

FINANCIAL TECHNOLOGY IN EGYPT BETWEEN OPPORTUNITIES AND CHALLENGES

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Abstract - In Egypt, the Central Bank of Egypt is working to launch a new phase of financial technology, as one of the pillars of promotion of economic reform, and an effective and supportive mechanism for integrating the informal economy for individuals and institutions within the structure of the official economy of the state, and a way to Reality to raise and improve the standard of living and reduce poverty rates by containing certain segments of society from the marginalized, low-income and owners of small, medium and micro enterprises. The methodologies used explain the current state of financial inclusion and financial technology in Egypt, as well as the development of a law regulating and developing the use of financial technologies in non-banking financial activities in order to develop a mechanism for integrating the informal economy. The findings showed that enhancing the efficiency of the financial system and the effectiveness of monetary policy, are reflected in terms of financial stability which is considered one of the pillars of growth and transformation of the digital economy.

Keywords: financial exclusion, financial technology, smart phones, microfinance, opportunities and challenges, financial growth;

INTRODUCTION

In light of what the world is witnessing now of rapid and growing technological booms that cast a heavy shadow on the reshaping of the global economic system, and the accompanying emergence of many new terms on the dictionary of economic researchers such as globalization and Artificial Intelligence and other terms, the term financial technology is one of the concepts that have spread strongly during the past few years, especially in countries that lack this type of market mechanisms such as Egypt, through which a great deal of transparency and financial stability can be achieved, so that the search for This target, and this level of efficiency and quality in the banking financial field, represents a dream or even a kind of luxury, but it has become a challenge and an urgent requirement for the decision-maker as one of the pillars of economic growth, and with all the special capabilities it can provide for integrating informal economies into the structure and structure The official economy of any country, especially the developing ones.

Although countries rely mainly on banks to achieve the effectiveness of the monetary policy, as the tool that is used to address potential economic imbalances, which called for constant attention to developing the technological infrastructure of these banks. To urge it to provide more banking services to its customers, and thus monitor and activate all that is new from these financial technology techniques⁽¹⁾Especially in light of the entry of new players to this service area, with the

⁽¹⁾ In Egypt, for example, banks are the entity that controls the financial sector in a large way, as the size of the banking sector has increased compared to the size of the economy from 91% in 2013 to 122% in 2016. The Egyptian banking sector consists of five public sector banks and about 28 private banks, in addition to Seven foreign investment banks, where bank branches are spread in various governorates of the Republic at 4.5 branches per 100,000 people (one branch per 22,000 people), which means a low Egyptian banking density compared to the global average of (one branch per 8,000 people). The top of the banking system exercising its authority in supervision and evaluation... See:

emergence of many start-up companies within a large group of financial institutions with expertise in this field, which designed their plans and targets to provide a distinct variety of financial services including payments, digital currencies, money transfer, lending, crowdfunding and risk management etc., which made their provision of these services similar to those provided by traditional banks represent a burden and a new challenge for these banks, especially in light of the ability of these emerging companies to provide their services to segments of customers that are difficult for traditional banks to reach, such as remote and rural areas for example.

Egypt aspires to be a leading country in the field of digital payments, and from here it is working to launch a new phase of financial technology, as one of the pillars of growth and transformation of the digital economy and the promotion of economic reform, and an effective and supportive mechanism for integrating the informal economy for individuals and institutions within the structure of the official economy of the state, and a way to Reality to raise and improve the standard of living and reduce poverty rates by containing certain segments of society from the marginalized, low-income and owners of small, medium and micro enterprises.

Hence, financial inclusion and financial technology came at the top of the agenda of the Central Bank of Egypt, within the framework of achieving financial stability, to support economic growth and sustainable development goals, which is a main focus of the "Egypt Vision 2030" strategy, given that financial technology is an integral part of the vision as a national priority.⁽²⁾ As there are many roles and dimensions for financial market regulators in search of building and achieving a comprehensive Egyptian financial system, which can be primarily driven by the collective efforts of regulatory bodies "such as the Central Bank, the Ministry of Finance and non-bank financial services regulators", under the umbrella of the government as a policy maker, by effectively addressing the repercussions and failures on financial exclusion, and the formulation of a real national strategy that affects market regulations, the legal framework and the infrastructure of the financial market, spreading awareness and financial education, and protecting the rights of lenders and borrowers. More precisely, drawing a road map for all parties responsible for achieving financial inclusion in Egypt, which ultimately reflects on achieving comprehensive growth, better promotion of the lives of the less fortunate, empowering the roles of the marginalized such as women, and creating a cashless society through the promotion of electronic payment services.⁽³⁾

1. LITERATURE REVIEW

Thus, the importance of the study lies in the fact that it addresses one of the core issues, which has become one of the challenges of the current stage for all countries, including Egypt, which is the issue of financial technology and the pivotal roles it can achieve related to enhancing financial stability and contributing to achieving economic growth.

The financial sector in Egypt relies on banks as the cornerstone and the most controlling entity within the sector, as all banking institutions, commercial and specialized, are subject to the control and supervision of the Central Bank of Egypt. Central Bank of Egypt (ECB) In addition to being responsible for setting the financial policy, while the Financial Supervisory Authority takes charge of Financial Regulatory Authority (FRA), which was established in 2009, monitors and regulates all non-bank

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- The Central Bank of Egypt: The role of the banking sector in supporting the financial inclusion of women, a case study of central banks and some commercial banks in Egypt, Jordan and Palestine during the period (2011 - 2019), Egyptian Banking Institute, 2020, p. 19.

⁽²⁾This strategy has been implemented since January 2016. It includes twelve axes, the most important of which are economic development, transparency, and the efficiency of government institutions.

- Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion." *International Journal of Doctrine, Judiciary and Legislation* 2, no. 2 (2021): 367-426.

⁽³⁾ Nasr, Ehab, Mohamed Helmy, and M. Ali. "Financial Inclusion through Digital Financial Services and Fintech: the case of Egypt (Rep.)." *Alliance for Financial Inclusion (AFI)* (2018). P. 3.

financial services in Egypt, such as investment banks, the stock market, insurance operations, leasing, brokerage, real estate finance, factoring services and microfinance⁽⁴⁾.

Usually, most transactions in Egypt take place through banking institutions and not through the non-banking sector, as the size of the banking sector increased compared to the size of the economy from 91% in 2013 to 122% in 2016. The majority of bank credits granted usually go to government agencies, where the record Government credit is 65.8% of total domestic credit (March 2020), and the banking sector's investments in government debt instruments account for 36.8% of its assets in 2020, compared to about 29.5% in 2019, while the percentage of credits directed to the private sector decreases, especially those directed to small projects. and medium⁽⁵⁾.

If we know that the total assets of the non-bank financial sector amounted to about 615 billion pounds, the total assets of the Egyptian banking sector amounted to about 6.4 trillion pounds in June 2020, representing 89.6% of the total assets of the financial system, 99.4% of the nominal GDP, as The assets of the banking sector are distributed mainly between financial investments, loans and balances with banks⁽⁶⁾.

Since 2003, the Central Bank has been seeking to implement many reform plans for the banking sector, as many banks have undergone mergers and acquisitions, as a result of which the number of licensed banks in Egypt decreased from (52) banks in 2005 to (39) banks in 2018, distributed between Public sector banks, private sector and investment banks, in addition to (2800) branches of these banks spread across the Republic.⁽⁷⁾ By the beginning of 2018, there were sixteen of the 39 banks offering full electronic banking and mobile financial services, with more than (133) thousand mobile payment agents. Nearly four thousand branches of the National Post Authority have also been monitored ENPO Egyptian National Post Office, (873) licensed institutions for Nano-finance, (808) branches of non-governmental organizations, and a total of (1721) branches, in addition to (140) brokerage companies, (37) insurance companies, (226) (Leasing Companies, (13) Mortgage Comp)⁽⁸⁾. The banking structure in Egypt includes about 32 banks that provide online banking services⁽⁹⁾ It also includes more than 13.5 thousand automated teller machines ATMs In addition to about (70) thousand points of sale point of sales (PoS), and more than (16) million discount Debit Cards and about (11) million prepaid In addition to nearly five million credit cards circulated.

(4) The non-bank financial sector institutions are the second component of the financial system with total assets of 615 billion pounds for the fiscal year 2018/2019, representing 10.4% of the total assets of the financial system, and about 11.6% of the GDP, as this sector continued to play its role in creating and strengthening Sources of financing for all economic activities, see including:

- The Central Bank of Egypt: Financial Stability Report 2019, Previous reference, pg.

(5) Which may expose the banking sector to systemic risks in the event of imbalances in government financial performance, see:

- The Central Bank of Egypt, previous reference, p. 15.

(6) Previous reference, pg16.

(7) Hmaied. "Financial development and inclusion in Egypt, Jordan, Morocco and Tunisia." EMNES Studies (2018).P. 12.

(8) while enjoying (ENPO) with a high market share of savings for low-income groups, especially in remote areas, the number of users of insurance programs in Egypt through its 37 companies does not exceed 1% of the population, and microfinance companies provide loans to families and small and medium-sized companies, where many have joined Of the new institutions that have become pioneers in the microfinance market in Egypt, such as Reefy, Tanmeyah Tanmeyah, Tasaheel Tasaheel and Aman, which were established between 2015-2018, see:

- Nasr, E, Helmy, M. and Ali, M., Op.Cit, P. 4.

-The Central Bank of Egypt: The role of the banking sector in supporting the financial inclusion of women, previous reference, p. 19.

(9) These banks have about 1.4 million registered accounts, 128 million Egyptian pounds (7 million US dollars), of the volume of transactions, see:

- Nasr, A, Helmy, M., and Ali, M., Op.Cit, p.5.

With regard to bank payment cards, 4.5 million cards were issued by 2,800 government institutions to obtain salaries, and nearly 7 million cards were issued for obtaining pensions.⁽¹⁰⁾

The data reflects the fact that financial technology is driven by direct salary transfers, which indicates that this coverage is characterized by the passive use of financial services (salaries and cash transfers), more than the actual or active use, as it includes money services via mobile phones in Egypt, according to the 2016 Central Bank regulations, Payment/cash withdrawal from one person to another person(P2P)or from a person to a merchant(P2M)And from merchant to merchant(M2M), and cash through ATMs Cash Funds withdraw/deposit, International Money Transfers (IMT)And the Virtual Card Number (VCN), and load the value of the account Value Load (AVL) From the bank account to the wallet account⁽¹¹⁾.

2. METHODS

The study methodology relies on the descriptive method in describing and analyzing the subject of financial technology and financial inclusion and determining its nature, dimensions, effects and obstacles, and other aspects that help to explore a particular problem or phenomenon. This approach goes beyond just collecting and descriptive data on the subject to analyzing, linking, interpreting, measuring and drawing conclusions from them.

Study questions:

- What is financial technology, what is its role and its relationship to achieving and promoting financial inclusion?
- What are the obstacles to reaching the target levels of financial technology in Egypt?
- What about the initiatives, strategies and efforts made by the parties concerned with achieving financial technology in Egypt?

3. RESULTS AND DISCUSSION

A-Fintech as an enabler for financial inclusion:

Fintech as A Tool to Enhance Financial Inclusion:

Although financial innovations have been an inherent partner of successive financial systems throughout the ages, financial technology Fintech. It gives the impression that this time it's completely different than before⁽¹²⁾. Access to financial services, as one of the direct reflections of financial inclusion, and their use by individuals and companies, who did not have bank accounts, was synonymous with the expansion of the use of financial technology.⁽¹³⁾ Where did the use of smartphones lead Smart Phone and their spread around the world due to their low cost and the possibilities it provides, and with the availability of the Internet faster and on a wider geographic scale, as well as the accelerating spread of AI applications and Big Data, and the maturation of many server applications for users Apps, and multiple platforms of trust chain technology and payment without intermediaries Block chain Platform and peer-to-peer lending... etc., to increase the

⁽¹⁰⁾ Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion, Op. Cit, p.367

⁽¹¹⁾ Nasr, E., Helmy, M. and Ali, M., Op. Cit, P. 5.

