Inclusion Indices. *Borsa _Istanbul Review*.
3. Abdul Karim, A., & Mezyan, M. (2022). Islamic financial technology and its role in promoting the growth of Islamic finance. *Al-Imtiaz Journal for Economics and Management Research*.
4. Alexandra , Z., & Laurent , W. (2016). The Determinants Of Financial Inclusion In Africa. *Review Of Development Finance*.
5. Arab Monetary Fund. (2019). *Financial Stability Report in the Arab Countries.* Arab Monetary Fund.
6. Fatna, B. (2022). The role of financial technology in developing the performance of Islamic banks: presentation of the experiences of leading countries. *Al-Bashaer Economic Journal*.
7. Gharbi, A. (2020). Towards a Conceptual Framework for Islamic Financial and Banking Inclusion - An Analytical Study of Its Dimensions, Indicators, and Impacts. *Algerian Journal of Banking and Financial Studies*.
8. Hazik, & Hassnian. (2019). *Blockchain Fintech and Islamic Finance.* Boston: Degruyter.
9. Huma , H. (2018, 06 22). Innovative Financial Technologies To Support Livelihoods And Economic Outcomes.
10. Joseph, M., Dhanuraj , & Antony , J. (2017). Influence Of Financial Inclusion And Financial Self Efficacy On The Credit Behavior Of BPL Households. *International Journal Of Research In Economics And Social Sciences*.
11. Khawla, M. (2022). Financial Technology in light of the Corona Pandemic: Opportunities and Challenges. *Al-Aseel Journal for Economic and Administrative Research*.
12. KMPG. (2021). *Pulse of Fintech.* KMPG.
13. Lee David, K., & Teo Gin , S. (2015). Emergence Of Fintech And The Lasic Principles. *Journal of Financial Perspectives*.
14. Nasira, M., & Brech, R. (2022). The Use of Financial Technology Techniques in the Islamic Financial Industry - A Case Study of the Organization of Islamic Cooperation Countries. *Annals of Guelma University of Social and Human Sciences*.
15. Nassiry , D. (2018). *The Role Of Fintech In Unlocking Green Finance: Policy Insights For Developing Countries.* Tokyo: Development Bank Institute (Adbi).
16. Odeh, L., & Salem , H. (2019). Proposed mechanisms and policies to expand the base of the spread of financial inclusion in order to reach financial service in Iraq. *Al-Alam University Journal*.
17. Peterson, O. (2018). Impact Of Digital Finance On Financial Inclusion And Stability. *Istanbul Review*.
18. Qatar Islamic Bank. (2021). *Annual Report.* Qatar : Qatar Islamic Bank.
19. Rainer, A., Roman, B., Martin, T., & Smits. (2018). *Fintech And The Transformation Of The Financial Industry.* Electronic Markets.
20. Standard, D. (2021). *Global Islamic Fintech Report.* Salaam Gateway .
21. Union of Arab Banks. (2018). Financial Technology and Artificial Intelligence in the Financial and Banking Sector. *Specialized Monthly Journal*.
22. Union of Arab Banks. (2019). The reality of financial inclusion and the role of financial technology in promoting it. *Journal of Studies Research and Reports*.