⁽¹²⁾ While financial history has been marked by the emergence of many new institutions and brokers over the centuries, often tackling new demands or particular regulatory restrictions, the early 20th century saw the emergence of investment banks. Investment Banks To finance the expansion of railroad construction in the United States, while the 1960s saw the emergence of money market funds Money Market Funds response to regulation Which prevented banks from paying interest rates on demand deposits, see:

Beck, T. 2020. Fintech and Financial Inclusion: Opportunities and Pitfalls. ADBI Working Paper 1165. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/fintech-financial-inclusion-opportunities-pitfalls>. P9

⁽¹³⁾ Patwardhan, Anju, Ken Singleton, and Kai Schmitz. "Financial Inclusion in the Digital Age. Handbook of Blockchain, Digital Finance, and Inclusion, Volume 1." (2018). P. 13.

intensity of competition between those in charge of providing financial services to consumers, and even raise the ceiling of these consumers' ambitions and expectations in obtaining more distinguished services, and survival in the market, whether in the medium or long term, depends on comprehensive keeping pace with modern technology. , which was strongly reflected in the seriousness of the position of traditional models in favor of innovation Changes in Business Models. Businesses - in general - are moving towards Automation Societies have accelerated towards more digital and cashless Digitalization with all that this requires of the importance of having the necessary infrastructure to provide these new financial services and transactions around the world in support of obtaining the benefits of this financial technology⁽¹⁴⁾.

Financial technology is defined as technologies and innovations that seek to compete with traditional methods when providing financial services. It is the application and use of innovations and modern channels from the financial sector. It is an emerging industry used to improve multiple financial activities, such as the use of smart phones in banking services or what is known as cellular banks. Fintech companies consist of start-up projects, financial institutions and well-established technology companies that aim to enhance the use of financial services provided by existing financial companies, or replace them, which usually pushes these institutions to apply financial technology solutions and technologies in order to improve and develop their services, in order to improve their competitive position.⁽¹⁵⁾ Financial technology simply stems from the main concept that includes a mixture of legal and technological systems for a modern revolution that seeks to support financial services in a modern technical way⁽¹⁶⁾.

Financial systems have realized that the financial technology industry will help them in promoting financial inclusion through the opportunities that this technology provides for easy access to disadvantaged groups of financial services through digital finance. As well as speeding up transfers and payments and reducing their costs⁽¹⁷⁾. Also, allowing the entry of new competitors to the existing banks will lead to the division of the banking services market, and reduce the systemic risks associated with large banks.⁽¹⁸⁾ In fact, the use of the mobile phone in the field of facilitating payments has led to a fundamental change in the dynamics of payment by providing digital payment services, as the spread of mobile phone technology has made it possible to achieve cheaper electronic communication, as well as reducing the need for extensive branch networks, which allowed a new generation of providers Online services provide their services at a much lower cost and more competition with existing companies. companies like Transfer Wise, Zoom, World Remit... and

⁽¹⁴⁾ The development of such a robust infrastructure raises a wide range of issues related not only to the financial sector, but also to the digital economy in general, including data ownership, protection, privacy, cyber security, operational risks, concentration risks, consumer protection...etc, see:

-Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion, Op. Cit, p.367

⁽¹⁵⁾ Thorsten Beck, Op., Cit., P. 1 - 2.

⁽¹⁶⁾ Wahiba Abdel Rahim: Financial Technology Guidelines in the Light of Successful Companies' Experiences, Al-Ijtihad Journal for Legal and Economic Studies, Volume 7, No. 3, 2018, pg4.

⁽¹⁷⁾ Digital finance has brought hundreds of millions of dollars into high-tech development, telecom providers, microfinance institutions, and governments. See:

- Nasr, Ehab, Mohamed Helmy, and M. Ali. "Financial Inclusion through Digital Financial Services and Fintech: the case of Egypt (Rep.), Op.. Cit., P6

⁽¹⁸⁾ The rapid growth in financial technology has become a challenge and an opportunity for existing banks at the same time, which depends mainly on the strategies of both start-up companies and banks, and whether these companies will see themselves as a direct competitor to the bank or as a partner to it, and this cooperation is what will enable banks to Take advantage of it as you strive to become more responsive to changing customer needs and emerging technology.

others, it has been able to reduce the operational cost of money transfers from several dollars to less than one dollar often ⁽¹⁹⁾.

Indeed, financial innovation itself has blurred the regulatory boundaries of the financial system, as non-banking institutions, including telecommunications companies and large corporations such as Tencent, Alibaba, in providing financial services and increasingly moving into the business of financial intermediation. Thus, these new players can be understood as new technology-driven actors aiming to compete with traditional financial institutions in providing financial services. ⁽²⁰⁾.

Perhaps one of the most important drivers of success and excellence for financial technology companies Fintech Or even for big tech companies Big tech .This is due to their ability to easily collect available data whether through digital footprints Digital Footprint For their clients or by scraping the web Scraping the Web Large technology companies can also take more effective steps by obtaining the data of their potential customers through their non-financial dealings with them, as the use of artificial intelligence allows them to transform soft information, which can be collected through social media or other means, into solid information, It can also give them the advantage of the network Access to more data, improve their models, and thus increase their reach⁽²¹⁾.

In comparing them, with all their data, and traditional banks, which rely mainly on credit history data, of course these companies have the advantage of easier anticipation of potential defaulters on loans, thus increasing their ability to attract a larger number of borrowers, relying only on data The local credit bureau will exclude many of the target audience as providing credit to them is a high-risk operation⁽²²⁾.

Contrary to the traditional view, the more holistic view of these startups, which are usually small-sized companies, depend in their work on focusing on certain services (such as payment services or credit for small businesses), and they usually use digital technology to provide financial services to specific groups or clients, Those who do not receive sufficient attention from traditional financial service providers, see these start-ups as a complement rather than a competitor to the existing banks, the latter started investing in financial technology companies and even proceeded to acquire them, as banks see the advantage of buying financial technology solutions in the form of start-up companies Rather than developing such solutions internally, it is more effective and beneficial, as innovative activity often requires a different culture than that prevailing in the banking sector. ⁽²³⁾.

⁽¹⁹⁾ And in this he says Taavet Hinrikus CEO Transfer wise Our mission is to make money without limits, and in this we want international money transfers to be instant, convenient, transparent, and ultimately free, so the marginal cost should be close to zero, see:

- Patwardhan, A., K. Singleton and kai Schmitz, Op. Cit., p. 15.

⁽²⁰⁾ It has been observed that people lend to each other²²Increases when banks tend to reduce lending operations due to increased regulatory restrictions Regulatory Constraints The riskiest borrowers are turning to platforms see:

- Tang Huan, Peer-to-peer lenders Versus Banks: Substitutes or Complements? Review of Financial Studies 32, 2019, PP. 1900 - 1903. And see also:

- Buchak and al, Fintech, Regulatory Arbitrage and the Rise of Shadow Banks, Journal of Financial Economics 130, 2018, P. 453 - 692.

⁽²¹⁾ Berg et al., On the Rise of Fintechs: Credit Scoring Using Digital Footprints, Review of Financial Studies 33, 2020, PP. 2845 - 2897.

⁽²²⁾ Jagtiani, J. and C. Lemieux, the Roles of Alternative Data and Machine Learning in fintech Lending: Evidence from lending club Consumer Platform FRB Philadelphia working paper, 2018, PP. 15 - 18.

⁽²³⁾ Incumbents in traditional financial institutions are less interested in innovation, and even the new entrants into the financial system are the ones providing the new services. But innovation may also come from the traditional financial institution. Equity Bank in Kenya, for example, was able to transform from a failed building society to an innovative full-service bank, by moving beyond the traditional branch network to using mobile branches, targeting segments of the population that did not It had no previous dealings with the bank, in addition to increasing the quality of service provision, such as providing it in the language of minorities, see:

- Allen et al., Improving Access to Banking: Evidence from Kenya, working paper, 2020.

Thus, the emergence of one of the most important financial innovations in developing countries, "Mobile Money Transfer", has had a supportive and effective impact in achieving high rates of financial technology in many countries. This innovation offers many important advantages compared to other transfer channels. First, it helps in reducing variable costs significantly, by actually taking advantage of the fixed costs of the mobile network that already exists, unlike when dealing with traditional banking channels, secondly: where mobile banking does not depend on the branch network but on the customer network. The lowest cost entirely, which reduces the geographical barriers of customers significantly, and third: it usually relieves customers with small number or volume of transactions from the need to fulfill onerous documentation requirements, with which financial transactions become available to large parts of the population transacting within the informal economy, Fourth, the success of this innovation enables a shift from a credit-based inclusion approach Credit-led Inclusion Approach To a payment-based inclusion approach Payment-led Inclusion Approach, an approach that meets people's needs for safe and fast payments, and contrasts with the traditional model of banks in developing countries, which is not always compatible with the conditions of most developing countries⁽²⁴⁾.

The available statistics reflect the reality of what new innovations have brought about in the field of financial services across the world. In China, for example, the volumes of mobile payments increased from 1.2 trillion yuan (195 billion US dollars) in 2013 to 58.8 trillion yuan (8.5 trillion US dollars) in 2016, that is, it has doubled nearly 50 times in three years. Proverbs We Chat Pay, Ali Pay Accelerate the country's transition to a cashless society with a combined market share of more than 90% of the volume of transactions ⁽²⁵⁾. In Bangladesh, mobile payment platforms are gaining momentum, if they have Bkash More than 70% of the market share is in mobile financial services, with more than 27 million Bengali adults owning or using a mobile account. Bkash in just eight years (2007-2015), nearly 80% of Kenyans had either a bank account or a mobile cash account through an app .M-Pesa, as we shall see later ⁽²⁶⁾.

In Egypt, after the Central Bank issued the rules governing the provision of mobile payment services in 2016, the number of mobile phone accounts in the pound reached 19 million mobile phone wallet accounts by the end of July 2020, with an annual growth rate of 41% (compared to July 2019), and the value of transactions reached The monthly transactions of the governor reached about 9.6 billion pounds, on the same date, an increase of 193% from the end of February 2020, and the number of monthly transactions of the governor reached about 10.9 million, an increase of 76% over the end of February 2020, or immediately before the start of the repercussions of the Corona pandemic. ⁽²⁷⁾.

While mobile money transfer services were initially limited to payment and transaction services, there have been other increasing uses of mobile phones for other financial services. For example, in 2012, was launched M-Shwari, as a model for cooperation between the company Safari command the African Commercial Bank associated with M-Pesa, which includes both a savings account and access to a 30-day mini-loan at 7.5% per month. In addition to the use of mobile phones and mobile money to provide financial services, the use of a mobile phone to communicate via text messages can also

⁽²⁴⁾ Thorsten Beck, Fin Tech and Financial Inclusion: Opportunities and Pitfalls, Op. Cit., P. 5-6.

- Patwardhan, A., K. Singleton and Kai Schmitz, Financial Inclusion in the Digital Age, Op. Cit, P. 16..

⁽²⁵⁾ Another innovation in the People's Republic of China is the use of a QR code QR Code Customers pay through a mobile application displayed on the merchant's QR code, which represents a simple and cheap way to provide communication between merchants and consumers, eliminating the need for point-of-sale devices, as this system eliminated the different intermediaries found in traditional payment systems based on ID cards. Following their success in payments, both We Chat Pay, Ali Pay In the sale of other financial services through these channels such as insurance, lending, credit registration, mobile phone wallets and money market funds, see:

- Patwardhan, A., K. Singleton and Kai Schmitz, Op.Cit, P. 14 - 15.

⁽²⁶⁾ Also referred to as an application contribution M-PesaKenya to reduce the poverty rate by 2%, see:

- Suri, T. and W. Jack, the Long Run Poverty and Gender Impacts of Mobile Money, Science 354, 2016, PP. 1288 - 1292.

⁽²⁷⁾ Central Bank of Egypt: Financial Stability Report 2019, p. 50, available at :www.cbe.org.eg

have important effects for financial service providers and their clients, as reminders sent through these messages can have an impact on credit repayment and savings behaviors, especially when benefits are mentioned. Saving and its goals through the text message⁽²⁸⁾.

Digital has brought in new partners in the form of peer-to-peer lending platforms from peer-to-peer. The existence of these platforms allows non-financial companies to enter the financial services markets with mobile network organizations (MNOs) And big tech companies like Facebook, Amazon. These platforms are often seen as the real players that have filled the market gaps left by the curtailment of bank lending to SMEs. SMEs. After the global financial crisis⁽²⁹⁾.

It is important to mention here, that all these innovations came from the new entrants in the financial sector and not through governments, and that the pursuit of profit - and not for social goals - was the main driver for them, and that the initial focus of these was on the number of accounts that are opened and not On the actual use of these accounts, that is, maximizing the share of the adult population who owns accounts, which did not achieve the idea and philosophy of financial technology, which aims to focus on the actual use of these accounts through daily transactions, which represented the actual development, in recent times, of the target of all parties from Policy makers or practitioners.

B - The status and reality of financial technology in Egypt:

The Status of Financial Inclusion in Egypt:

In the wake of the directive of the political leadership in Egypt to the Central Bank to enhance financial technology, and to try to move forward towards “digital Egypt” and expand the provision of financial services across the country, in order to achieve the automation of these services and the gradual disposal of the burdens and routine of cash or paper dealing, and in a manner that confirms and activates the system Electronic payment, establishing databases, and departing from the traditional form of financial service provision by expanding the use of mobile phones, post offices and hotlines dedicated to providing services etc. In a manner that leads to speed in the performance of services and savings in expenses, the Central Bank played an active role In providing many initiatives and supporting steps towards consolidating the principle of financial technology in the banking sector, starting with the establishment of the Central Administration for Financial Inclusion and through the preparation and design of a national strategy for financial inclusion and the establishment of the External Data Committee for Financial Inclusion⁽³⁰⁾ And ending with the establishment of departments in all national banks to undertake the process of internal coordination

⁽²⁸⁾ Karlan, D., M. Morten and J. Zinman, A personal Touch: Text Messaging for Loan Repayment, NBER Working Paper, 17952, 2012, P. 234

⁽²⁹⁾ An early example is the factoring platform in Mexico, where the Development Bank launched NAFIN Online system, established in 2001, to provide reverse factoring services Reverse Factoring For small and medium businesses, where such a system, in the field of small and medium enterprises, represented a promising system, a form of financing that allows these enterprises to discount bills to large enterprises and thus effectively finance themselves based on the reputation of their large customers, rather than relying on their own, non-existent credit history In most cases, see:

- Klapper, L. The Role of Factoring for Financing of Small and Medium Enterprises, Journal of Banking and Finance 30, 2006, PP. 3111 - 3130.

⁽³⁰⁾ Where, in March 2019, the Central Bank initiated the formation of a committee for external data for financial inclusion, headed by the Deputy Governor for monetary stability, with the membership of representatives from ministries and bodies concerned with financial inclusion, in order to establish the principle of coordination between the parties concerned with financial inclusion at the state level. The committee aims to identify priorities and needs for data and information, as well as to agree on the main indicators of financial inclusion that are developed in accordance with the international indicators issued in this regard. Financial, which includes the formal and informal sectors, the implementation of which is currently led by the Central Bank of Egypt, as well as the issuance of a study by the Central Bank to compile data on financial inclusion disaggregated by gender and the financial inclusion of women, in cooperation with the International Alliance for Financial Inclusion(AFI), see: Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion, Op.Cit, p 400

between the bank's departments on the one hand and the Central Bank on the other hand with regard to financial technology, and the development of strategies for financial inclusion that take into account the three dimensions of access and product quality Product Market Fit and the ability to use Affordability⁽³¹⁾.

In order to monitor the alphabet of the development stages and steps of achieving financial technology in Egypt, we can stand at a number of stations and data that reflect the state of financial technology, as follows:

a- The efforts of the Central Bank of Egypt in the field of financial technology are being recognized and appreciated on the international scene. The Central Bank of Egypt has been an active member of the International Alliance for Financial Inclusion since 2013, and to confirm this pioneering role, in September 2017, Egypt hosted the annual conference for financial inclusion in Sharm El-Sheikh, with the participation of 94 countries and 119 international institutions, which is rightfully considered the most important forum for financial technology policy makers. In the world, through which the initiatives and efforts undertaken by member states in the field of financial technology are identified and the strategies and policies related to it prepared. Egypt was also chosen, along with China and Mexico, to participate in the Financial Inclusion Global Initiative (FIGI), taking into account Egypt's ability to include more than 44 million Egyptian adults in the formal financial system, according to World Bank estimates.⁽³²⁾

B- The Central Bank's realization that building a strong and stable infrastructure is one of the necessities for obtaining strong digital financial services, led the Central Bank to implement the real-time gross settlement system Real Time Gross Settlement System. In 2009, as this system, which is usually used to settle large-value payments between banks in Egypt, is the mainstay of the national payment system, the activities of its first phase (settlement in local currency) began since October 2018, for the value of interbank payments amounted to about 52.5 trillion in 2019 pounds, equivalent to about 17 times the size of GDP⁽³³⁾.

c- The mobile phone penetration rate in Egypt reached about 109%, which indicates that users have more than one SIM subscription. However, only 29.4% of these subscriptions have access to the Internet, which represents about 30 million users. The percentage of Internet penetration in Egypt does not exceed 38%, which represents a limited percentage and a real obstacle to the adoption and use of financial services via mobile phone⁽³⁴⁾.

In Egypt, mobile operators own Mobile Network Operators (MNO) Largest market share, with mobile payments operating on a bank-led model. As a result of the Central Bank's issuance, in November 2016, of the rules regulating the provision of mobile payment services, the number of mobile phone accounts in the service reached by the end of July 2020, about 19 million accounts, and the value of the monthly transactions of the wallets amounted to 9.6 billion Egyptian pounds. The number of monthly transactions of the wallets reached about 10.9 million. These numbers may reflect the fact that noticeable increases have been achieved in the growth rates of mobile payment services, which had reached, four months before that date (February 2020) only 16.5 million accounts, an increase of up to 15%, compared to 13.5 million An account only in (July 2019), an increase of up to 29%, which represents a clear indication of the success and effectiveness of this

⁽³¹⁾ Patwardhan, A., Singleton, K. and Kai Schmitz, Op.Cit, P. 11 - 12.

⁽³²⁾ Rahim, Wahiba Abdul, and Ashwaq bin Qaddour. "The trends of financial technology in the light of successful companies' experiences." *Ijtihad Journal for Legal and Economic Studies* 7, no. 03 (2018): 13

⁽³³⁾ While the value of these settlements in 2009 amounted to (10.5) trillion pounds, it increased to 21.5 trillion in 2014, and 40.6 trillion in 2018, that is, it increased in 2019 compared to the previous year 2018, with an overall growth rate of 15%, which is a strong indication of Efficiency of capital turnover and increase in economic efficiency, see:

- Egyptian Central Bank: Financial Stability Report 2019, previous reference, pg. 49.

⁽³⁴⁾ Nasr, E., Helmy, M. and Ali, M., Op. Cit, P. 1.

service and its gaining the public's trust and dependence on it in an effective way in conducting its transactions MDaily finances, such as transferring, paying bills, purchasing...etc.⁽³⁵⁾.

And in support of the Central Bank to allow citizens and legal entities to expand mobile phone wallets, because of its importance in reducing the use of paper money in financial transactions, and thus achieving more financial inclusion, the bank decided to increase the maximum daily usage limits for mobile phone wallets from six thousand EGP to thirty thousand pounds for natural persons and forty thousand pounds for legal persons, with the increase of the monthly limits to one hundred thousand for natural persons and two hundred thousand for legal persons, in addition to exempting all from fees and commissions related to deposit, transfer and cash withdrawals for mobile phone wallets from ATMs⁽³⁶⁾.

Dr- In light of the fact that there is a severe shortage of automated teller machines Automated Teller Machines, where their number across the Republic (in July 2020) did not exceed 13.600 machines, with their poor distribution across the country's geography due to their concentration in major governorates and main cities in remote governorates, despite being one of the main pillars of the infrastructure of the electronic payment system and the provision of digital financial services to all citizens, especially in remote and poor places, or vital places with high density and lack of services With sufficient banking, the Central Bank of Egypt decided to announce the launch of an initiative to deploy a large number of these machines with a target of adding (6500) new machines by the end of December 2021, to reach about 20 thousand machines, provided that these machines have the possibility and ease of use with the knowledge of people with special needs. , and to allow cash deposits and accept contactless transactions, while also supporting the recharge of mobile phone wallets and prepaid cards, up to the world levels in the banking density of these machines.⁽³⁷⁾.

e- In March 2018, there were 70,509 electronic points of sale E.POS and in support of the Central Bank for contactless transactions, taking into account the working conditions in remote areas, and encouraging banks to spread electronic points of sale more in governorates that do not have sufficient numbers of those points of sale, in order to benefit as much as companies and merchants who do not currently have points of sale. The Central Bank launched the electronic payment initiative, aiming to publish a number of (100) thousand electronic points of sale, the costs of which will be borne by the Central Bank, as well as the publication of (200,000) quick response codes. QR Code I have merchants and companies⁽³⁸⁾.

And the Pursuant to Republican Decree No. 89 of 2017, and under the presidency of the President of the Republic, with sixteen members, including the Prime Minister, the Governor of the Central Bank, and a number of relevant ministries, The National Payments Council has created National Council of Payments (NCP)With multiple specializations, foremost of which is the adoption of policies aimed at

⁽³⁵⁾ Perhaps the facilitation of the procedures adopted by the Central Bank, and its setting up of exceptional rules for electronic registration of new customers, in light of the Corona pandemic, had a clear role in the demand of a large percentage of customers to open a mobile phone wallet account electronically and without the need to go to the bank or service providers, in order to avoid the risk of mixing And the risks of disease, which has proven successful and an important step in achieving the Central Bank's strategy to enhance financial inclusion and transition to a digital economy: see:

- The Central Bank of Egypt: Financial Preparedness Report 2019, previous reference, p. 50.

⁽³⁶⁾ Previous reference, p. 51.

⁽³⁷⁾ The Central Bank of Egypt: Financial Stability Report 2019, previous reference, p. 51.

⁽³⁸⁾ In May 2019, the Central Bank issued the rules for the criteria for issuing and accepting contactless electronic payments, which would facilitate payments to customers through contactless services and increase the acceptance of electronic payment cards with merchants due to the many advantages for customers, which is the speed and ease of the payment process on top, as well as the diversity of payment methods. What suits each customer, in addition to complete security about these operations, and the customer does not need to enter the password of the electronic payment tool for small transactions, see:

- The Central Bank of Egypt: Financial Stability Report, 2019, previous reference, p. 20.

reducing the use of banknotes outside the banking sector, supporting and motivating the use of electronic means and channels for payment as an alternative to paper use, developing national payment systems and working to achieve financial inclusion with the aim of including the largest number of citizens in the banking system, and creating Incentives to financially incorporate the informal sector, reduce transaction costs and increase tax revenue.

In order to activate these competencies, several measures have been taken and some requirements to be met ⁽³⁹⁾:

- The commitment of all government agencies that provide public services to citizens to work on developing non-cash payment systems, such as points of sale, within a short period.
- The commitment of all government agencies and local administrations to fulfill their obligations to suppliers through checks or banks for any transaction exceeding 20,000 pounds, starting in 2018, with a maximum limit of 500 pounds for any expenses that may be paid in cash.
- Issuing more than 4.5 million cards for more than 2,800 government agencies out of 3,500 agencies to implement the system for disbursing benefits electronically for employees, and more than seven million cards for pensioners ⁽⁴⁰⁾.
- Issuance of the first national payment card, in December 2018, under the name "BenefitMeez" In preparation for the transition towards a cashless society, which allows dealing with all government and public services provided to the public through electronic payment, in addition to using it to pay for e-government services and e-commerce services, as this card contributes to achieving financial inclusion, especially in light of the low The costs of its use, by including some categories of merchants that do not use electronic payment, which leads to an increase in the base of customers in the electronic payment system and a decrease in cash handling⁽⁴¹⁾.

g-As a sponsor of financial policy, the Ministry of Finance announced its efforts to support and enhance financial inclusion, as the ministry has, since the beginning of 2019, built a digital platform for the tax filing system. Digital Platform for Taxation Filing System (DPTFS) It is now available for taxpayers to deal with on the Internet, thus no more paper-based tax files are accepted. The Ministry, in cooperation with the Central Bank, has also introduced the Government Financial Management Information System Government Fiscal Management Information System (GFMIS) Which allows all government agencies to fulfil their payments through banks electronically, and the Egyptian Tax Authority is working on establishing a point of sale platform PoS for schools and restaurants so that customers can pay their fees or dues, which creates the opportunity for a gradual transition towards

⁽³⁹⁾ Nasr, E, Helmy, M. and Ali, M., Op.Cit, P. 9.

⁽⁴⁰⁾ It is noteworthy that the company e-finance is responsible for implementing the project from a technological point of view, and it is a company established in 2005 to design, manage and operate electronic business systems for all government agencies, financial institutions and companies. In the operation of that system since the beginning of 2009. Perhaps among the other most important services it provides, in addition to electronic payment and collection services, through which it provides services for paying salaries, collecting taxes and customs fees, and social insurance contributions, comes the infrastructure establishment services, business technology services, card center services and others. One of the electronic services, which is a wholly state-owned company, and is considered an initiative by the state to reach the transformation of the digital economy, where the National Investment Bank contributes with 70%, and the National Bank, Banque Misr and the Egyptian Banks Company by 10% each, see:

-TAWAKOL, FADY, and WalaaEldeen Ibrahim. "Restructuring the Small and Medium Enterprises in response to COVID-19 effect on Emerging Economies." *Ilkogretim Online* 20, no. 5 (2021).

⁽⁴¹⁾ This card is issued through the Egyptian Banks Company, in cooperation with the Ministry of Communications, the Central Bank of Egypt and a number of banks operating in the local market, led by the National Bank, Banque Misr, Cairo Bank, Housing and Development Bank and others. It is a national bank card such as Master cards. Card, and the card enables the holder to obtain his own payments, conduct electronic transactions and disburse various types of support, see.

- Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion. Op.Cit .p 401

reducing cash transactions, while helping the government estimate the actual value of taxes to be paid through various financiers⁽⁴²⁾.

h- Providing microfinance Nano-Finance, one of the most important pillars of financial inclusion. Despite the attempts of banks to provide electronic services to support this sector, they did not succeed distinctly in serving this category, in which the percentage of financial exclusion is high, despite the increase in the total assets of this financing activity at a rate of 48.2% at the end of 2019 compared to 2018. Microfinance balances rose to record 16.5 billion pounds, with a growth rate of 43.5%, and continued to rise to 17.2 billion pounds by the end of 2020. These balances are concentrated in individual financing by 79.4%, with a total of 3.1 million beneficiaries, with the women category accounting for 65% of the total. The number of beneficiaries, in addition to directing attention to increasing the geographical spread, so that Upper Egypt governorates occupy the most important aspect with 53.5% of the total financing outlets⁽⁴³⁾. To enhance financial inclusion, the digital finance product has been activated Digital Finance which relies on digital technologies in order to support the most needy groups, which fall under the poor class: street vendors, small farmers, young graduates, women breadwinners...etc.⁽⁴⁴⁾ The portfolio amounted to about 650 thousand pounds to serve 2.7 thousand customers, in addition to the high rate of dealing with non-cash payment methods in the microfinance activity, as the volume of electronic receipts from financing installments amounted to about 99 million pounds for 43 thousand customers, and the volume of payments reached Electronic fund disbursement of 405 million pounds to 30 thousand customers by the end of February 2020⁽⁴⁵⁾.

i- In connection with the previous point, and given the growing importance of small, medium and micro enterprises to the Egyptian economy, which now represents more than 98% of the volume of enterprises operating in Egypt (83% micro enterprises, 8% small enterprises, 7% medium enterprises), where Large projects do not represent more than 2% of the total volume of projects⁽⁴⁶⁾. Statistically, these projects, amounting to more than 6.5 million projects, provide more than 33% of the GDP and more than 75% of job opportunities (400 thousand job opportunities in 2018 for small

⁽⁴²⁾ Statistics indicate that the government has succeeded in entering 395,000 tax files since December 2019 following the implementation of the electronic tax filing system, see:

- The report issued by the Ministry of Finance 2019, available on the website www.mof.eg.

⁽⁴³⁾ The Central Bank of Egypt: Financial Stability Report 2019, previous reference, p. 33.

⁽⁴⁴⁾ This is done by transferring the value of the loan to the borrower on his mobile phone account, and in the same way, the value of the monthly installment is collected from the borrower by deduction from his mobile phone account, which saves the borrower a lot of time, effort and money compared to traditional methods, and with everything that can be achieved from behind. This is in terms of combating poverty, raising the standard of living, and supporting financial inclusion as much as the number of citizens expected to benefit from this system, see:

Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion.

⁽⁴⁵⁾ On October 9, 2019, the Central Bank agreed to finance the first phase of the Egyptian Federation for Microfinance Program for the institutional upgrade of 41 civil associations and institutions, category C, with active portfolios (from 4 to 10 million pounds) and which have a future ability to expand to be upgraded from category C. (C) to Category (B), in order to make it more attractive to banks and investors, by working on five main axes: (1) providing automated systems (2) formulating policies and work procedures, (3) building institutional capacities for employees, (4) compatibility with governance requirements, (5) facilitating associations' access to funding, and a committee has been formed that includes various entities concerned with microfinance (The Central Bank of Egypt, the Financial Supervisory Authority, the Egyptian Federation of Microfinance, the Micro, Small and Medium Enterprises Development Agency, and some microfinance companies and associations) to be responsible for launching, implementing and following up the program with the required quality and efficiency, see:

- Central Bank of Egypt: Financial Stability Report for the year 2019, p. 46.

⁽⁴⁶⁾ Central Agency for Public Mobilization and Statistics: 2018 data on the Small, Medium and Micro Enterprise Development Authority.

and micro projects only). However, despite all the importance of these projects, the map of access to financing channels reflects the fact that the larger the project, the greater its ability to obtain the necessary financing, and the smaller its size, as figures show that 75% of small and micro projects do not progress. Never to obtain bank loans, being satisfied with self-financing through the private savings of those in charge of them. Indeed, 92% of small projects who applied for bank financing were rejected.⁽⁴⁷⁾

Despite the multiplicity of programs and initiatives directed at these projects, which exceeded forty programs under the auspices of donors, governmental and non-governmental organizations, the Social Fund for Development, and finally the Central Bank, operating banks, and others, a small percentage of small and medium-sized projects are those that have proven to benefit from these programs. And that the percentage of financing specifically directed to this type of project, through banks - remained until 2016, and until the Central Bank presented its four-year initiative to support this type of project, it does not exceed 3-4% of its total credit portfolios⁽⁴⁸⁾.

Perhaps the high degree of banking risk associated with lending to small and medium-sized projects, due to the doubts that plague the work of these projects and the increased possibility of their failure and susceptibility to default, especially in their initial stages, as well as the inability of these projects to provide and provide the traditional guarantees necessary to obtain financing, with their weak experience in The field of business management and its ignorance - usually - of advanced marketing methods and the inadequacy of its financing structure, which reflects the meagerness of its apparent capital in order to avoid tax accountability, which represents significant reasons for the reluctance of banks to lend to them⁽⁴⁹⁾.

With the beginning of 2016, the Central Bank launched its initiative to support and finance small and medium enterprises, making the focus on these projects a national priority and a decisive element in achieving economic stability, and the opportunities that the upgrading of these projects achieves to reduce poverty, achieve social and economic goals, and create more job opportunities. Supporting and promoting financial inclusion and sustainable development.

Perhaps among the most important provisions of this initiative are the following⁽⁵⁰⁾:

- Amending the definition provided by the Central Bank of each of the small, medium and micro enterprises to comply with the economic variables accompanying the process of floating the exchange rate (March 2017) by raising the maximum annual business volume for small and medium enterprises⁽⁵¹⁾.
- Requiring banks operating in the banking system that the percentage of loans and facilities granted to these companies shall not be less than 20% of the bank's total credit facilities portfolio, within four years ending in 2020.

⁽⁴⁷⁾ Dr. Abdel Hamid Seddik Abdel Bar: The Experience of Small Enterprises in Egypt, Obstacles, Challenges and Treatment Methods, A Comparative Study with International Experiences, Contemporary Egypt Journal, No. 510, 2013, p. 31.

⁽⁴⁸⁾ Abbas, Mohamed Ahmed. "Informal Economy in Egypt: Problems and Solutions." *Egyptian Institute for Studies*. www.eipss-eg.org (2019).

⁽⁴⁹⁾ This is in addition to the bias of commercial banks in favor of working with major companies because of their common interests and ties, whether those ties take the form of ownership, joint management, or joint deals. Therefore, banks usually do not find the need to provide their loans to small or medium-sized projects in order to acquire major projects on the general side. Among them, see:

- Muhammad Tariq Youssef: The Role of Small and Medium Enterprises in Economic Development and Reducing the Problem of Unemployment, Egyptian Tax Association, Vol. 19, No. 76, 2009, pg. 97.

⁽⁵⁰⁾ Akhbar Al-Youm Gate: Details of the Central Bank's initiatives to finance small and medium enterprises, Monday 9 September 2019.

⁽⁵¹⁾ For more details on the definition of small, medium and micro enterprises, you can refer to the text of Article One of the Medium, Small and Micro Enterprise Development Law No. 152 of 2020 through its fifth to seventh paragraphs, see:

- Official Gazette, Issue (28) bis (f), issued on July 15, 2020.

- The entry of the Central Bank as a shareholder in the credit risk guarantee company by 20%, and its issuance in 2018 to a guarantee of 2 billion pounds in exchange for the company covering part of the risks associated with financing small and medium projects, which contributed to motivating banks to grant credit facilities to this category, as guarantees were issued from The company is part of this program at a value of 17 billion pounds until July 2019, to cover financings amounting to 25.4 billion pounds⁽⁵²⁾.
- The Egyptian Credit Bureau designed and implemented a homogeneous model for rating companies based on assessing the creditworthiness of the client Grading Module to improve the consistency and objectivity of credit decisions rather than each bank building its own system.
- The Central Bank has launched three additional initiatives to encourage banks to increase the volume of financing granted to small and medium-sized companies, which are:
 - The "5%" initiative to finance small projects, targeting all sectors⁽⁵³⁾.
 - The "7%" initiative for medium and long-term financing of up to ten years for the purchase of equipment, machinery and production lines for medium-sized companies operating in the industrial, agricultural and renewable energy sectors, with a maximum of 40 million pounds per customer.
 - The "12%" initiative for short-term financing of working capital for companies and medium-sized enterprises operating in the industrial sector, agro-processing, and new and renewable energy.

According to the Central Bank, the total loans granted to small and medium-sized enterprises amounted to 110.8 billion pounds until June 2018, reaching 200 billion pounds by mid-2019, while the sector of NGOs and institutions, which is rightfully the main source of financing micro-enterprises in Egypt, provided funds amounting to 3.4 billion pounds. billion pounds in 2016, to rise to about 4.6 billion pounds in 2017, and to reach nearly 6 billion pounds in 2018, for more than 2 million beneficiaries⁽⁵⁴⁾.

As for the financing of specialized companies from outside the banking sector, which are subject to the rules and provisions of the Financial Supervisory Authority, it amounted to about one billion pounds in 2016, and increased to about 2.5 billion pounds in 2017, and to more than 4.8 billion pounds in 2018, for more than 800,000 beneficiaries.⁽⁵⁵⁾

With all economies exposed to the negative effects of the Corona pandemic 2020, including the Egyptian economy, of course, and the harmful effects of many small and medium enterprises, the state had a distinguished presence in this regard, and perhaps one of the most important decisions issued in this regard was the allocation of loans with a limit. Maximum "one million pounds" for industrial projects, and "half a million pounds" for modern projects to meet the low liquidity, pay operating expenses and pay workers' wages and salaries, where the loan term reaches one year with a grace period of three months⁽⁵⁶⁾.

j-In conjunction with the government initiative "Solidarity and Dignity", which targets marginalized groups of women and those living below the poverty line, who are provided with pensions through

⁽⁵²⁾ Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion." Op.,Cit. P412

⁽⁵³⁾ Paying special attention to important economic sectors, especially industrial projects, and labor-intensive activities, while giving attention to projects with innovative ideas and those targeted for export.

⁽⁵⁴⁾ A statement issued by Dr. Nevin Al-Tahri, Deputy Assistant to the Governor of the Central Bank for the Banking Development Sector, on the volume of financing provided to small and medium enterprises, Youm7 website, June 2018.

⁽⁵⁵⁾ The Egyptian Center for Public Policy Studies: Small and Medium Enterprises Sector Guide in Egypt, issued by the Economic Freedom Program, 2018, p. 21.

⁽⁵⁶⁾ In this regard, it is indicated that this loan was considered a first precedent, as it was not usual to allow obtaining loans for the purposes of paying wages and others, as obtaining loans was limited to financing the investment activity, and that the payment of these obligations was from the proceeds of the activity, see in that:

-TAWAKOL, FADY, and Walaa Eldeen Ibrahim. "Restructuring the Small and Medium Enterprises in response to COVID-19 effect on Emerging Economies." *Ilkogretim Online* 20, no. 5 (2021)..

smart cards under 7.4 million beneficiaries, there is a governmental and institutional orientation in Egypt to support women, with a national plan represented in "The National Strategy for the Empowerment of Egyptian Women 2030"⁽⁵⁷⁾ which aims to enhance the status of women and achieve financial inclusion for this important group, which represents about 49.4% of the total population, but suffers from a weak participation rate in the labor market or its financial inclusion rates⁽⁵⁸⁾.

According to the data of the Central Agency for Public Mobilization and Statistics, the percentage of working women represents 22.9% of the total workforce, of whom 43% work in the agricultural sector, while the percentage of working women in the informal sector reaches 47.6% of the total women, and those who work informally in jobs without wages, and their percentage is about 60.3%, compared to only about 11.7 of men⁽⁵⁹⁾. About 31% of females in Egypt (over the age of ten) suffer from illiteracy, compared to 18.5% of males, which prevents them from working in the formal public sector, and pushes them to self-employment as a last resort for their income. According to 2018, the percentage of small, medium and micro enterprises owned by women is 47% of the total projects organized by the Small and Micro Enterprise Agency (119 thousand projects, most of which are micro), with a total of 1.8 billion pounds, which represents 33% of the total funds of the Agency, compared to 67 % for males⁽⁶⁰⁾.

Of the approximately 65 million Egyptians of the adult population, indicators of financial inclusion in 2017, 32.8% of them own bank accounts, of whom only 1.8% use mobile financial services, males constitute 39% of the index and women only 27%, i.e. With an account ownership gap of 12%, the gender gap is also achieved with regard to borrowing from official financial institutions (men 6.3% versus 4.9% for women), and a gap of up to 1.4%, and this may be mainly due to the preference of women to borrow through informal channels through friends and family, with a rate of 26.5% compared to 21% of men⁽⁶¹⁾.

Perhaps the high rates of illiteracy among women in Egypt (31%) and the fact that many of them, especially in the countryside, do not have national identity cards, impede their ability to obtain financing, in addition to the lack of services directed to them, the low degree of awareness they have of the financial services provided, and their reluctance to Banks for providing more financing operations for women and imposing more stringent conditions in the face of their requests for financing compared to those imposed on men, in addition to the spread of many social and cultural norms that restrict women's freedom and their ability to deal with others and manage projects on their own, which represent influential reasons for the decline Levels of financial inclusion for women in Egypt⁽⁶²⁾.

In the context of supporting financial inclusion for women, the Central Bank presented an action plan that includes several decisions and initiatives, including:⁽⁶³⁾

⁽⁵⁷⁾ The social program "Solidarity and Karama", which has been in operation since March 2015, provides a cash pension to more than 2.25 million families of the most deserving. The percentage of those entitled to this pension is 89% of women and 11% of men, see this:

- The Central Bank of Egypt: The Role of Banking Inclusion in Supporting Financial Inclusion for Women, previous reference, p. 18.

⁽⁵⁸⁾ Nazier, H., Ramadan and Racha, Women's Participation in Labor Market in Egypt: Constraints and Opportunities, Economic Research Forum, 2016.

⁽⁵⁹⁾ Central Agency for Public Mobilization and Statistics: 2019 data.

⁽⁶⁰⁾ The Egyptian Observatory: Small projects are the mainstay of economic development in Egypt, available on August 22, 2019 at the link: <https://Marsad.ecsstuies.com>

⁽⁶¹⁾ For more details see: World Bank Group, The Little Data Book on Financial Inclusion, 2018.

- The Central Bank of Egypt: The role of the banking sector in supporting the financial inclusion of women, previous reference, pp. 20-21.

⁽⁶²⁾ Previous reference, p. 22.

⁽⁶³⁾ Previous reference, p. 23, and see also:

- Central Bank of Egypt, Banking Development Sector for Small and Medium Enterprises, 2018.

- Requiring banks to collect data to measure the level of financial inclusion in Egypt, classified by type Gender - disaggregated data⁽⁶⁴⁾, to be submitted to the Central Bank to assess the extent of development in reducing the gender gap in the banking sector (12 percent), in an effort by the Bank to reduce this gap in half by the end of 2021, and with all that this requires of inviting operating banks to grant more loans to women, taking into account a certain level risk⁽⁶⁵⁾.
- To fill this gap as well, the Central Bank has developed a new service business model through the mobile payment system that allows individuals, especially women, to save and borrow, through the “Rural Savings and Lending Group” that is applied globally by CARE under the name Village Saving and Loan Association (VSLA) and its integration into the digital system⁽⁶⁶⁾. The total beneficiaries of the system, since 2014, have reached more than 18,000 individuals (92% of them are women, only 8% are men), as savings of more than 4.5 million pounds have been accumulated, through which 6,138 loans have been deducted, of which 4,357 loans are for projects Income-generating, with a total value of outstanding loans of 2.2 million pounds⁽⁶⁷⁾.
- Amending the definition provided by the Central Bank for companies and establishments that are managed or owned by women, where the definition requires one or more women to own at least 51% of the company’s capital, or to own at least 20% of the company’s capital with a woman working at least one for the position of CEO or his deputy.
- Authorizing the Egyptian Banking Institute, as it is responsible for training programs, to carry out financial awareness activities for marginalized groups, the most important of which are women, through financial education sessions and programs supporting the issue of financial inclusion for women⁽⁶⁸⁾.

⁽⁶⁴⁾ In 2018, the Central Bank of Egypt built a database of financial inclusion classified by type on the supply side of financial services using the national number(Data Hub), where the project was implemented in phases, and began with collecting basic data on Egyptian natural individuals from banking sector customers, related to deposits, loans and electronic banking services, as well as data from Egypt Post, all the way to microfinance data, taking into account the database’s subordination Those to update monthly, see:

- Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion. Op.Cit, P. 389

⁽⁶⁵⁾ Banque Misr is the first bank to join the membership of the financial alliance for women, as the bank signed a cooperation agreement with the International Finance Corporation to provide banking services to support women entrepreneurs in September 2018. It would support informal small and micro enterprises, which are often led by women, to move from the informal sector to the formal sector in order to support financial inclusion efforts in Egypt. By the end of 2018, Banque Misr’s micro-enterprise portfolio included 82 thousand clients, with a total of 2.3 billion pounds. The percentage of women entrepreneurs in this portfolio was 35%. The bank also appointed 1,100 employees, of whom more than 50% were women. See:

- The Central Bank of Egypt: The Role of the Banking Sector in Supporting the Financial Inclusion of Women, previous reference, p. 24.

⁽⁶⁶⁾ This system helps women in villages and remote areas to establish their small businesses and achieve their dreams by saving and borrowing through this service, see:

- Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion. Op.Cit, P389

⁽⁶⁷⁾ Nasr, E., Helmy, M., Ali, M., Op.Cit, P. 9.

⁽⁶⁸⁾ Since 2013, the Institute has participated in the activities of the World Financial Inclusion Day on an annual basis, where more than 7 million students have been educated over the previous years, by conducting training courses for trainers on financial education to spread financial culture by holding youth, student and university seminars In addition, financial education brochures and infographics were made with various financial concepts for children and youth within the framework of the “Alashan Bakra” initiative, to educate 5.5 million young people and children, which led to Egypt winning five international awards in the field of financial education recently, by the International Youth and Children Finance Authority.(CYFI), in addition to Egypt winning the 2019 World Financial Day award, see:

▪ In order to activate the pioneering role of women as decision-makers, and through the "Women's Leadership Guidance Program", the "Women Lead the Future" initiative was launched, "aiming to create pioneering female cadres from various fields with the ability to assume leadership positions, in addition to the "Nile Pioneers" initiative, which it implements. Nile University, in cooperation with banks and a number of local and international bodies, aimed at supporting pioneers, entrepreneurs and emerging projects.

▪ Providing a package of banking products that meet the needs of women, perhaps the most important of them ⁽⁶⁹⁾:

- "Bakrah Account", which is a savings account in which amounts are deposited periodically in the form of fixed monthly installments that may reach up to 10 years based on the customer's desire, and after the expiry of the period, you will get the original amount and the cumulative return with the provision of life insurance, as well as the possibility of Assumption is guaranteed.

- Loan for the breadwinner with a minimum of EGP 1,000 and a maximum of EGP 10,000, provided that the purpose of the loan application is to finance an existing micro-project or establish a new project, where the loan term is 12-24 months, to be paid in monthly or quarterly installments, with Possibility of expedited payment.

- Launching a microfinance program, in cooperation with the Long Live Egypt Fund, with an amount of EGP 250 million (revolving projects) directed to Egyptian women to prepare them to become active member of society instead of being a recipient of support, according to the nature of the activities of each governorate.

K- As a development of the legal and legislative framework, Law No. 18 of 2019 was issued regarding the "Regulating the use of non-cash payment methods", as its preparation and its executive regulations took into account the dimension of financial inclusion, the principle of gradual application, and feasibility on the ground, aiming to develop a regulatory framework for non-cash payments that both the public and private sectors are committed to, in addition to encouraging the benefit of the advantages provided by the law, as it allowed government agencies dealing with the public to grant more positive incentives for payment by means of non-cash payment, such as offering a discount on the amounts paid to it in this way, or refunding part of it, after the approval of the Minister of Finance. The law also granted the addressees with a sufficient period to reconcile modes ⁽⁷⁰⁾.

As a continuation of the efforts made to develop the legal and legislative framework, Law No. 194 of 2020 was issued on September 15, 2020 concerning the "Central Bank of Egypt and the Banking System", including a complete chapter on payment systems and services and financial technology, with the aim of keeping pace with the rapid and growing development in the field of payments at the international level, and increasing The efficiency and effectiveness of the financial system, work to encourage the provision of more digital financial technology services, and the addition of payment system operators and payment service providers to the entities covered by the law ⁽⁷¹⁾.

In fact, the law has been prepared taking into account the best practices, norms, global experiences and legal systems of the corresponding regulatory authorities at the international level. The law places among its objectives the development of a regulatory framework for the entities working in operating payment systems and providing services, in compliance with the controls and rules issued by the Central Bank in this regard. This is in addition to raising the level of performance of the

- Abbas, Mohamed Ahmed. "Informal Economy in Egypt: Problems and Solutions Op.Cit,10

⁽⁶⁹⁾ The Central Bank of Egypt: Financial Stability Report 2019, reference Previous, pp. 47-48.

⁽⁷⁰⁾ For more details about the law regulating the use of non-cash payment methods and its executive regulations, see:

- The Official Gazette on April 16, 2019, and Prime Minister's Decision No. 1776 of 2020 issuing the Executive Regulations, published in the Official Gazette on September 7, 2020.

⁽⁷¹⁾ For more details on Law No. 194 of 2020 regarding the Central Bank of Egypt and the banking system, see:

- Official Gazette: Issue No. 37 bis (f), issued on September 15, 2020, see also:
- The Central Bank of Egypt: Financial Stability Report 2019, previous reference, pg. 49.

banking system, modernizing it and supporting its competitive capabilities, in a way that qualifies it for global competition, and strengthening the governance and independence of the Central Bank of Egypt to ensure activating its role and achieving its goals. The law was keen to emphasize the importance of going electronic transactions and opening the Egyptian market to attract various investments in the field of payment services.

As a continuation of the efforts made to develop the legal and legislative framework, Law No. 5 of 2022 was issued on February 8, 2022, regarding

Regarding the issuance of a law regulating and developing the use of financial technology in non-banking financial activities.", Within the framework of enhancing financial inclusion, and working to expand the base of beneficiaries of non-bank financial activities, raise their efficiency, and reduce the costs necessary to benefit from those activities and services. The presented law will aim to enhance the use of the Financial Supervisory Authority as the supervisory authority over the entities that engage in non-banking financial activities with modern and innovative technology in order to facilitate its performance of its supervisory role over the entities subject to it with regard to compliance with standards of transparency and governance, protection of dealers in non-bank financial markets and the adoption of modern technological tools And innovative to facilitate dealing with the non-banking financial sector in the field of using financial technology.

Among the most prominent objectives addressed by the law is the stipulation that the Financial Supervisory Authority is the only administrative authority competent to apply the provisions of this law and take all necessary measures to develop the use of modern and innovative financial technology systems (Fintech) in the areas of non-banking financial activities, providing related financial advice, taking procedures for establishing companies subject to the provisions of this law and granting the necessary licenses and approvals to practice the activities stipulated in this law, in order to use financial technology in performing the supervisory role of the authority through digital data collection and verification And analyze its indicators through programs designed for this purpose, in addition to making sure to use mechanisms Artificial intelligence and other digital models to detect facts that constitute irregularities.

According to Resolution No. 58 passed by the Authority Board on March 16, 2022, which was issued for the year 2022 The Financial Supervisory Authority Board has distributed guidelines that detail the requirements and procedures that must be followed in order for organizations and entities to be formed, licensed, and approved in order for them to participate in non-banking financial operations that make use of financial technology. These guidelines focus on the requirements and procedures.

Naturally, we will find that these efforts, which create a supportive legal and legislative framework and environment, have direct effects on the transformation of a real digital economy, as well as the efficiency of the financial system and the effectiveness of monetary policy, and all that this can reflect in terms of financial stability, and thus further realization of financial technology in Egypt.

C- Challenges and obstacles of financial technology in Egypt:

We can say that the Egyptian government, represented by its regulatory bodies such as the Central Bank, the Financial Supervisory Authority and the Ministry of Finance, has taken many encouraging steps to establish a friendly environment and a sound regulatory framework that includes many financially excluded segments of society, paving the way for significant progress towards promoting financial technology At the policy-making level, however, this progress cannot prevent us from observing many obstacles and negatives, which still slow us down to a real and complete achievement of localizing the philosophy of financial technology, similar to the successful global experiences such as the experience of Malaysia, India or Kenya. Hence, we find it necessary here to observe -Even briefly-The challenges it faces in achieving this goal, perhaps the most important of which are the following:

- The weak purchasing power of a large segment of the citizens, the financial deficit Financial Inability. It represents the first and most important obstacle to financial technology in Egypt, where about a third of Egyptians live below the poverty line, and therefore usually direct the bulk of their income to spending, with little or no residual of this income to direct it to saving. -usually-He needs to have

a bank account, and in the best case it will be enough to own a family member—Often the father or husband—to this account to make all kinds of deposits or withdrawals for the whole family⁽⁷²⁾.

The observed poverty rates during the last ten years (2010-2020) recorded a gradual increase in the rate from 25.2% in 2010/2011 to a peak in 2017/2018 at a rate of 32.5%, and then tended to decline to reach 29.7% in 2019/2020, with a target to reach 28.5% in the 2021/2022 fiscal year⁽⁷³⁾.

- Linked to the previous point are two important indicators, the first of which is the high unemployment rate. The second is the high rate of illiteracy rate. As for unemployment rates, after they achieved their highest levels in 2013, recording 13.2%, they gradually decreased to reach 7.4% during the first quarter of 2021. Although it indicated further improvement, it remains at a high rate reflected in the number of unemployed people, which is 2.2 million people (1.4 million males, 812 thousand females), compared to 2.16 million unemployed people in 2020, a decrease of 11 thousand unemployed or 0.4%, out of the total labor force of 29.3 million individuals (24.2 million males, 5.1 million females). More than 13 million people work in urban areas, 16.3 million in rural areas⁽⁷⁴⁾. And here, of course, the question arises: Do these unemployed have the ability to enjoy financial and banking services while they represent a segment of the labor force that has no income?

As for the illiteracy rate After recording about 39.4% during 1996, it declined to 24.6% in 2019, i.e. its coverage of nearly a quarter of the Egyptian population, where the illiteracy rate for females is about 31%, and for males is 21.1%, and this percentage inevitably increases in the countryside than in urban areas, if it recorded 32.2% in rural areas, compared to 17.7% in urban areas⁽⁷⁵⁾.

This is a very high percentage when compared to other countries. In the developed West, this percentage does not exceed 1%, and in many Arab countries it also does not exceed 5%, bearing in mind that the intended illiteracy here is the illiteracy of reading and writing, not Functional illiteracy (i.e. the ability to perform business with certain knowledge) or of course cultural illiteracy, which may be taken as a basis for knowledge in many developed countries, and to re-ask the question, how can financial technology be achieved among a society many of which are functionally illiterate and the majority of whom are culturally illiterate⁽⁷⁶⁾.

⁽⁷²⁾ The governorates of Upper Egypt top the list of the poorest governorates, as Assiut governorate recorded a poverty rate among its citizens that amounted to 66.7%, followed by Sohag governorate with 59.6%, Luxor 55.3%, Minya 54%, and Qena 41%. While Port Said, Damietta and Gharbia governorates are among the least poor. In total, poverty rates in urban areas were 22.9% in 2019, while they were recorded in the countryside at 39%, and in urban Lower Egypt, they were recorded at 11.2%, while they were recorded in the countryside of Lower Egypt with 27.3%, while in urban Upper Egypt they recorded 30% and in the tribal countryside of 48%. Check it out:

- Al Watan Gate: In numbers, find out about poverty rates in Egypt during 21 years, available on February 24, 2021 at the website:

- elwatannews.com/news/details/5331718.

See also: Central Agency for Public Mobilization and Statistics: Banker Arqaam, 2021, p. 135.

- BBC News Arabic: The poverty rate in Egypt has risen to 32.5% of the population. Available on July 30, 2019, at: <https://www.bbc.com/Arabic/business-4916756>

⁽⁷³⁾ Al Arabiya News: How Egypt succeeded in reducing poverty to the lowest level in 20 years, available on 3/9/2021 at: <https://www.alarabiya.net/aswaq/economy>.

⁽⁷⁴⁾ Al Arabiya News: Unemployment in Egypt increased to 7.4% in the first quarter of 2021, available on 3/9/2021 at the website: <https://www.alarabiya.net.aswaq/economy> See also: Central Agency for Public Mobilization and Statistics: Banker Arqaam, 2021, p. 55.

⁽⁷⁵⁾ Minya governorate has the highest illiteracy rate in Egypt with 32.2%, while the Red Sea and Canal governorates have the lowest rate with only 12%, see:

- Central Agency for Public Mobilization and Statistics: Banking in Figures, available on 5/9/2021, at:

- <https://www.capmas.gov/eg/pages/staticpages.aspx?>

⁽⁷⁶⁾ Perhaps the answer to the question seems simple if we know that a country like Cuba, which is a totalitarian state, was able to reduce the illiteracy rate from 65% to 4% in a short period, just as Mexico, a semi-democratic country, was able

By reviewing both rates, it is possible to observe and monitor the direct relationship between unemployment on the one hand and illiteracy on the other hand, and the link between both of them with poverty. The illiterate usually does not find work that generates a stable income, which puts him - often - in the circle of those who suffer from poverty and hardship of life, and these usually do not enjoy. With the luxury of seeking to know the financial services provided to them by financial institutions, they are always concerned with searching for the satisfaction of their basic needs such as food, housing, clothing, treatment and education... So where is the surplus of their income to be dealt with by banking, especially if we know that the average annual income of Egyptian families arrives, according to data The Central Agency for Public Mobilization and Statistics 2021, to about 58 thousand pounds, and that the average annual consumption of the family reaches 53 thousand pounds in normal circumstances, and without exceptional spending or luxury, to make it clear to us that many Egyptians first need social and cultural inclusion to rid them of ignorance and poverty for their access to financial inclusion⁽⁷⁷⁾.

Related to both of the previous two indicators is a third indicator that is no less dangerous and important than them, which is related to high inflation rates. The data of the Central Agency for Public Mobilization and Statistics recorded the instability of this rate during the past ten years. After this rate recorded 7.1% in 2012, it gradually rose again to reach 13.8% in 2016, and reached its peak in 2017, recording 29.5%, and then declines again quickly to record 9.2% in 2019, and achieve its lowest rate since 2006, to score only 5% in 2020⁽⁷⁸⁾.

It is known that one of the most important negative consequences of inflation is the deterioration of the value of money, the loss of a large part of its purchasing power, and the weakness of the real income of individuals, which makes individuals more skeptical about the value of money, which causes the latter to lose many of its functions, especially as it is a store of value, as the tendency increases towards Consumption and the tendency to save decreases, and individuals seek to get rid of money and replace it with goods, which is completely incompatible with the direction of opening bank accounts, or originally dealing with banks, and thus more financial exclusion⁽⁷⁹⁾.

- Taking into account that the population of Egypt in 2021 amounted to 101.5 million, of whom 43.6 million live in urban areas, 57.9 million in the countryside, and referring to the degree of banking and geographical concentration of banking institutions, we will find that large banks (such as Al-Ahly, Egypt, Cairo and Alexandria) account for more than two-thirds of the banking market, but, despite the importance of the negativity achieved by this degree of banking concentration, the negative impact is the most. Rather, it seems evident in the distribution of the branches of these banks and their banking units across the governorates on the one hand, and across the residential districts and neighborhoods within each governorate on the other hand. The reality reflects that the rural population - despite their large number - is the least fortunate to benefit from banking services due to the lack of sufficient number of banks (Except for the village banks and the Agricultural Bank of Egypt) in rural areas, unlike the city's residents who are more fortunate to have bank branches in urban areas and to contain many malls, store chains and restaurants that allow the use of credit cards in purchases and fulfillment.

to reduce its illiteracy rate to 6% , see, Muhammad Abu Al-Ghar: The spread of illiteracy in 25 Egyptians is a great shame, available on 5/9/2021, at the website:<https://www.almasryalyoum.com/newa/details/2389407>.

⁽⁷⁷⁾ The high level of financial illiteracy is one of the reasons for financial exclusion, which we note some of its manifestations through the inability of many, especially the elderly and pensioners, to deal with ATMs, despite the simplicity of obtaining this service and the similarity of the steps of dealing with different types of machines.. See in that:

- Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion, pg. 493.

⁽⁷⁸⁾ Central Agency for Public Mobilization and Statistics: Egypt in Figures 2021, previous reference, p. 126.

⁽⁷⁹⁾ Attia, Ashraf. "Enhancement of Financial Inclusion and Fintech: Opportunities and challenges A Presentation of Egypt's Experience in Financial Inclusion, pg. 493.

Thus, the weakness of the banking density index (the index of the number of branches or units per ten thousand inhabitants) is one of the most important causes of financial exclusion. There is a direct, direct relationship linking the banking density indicator with financial technology. An increase in the number of operating banks and their good geographical distribution will inevitably lead to an increase in the level of financial technology and vice versa, as previously discussed.⁽⁸⁰⁾

- The increase in the size of the informal economy in Egypt comes as one of the most important reasons for the weakness of financial inclusion, especially if we know that this economy includes more than 18 million establishments, including 40,000 factories whose business volume ranges between 1.2 and 1.5 trillion pounds, or about 65 : 70% of the size of the official economy, and this economy absorbs about 40% of the volume of employment, there are approximately 9.6 million people working outside the official framework, and the value of illegal exchanges and ownership - in cities and villages - is about 248 billion dollars, which is greater than 30 times the market value of the companies listed on the Cairo Stock Exchange. In total, the size of the informal economy in Egypt amounts to 400 billion dollars. The informal economy is, as it was said, the largest employer in Egypt, which had negative repercussions on the erosion of tax bases. Transactions that take place within this economy, of course, avoid paying their tax obligations, which were estimated at about 330 billion pounds annually, and here comes the issue of financial technology as a real way to solve this problem. The increase in the activities of the hidden or informal sector, the spread of monetary transactions between these activities and the logical distance from non-cash payment methods in order not to become known, will usually lead to a weak level of financial inclusion⁽⁸¹⁾.

Thus, the work to include many activities of the informal economy, with all that it includes of different social and labor groups, most of which come from those with irregular employment such as street vendors, daily workers, tuk-tuk drivers, domestic servants ... etc., into the official financial structure through The financial technology program, by improving their access to finance and enabling them to secure their current jobs and future revenues, may represent an imperative and a strategic direction for the Egyptian economy.

- The spread of many inherited cultures, even among the educated and those with high standards of living, some of which have an ideological aspect that sees dealing with banks as depositing and borrowing or in obtaining interest that contradicts Sharia, which necessitates avoidance of it. And most of them have a social aspect, and they see in dealing with banks the possibility of losing their money, and even a waste of their time and effort, which creates a state of anxiety and fear for the bank to risk bankruptcy or the idea of the state taking over depositors' money when needed. In general, there is a degree of mistrust in the banking sector, and the restrictions imposed on women's freedom to deal with others and even their ability to own bank accounts or even a mobile phone, as one of the social and financial obstacles that lead to the exclusion of a large segment of female citizens, especially those belonging to the rural community, from Access to financial services.
- Despite the importance of digital financial services and their significant impact on financial technology, the ecosystem for digital payments. In Egypt, it still lacks the necessary operational and regulatory support framework in some areas, such as the use of bank agents applying a risk-based approach to combating money laundering Anti-money laundering or combating terrorist financing. Perhaps the Central Bank's attempt, in June 2017, in cooperation with the Egyptian Banks Company, to implement a mobile phone interoperability systemTa7weel, which gives users the flexibility to transfer funds provided directly through banks, to alleviate this lack, followed by the announcement by the Central Bank - in the same year - of the launch of the Computer Security Incident Response

⁽⁸⁰⁾ Abbas, Mohamed Ahmed. "Informal Economy in Egypt: Problems and Solutions. Op, Cit., p13

⁽⁸¹⁾ For more details about the informal economy and its negative effects, see:

- Dr. Ashraf Attia: The phenomenon of the hidden economy, effects and mechanisms of confrontation, , pp. 3295 - 3296, and see also:
- Muhammad Ahmad Abbas: The Informal Economy in Egypt, Problems and Solutions, Egyptian Institute for Studies, Political Papers, March 2019, p. 8.

Team Computing Security Incident Response Team (CSIRT) To ensure the flexibility of electronic payment channels in the face of any electronic or fraudulent attacks, and to help financial institutions and protect them from different types of security attacks.⁽⁸²⁾ They are steps on the path to digital transformation and to a system based on secure banking and electronic settlement, in which cash transactions represent only a limited percentage.


D- The economic and social returns of financial technology in Egypt:

The Financial Stability Report for the year 2019 indicates the achievement of many benefits and social and economic returns within the Egyptian economy as a result of the application of financial technology, and perhaps the most important of these returns are the following:⁽⁸³⁾:

- Starting from February 2018 to November 2019, with the stability of the exchange rate and low inflation rates, the monetary policy tended to reduce the interest rate gradually, by 650 basis points, which contributed to the decrease in the cost of borrowing, which was offset by the prudential policy in December 2019 by raising the ratio of debt service to income. To 50% for consumer loans, including mortgage installments at 40% of the total monthly income.
- In July 2019, the Central Bank issued the rules governing the classification of financial inclusion products and services, after the Board of Trustees of the Anti-Money Laundering and Terrorist Financing Unit approved in November 2018 simplified due diligence procedures for financial technology clients and services, which allow banks to develop and provide low-risk banking products and services with certain determinants. Through simplified procedures to reach the target groups, in implementation of the principle of the risk-based approach adopted by the Financial Action Group FATFI have to talk about fintech.
- In October 2019, the Central Bank issued an initiative to finance the industrial private sector allocating an amount of 100 billion pounds through banks at an annual interest rate of 10% to grant credit facilities to companies operating in the private industrial sector, benefiting from them until April 2020, 726 clients with a total balance of 4.8 billion pounds.
- In December 2019, the Central Bank issued the real estate finance initiative for middle-income people, allocating an amount of 50 billion pounds through banks at an annual interest rate of 10% for a maximum period of 20 years, from which, until June 2020, about 213,000 customers benefited, with total loans amounting to 20.4 billion pounds.
- Private credit, which represents 34.2% of domestic credit, increased by 11.6% during the period from July 2019 to March 2020, and family credit, which represents 30.4% of private credit, increased by 23.2% during the same period, in conjunction with a decrease in average inflation rates. To 5.8%, while credit directed to the business sector (public and private) increased by 7.2%, during the same period, with an increase in the percentage of investments to GDP implemented by private sector companies and public companies.
- By the end of June 2020, the balance used from the initiative of the industrial, agricultural and contracting sector amounted to 68.8 billion pounds, while the portfolio of loans and facilities directed through the initiative to finance small, medium and micro enterprises increased to 201.8 billion pounds, and the balances of debts that were settled under the initiative of irregular customers Of the legal persons in all sectors, an amount of 13.6 billion pounds, of which about 2.1 billion is for the tourism sector.

⁽⁸²⁾ This is in addition to providing the Central Bank, in cooperation with the Arab Monetary Fund, another payment system that helps provide guaranteed payments, which is a system (ARPS) Through it, payments and settlements are established between Arab countries at the lowest costs, and it is considered an effective system for Egypt, especially due to the increase in the volume of remittances of Egyptians working in the Arab region, which represents 72% of the volume of Egyptian workers working abroad

⁽⁸³⁾ The Central Bank of Egypt: Financial Stability Report for the year 2019, Executive Summary, previous reference, pp. 1-7.

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- The total assets of the banking sector in June 2020 amounted to about 6.4 trillion pounds, compared to about 5.3 trillion in the fiscal year 2018/2019, as the structure of these assets is characterized by high liquidity, in which the portfolio of financial investments, treasury bills, cash and balances with banks represents 62.6% of the total assets. Stability is the distinguishing feature of this sector's deposits, as family sector deposits occupy the largest share of the deposits' volume at 83.6%, and the recent period witnessed the continued growth of total deposits at a rate of 9.1% during the fiscal year 2018/2019 to rise from 68% to 77.4%, then At a rate of 6.2% during the period from March 2020 to June 2020 to reach 83.6%.
 - The average liquidity ratio in local and foreign currencies was 44.4% and 67.7%, respectively, in the fiscal year 2018/2019, and rose to 54.3% and 70.3%, respectively in June 2020. The total loans to deposits ratio recorded 46.7% in the 2018/2019 fiscal year, It rose to record 47.1% in June 2020, and the liquidity coverage ratio reached 932.5% for the local currency and about 170 percent for the foreign currency, and the ratio of net stable funding was about 257.5% for the local currency and 160.9% for the foreign currency for the same period.
 - In terms of currency type, the ratio of total loans to total deposits in local currency amounted to 42.8% and 68.9% in foreign currency in June 2020, compared to 41.2% and 69.6% in March of the same year, 40.1% and 74.7% in the fiscal year 2018/2019, which is This shows the possibility of banks expanding in granting credits to all sectors.
 - The loan portfolio grew and continued to provide financing for all economic sectors, as the portfolio amounted to about 2.2 trillion pounds at the end of June 2020, compared to 1.9 trillion pounds at the end of the fiscal year 2018/2019, with an increase of nearly 300 billion pounds, and the largest share of that portfolio is heading towards financing institutions by about 72%. While the share of the consumer loans portfolio and the portfolio of small, medium and micro companies amounted to 15% and 13%, respectively, and that period indicates the stability of the ratio of non-performing loans to total loans at a rate not exceeding 4%, which is a low percentage that reflects the quality of credit portfolios.
 - The percentage of loans provided to the private sector to the total loans granted to clients amounted to 62.1% in the fiscal year 2018/2019, compared to 61.6% in the fiscal year 2017/2018, before declining again to reach 61.9% at the end of June 2020.
 - The net profit of the banking sector increased by a growth rate of about 32% in the fiscal year 2018/2019, compared to a rate that did not exceed 2.5% in the fiscal year 2017/2018, as the return on assets rose to reach 1.8% and the return on equity to record 23.4%, and the net margin of return to record 1.4%.
 - The capital adequacy ratio increased in the fiscal year 2018/2019 to reach 17.7%, compared to 15.7% in 2017/2018, to continue its rise and record 20.1% in June 2020.
 - The total assets of the non-bank financial sector amounted to 615 billion pounds in the fiscal year 2018/2019, which represents 10.4% of the total assets of the financial sector, and about 11.6% of the GDP, as the postal and insurance sectors account for 58.8% of the sector's assets, followed by insurance funds Government and private companies by 13.2, then investment funds by 10.4%.
 - The value of savings in the postal sector amounted to about 437.2 billion pounds in the fiscal year 2018/2019, deposits of savings funds represented the largest part of them at 69.7%, while the assets of insurance companies amounted to about 118.2 billion pounds, investments representing about 86.3% of them, and the assets of government insurance funds amounted to about The assets of private insurance funds are about 80 billion pounds, while investment funds amounted to about 63.8 billion pounds at the end of 2019 with a growth rate of approximately 35.7% compared to the previous year 2018.
 - The total assets of non-bank financial institutions, which include real estate finance, microfinance, financial leasing, factoring and securitization, recorded EGP 97.6 billion in 2019, an increase of EGP 21.6 billion over 2018, with a growth rate of 28.5%.

E- Government and institutional plans to support financial technology:

In addition to all the positive and serious efforts, initiatives and steps that were previously covered by the study, there are many efforts made by the state and the authorities responsible for supporting and implementing financial technology plans in Egypt in the field of regulating digital financial services and disseminating them to the largest base of citizens, perhaps the most important of which are:

- The Central Bank's preparation of the bank's strategy in the field of the financial technology industry in order to maintain a balance between financial stability and unleashing innovation, with the aim of transforming Egypt into a regional center for the financial technology industry in the Arab region and Africa. Innovation Support Fund Fintech Fund, with a capital of one billion pounds funded by the Central Bank to finance start-up companies working in the field of financial technology, and to establish a laboratory for financial technology applications Fintech Sand Box to provide a regulatory testing environment to launch more FinTech innovations and reduce the associated risks, and establish a FinTech Center Fintech Hub, which acts as a one-stop-shop for all FinTech startups, to provide support for new innovations, and to collaborate with other FinTech hubs at the international level.
- Signing a memorandum of understanding between the Ministry of Communications and "Visa" International on May 16, 2017, to start implementing the project to develop the technological infrastructure for financial transactions and activate the digital economy. The memorandum includes that the company establish and operate a local network to manage transactions related to the various government payment programs, as well as support systems through a unified card, to ensure that all transaction data in Egypt is preserved. The memorandum of understanding comes within the framework of the government's endeavor to build infrastructure and a favorable technological business environment, and to achieve the goal of increasing the efficiency of support programs and government services provided to citizens, reducing the administrative costs of these programs, and increasing their effectiveness to stimulate the Egyptian economy⁽⁸⁴⁾.
- Signing a memorandum of understanding between the National Post Authority ENPO and Bank of Egypt Misr Bank and the global company "Visa" International Association On August 29, 2017, regarding expanding the area of accepting electronic payments, and enabling merchants in the governorates of Egypt and through the Egyptian Post to accept payments easily and conveniently for citizens to meet their various needs using electronic payment methods. Whereas, Visa provides all the assistance required for the success of this new model of cooperation from a technological point of view in terms of products and solutions that meet the aspirations and requirements of Banque Misr and Egypt Post customers. Its partnership with Banque Misr, and the memorandum includes the provision of machines ATME .In some post offices, which contributes to increasing electronic exchange points and contributing to achieving financial inclusion. The Banque Misr manages, feeds and maintains these machines, in addition to collecting loan and credit card installments for the bank's customers through post offices spread throughout the country, which contributes to making these services available to customers on wide range⁽⁸⁵⁾.
- A memorandum of understanding was signed between the Information Technology Industry Development Agency (ITIDA). the international company "Visa" on November 27, 2016, with the aim of promoting e-commerce and assisting small and medium IT companies, as well as providing digital payment services through banks and the National Post Authority in technological areas. The agreement also aims to increase awareness of digital financial services and financial education for all categories The community, and the agreement stipulates that the authority and "Visa" company provide the necessary support to help and motivate small and medium-sized companies to register in the Egypt Trade Portal, which is launched by "e-finance". In cooperation with the international

⁽⁸⁴⁾ Available on 24/6/2021, at the link:

- <https://oxfordbusinessgroup.com/analysis/digital-drives-host-government-initiatives-are-raising-financial-inclusion>.
And see also: <https://revamp-dotmsr.com/details/793038>.

⁽⁸⁵⁾ Available on 24/6/2021, at the link:

- <https://www.mcit.gov.eg/Ar/Media-center/Latest-News/7552>.

company Visa and the British company Cloud Pay, by defining the necessary criteria for selecting companies working in the field of creating websites, which will help in the process of developing web pages for various sectors of companies from all governorates of the Republic on the portal, with priority given to companies in Upper Egypt through the Assiut Technology Zone⁽⁸⁶⁾.

- On the same date, a Memorandum of Understanding was signed between ITIDA The MasterCard International Foundation MasterCard International Organization. With the aim of applying electronic payment systems and spreading the concept of cashless transactions in the technological areas and smart villages in Egypt, where the Information Technology Industry Development Authority seeks to support this initiative by motivating the smart villages and technology areas to provide their services completely electronically to be available on the Internet for companies operating in them to increase the speed of The integrity and transparency of services, and to achieve this goal, a set of innovative tools for electronic payment services are made available to small and medium-sized companies for use in development, such as the application programming interface API, while encouraging these companies to benefit from the experiences of the MasterCard Foundation in this field, as well as by participating in training programs organized by the Information Technology Industry Development Authority, and enabling small and medium-sized companies to enter the MasterCard payment system⁽⁸⁷⁾.
- Training of 200 postal employees in the fields of electronic payment and financial education, where the National Post Authority agreed with the international company Visa to train and raise the efficiency of employees working in post offices that are currently being developed and provide them with expertise and information in the field of electronic payment and financial education, provided that the training includes basic information about The electronic payments industry and the various payment products and tools available in the Egyptian market and through the Egyptian Post. The training also includes informing postal employees of the latest global trends in the areas of digital payments and the importance of creativity in achieving financial inclusion. Post offices also distribute financial education brochures, prepared by Visa International, to citizens dealing with post offices with the aim of spreading financial culture. ⁽⁸⁸⁾.
- The establishment of Victory Link It is a company specialized in the field of integrated digital services, by launching a new company under the name of the Egyptian Company for Electronic Payments "Cash Call", by the end of 2018, to provide its financial services in the field of bill collection and charging the balance of mobile phones, as well as providing its services to all government sectors, individuals, companies, banking and financial institutions⁽⁸⁹⁾.

4. CONCLUSION

Since 2008, financial inclusion has gained increasing importance in the wake of the recent global financial crisis, and achieving its target has become one of the priorities of work for all financial policy makers, reflecting the positive effects expected to be achieved with each rise in percentages, indicators and level of achievement, mainly represented in the availability of all services Financial and using it with the knowledge of the various groups of society, its institutions and individuals through all official channels, especially the disadvantaged and marginalized groups, as well as attracting the lost savings to the umbrella of the official financial system, thus enhancing liquidity

⁽⁸⁶⁾ Available on 9/14/2021 at the link: - <http://gat.ahram.org.eg/News/334422>.

⁽⁸⁷⁾ This agreement has enabled 4.6 million government employees to withdraw their salaries from ATMs using their own debit card, which they can also use to make purchases at nearly 60,000 points of sale across the country. Available on 9/14/2021 at the link:

- <https://www.mcit.gov.eg/Ar/Mediacenter/pressRoom/PressReleases>.

⁽⁸⁸⁾ Available on 9/14/2021, at the link:

- <https://www.mcit.gov.eg/Ar/Media-center/Press-Room/PressReleases/4305>.

⁽⁸⁹⁾ Available on 9/14/2021, at:

- <https://www.misr365.com/economy-news>.

and directing it towards the productive and investment sectors, and then achieving more financial stability and achieving sustainable development.

International reports indicate that there are about 1.7 billion adults who do not have bank accounts, which represents 31% of the world's population. Among them, the percentage of women is increasing, reaching 56%, and rising geographically in certain regions, reaching 63% on average in Arab countries and more from 67.2% in Egypt.

The expansion in the use of financial technology has revolutionized the development of indicators of financial inclusion, as the entry of digital technology into the financial field has led to radical transformations in the map of payment systems, especially in light of the entry of giant technological institutions into this field, benefiting from in-depth knowledge of customers to provide a wide range. One of the newly developed financial services, through its technological platforms and through the use of mobile phones and the Internet.

While financial inclusion helps poor families, start-ups and small companies increase their ability to access the required credit, it also works to attract more savings and payments, and with all that this can reflect in the positive impact on prosperity, job creation and inclusive growth, which we find resonance apparent in achieving More financial stability by creating a sound financial system that has the ability to address challenges and crises.

However, despite these positive results and the recent and influential technical development, the practical reality of supporting and enhancing financial inclusion reflects the fact that there are many severe obstacles from this spread, as the strict regulatory barriers set by financial institutions and the guarantees they require to provide their loans, as well as Geographical barriers, incomplete technological environment, financial market structure barriers, financial deficit of clients, often accompanied by illiteracy and weak financial culture, are at the top of a long list of difficulties leading to significant levels of financial exclusion, and thus failure to achieve the required and targeted level of financial inclusion.

In Egypt, financial inclusion has been placed as a top priority in the national agenda, and several initiatives and agreements have been formulated in order to raise its levels, which have had a natural return in increasing the number of Egyptians who can access financial services, as Egyptians have nearly 19 million mobile phone accounts in 2020, or what It represents 32.8% of the adult population estimated at 63 million people.

Egypt has a good financial structure that can give it the opportunity to achieve a real and distinct financial spread when the challenges are realistically monitored in preparation for addressing them and developing appropriate strategies to eliminate them. These limitations do not differ much from the challenges hindering financial inclusion in general, and some particular challenges may reflect a larger situation. Difficulty and motivation for rapid confrontation, such as the high rate of poverty (29.5%), the illiteracy rate (24%), the unemployment rate (8%) and the dependency rate (62%), in addition to the high degree of banking and geographical concentration of banks and the weak indicator of banking density. However, the spread of many religious ideas and beliefs, as well as other social customs and genetics, is one of the most obstacles that limit the degree of access of many models of the population, especially women and the elderly, to receive banking services.

In a real confrontation of the challenges and obstacles that can limit access to real and effective financial inclusion, and to activate the possibilities that prepare for this access, foremost among which comes the presence of a supportive political will and a national goal to build a non-monetary digital economic society, we can make a number of recommendations, as follows next one:

- In light of the multiplicity of parties concerned and related to the financial sector and the issues of financial inclusion in the country, and with the possibility of unilateral steps, plans and initiatives, and with the need to unify efforts under one umbrella, to avoid duplication, the existence and construction of a national strategy for financial inclusion that includes all stakeholders (parties Regulatory institutions, financial institutions, civil society, ministries...etc.) is inevitable, within a clearly defined plan with a specific time frame, preceded by a number of



studies, surveys and initial evaluations to find out the reality of the challenges, possibilities and opportunities available.

- Working to achieve a better geographical presence for financial institutions, and here may be to find a way for joint cooperation, between these institutions and microfinance institutions and post offices (with good spread), in providing financial services with a common brand, the way to achieve this better geographical presence.
- Inviting financial institutions to work hard and to build their human capabilities and develop their financial infrastructure to provide better designed and more accessible services, especially urging them to invest in financial technology solutions and provide their services online to the vast majority of customers.
- Providing the necessary facilities to invite global financial technology companies to invest in the Egyptian market and invite local private capital to take risks in investing in the field of financial technology, as this risk is the pillar upon which the growth of this type of technology is based, with the importance of expanding the provision of institutional support to help Increase start-up companies, such as establishing incubators and regulatory laboratories that allow these companies and financial institutions to test innovations in the real environment. In addition to the importance of setting the legal framework and the governing legislation that suits the advanced nature of these technologies, in order to give confidence to investments in this field in a safe manner, and to put in place effective mechanisms for settling disputes arising from these emerging technologies, such as electronic litigation, for example.
- Work to achieve legitimate competition and prevent ways of monopoly between all existing entities providing financial services, whether those traditional institutions such as banks, and their trust advantage, or those emerging companies, which usually have technological solutions that banks cannot build easily, which calls for The importance of emphasizing the complementarity of these institutions and not considering one a substitute for the other.
- Activating and expanding the roles of microfinance institutions to enable them to effectively reach the less fortunate groups by providing customized financing and savings programs, in addition to emphasizing that commercial banks play the same role, in preparation for the transformation of many of these groups (poor families, small and medium companies, and others) to enter into the scope of formal economy.
- Work on the establishment of integrated electronic banks that provide all the financial services provided by regular banks, provided that their main drive is to simplify procedures and access requirements, to be satisfied with the presence of a mobile phone and a personal photo of the applicant.
- Work also on the existence of fully specialized banks that provide their financial and social services to a specific category (small and medium-sized companies or women), for example, with conditions that are compatible with the capabilities and circumstances of each category, and the national target thereof, whether in terms of loan interests, loan guarantees, or the required papers and documents.
- Start taking advantage of artificial intelligence technology to provide services that are compatible with the special needs of customers, as well as take advantage of virtual reality technology Virtual Reality Which enables the customer to know the services and products from his place in a way that simulates the reality of his presence in the bank.
- Activating Islamic financing programs, especially since there is a group that is not a small group that views banking transactions as violating religious principles, which leads them to completely refrain from dealing with the banking sector.
- Work on activating measures to combat money laundering and terrorist financing as part of the strategy for implementing financial inclusion.
- Calling those in charge of educational policy to include and include spreading awareness of the importance of financial inclusion within the educational curricula across all stages of study, especially middle schools such as preparatory and secondary, to emphasize the preparation of generations aware of the feasibility of this national trend, and to work to address the low level of

financial awareness among citizens, in addition to continuing the call for initiatives And awareness campaigns through various media (read, audio and video) to expand the dissemination of this lost culture among many layers of Egyptian society.

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