

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF MOHAMED BOUDIAF - M'SILA

FACULTY OF ECONOMIC, COMMERCIAL
SCIENCES, AND MANAGEMENT SCIENCES
DEPARTMENT OF FINANCIAL SCIENCES
AND ACCOUNTING

N°:
DOMAIN:



**ECONOMIC, COMMERCIAL SCIENCES,
AND MANAGEMENT SCIENCES**
STREAM: FINANCE AND ACCOUNTING
OPTION: FINANCE AND BANKS

**The Reality of Financial Technology and
Artificial Intelligence for Supporting the
Financial and Banking Sector
-Case Study of AL SALAM Bank of M'sila**

Dissertation Submitted to the Department of Financial Sciences and Accounting in
Partial fulfillment of the Requirements for the Master's Degree in Finance and banks

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2021/2022

Dedication

This thesis work is dedicated to my beloved parents who encouraged and supported me with their prayers and efforts to continue this work

To my brothers

To my friend whom I shared this work Samia

My precious family : my grandparents.

*To my friends I have ever met specially **Nihad, Hassna***

To all who helped and encouraged me specially D.

Yassamine.

Dedication

I dedicate this work :

To my beloved parents who encouraged and supported me with their prayers and efforts to continue this work

To my brothers and sisters

To my husband for his support and understanding

To my lovely children

*To my dear friend whom I shared this work **yassamine***

To all my mates and friends who I have met

samia.

Acknowledgment

I would like to express my most sincere gratitude to the people who contributed to the completion of this dissertation.

*From the first step of this research to the last draft, my gratitude goes to my supervisor **Mr. Zeid Aymen**, for his advice and encouragement in the time of great need.*

*And special thanks to **Mr BENSEDDIK IBRahim** for his support and The information he gave us*

I also want to thank all the people whom I have known in this college in the past five years, all the teachers and all the students. I can finally say thank you so much.

Abstract:

In this study we sought to highlight on fintech and artificial intelligence, which formed A revolution in financial systems, where the study aimed to reveal the role of fintech and intelligence The Algerian banking sector has increased its efficiency, and an integrated relationship has been noted between them. We did an interview, depending on the information Rasat's previous father Seen, Rasa's father came up with the important role that both AI play.

And financial technology in developing and upgrading the efficiency of the banking sector, as we have come up with a set of Suggestions and recommendations enable Algeria to implement its own strategy and move towards investment in

Technology -- keywords: fintech, financial services, artificial intelligence,.

ملخص

في هذه الدراسة سعينا لتسليط الضوء على التكنولوجيا المالية والذكاء الاصطناعي، اللذان شكلا ثورة في الأنظمة المالية، حيث هدفت الدراسة الى الكشف عن دور التكنولوجيا المالية والذكاء الاصطناعي في الرفع من كفاءة القطاع المصرفي الجزائري، كما تمت الإشارة إلى علاقة متكاملة بينهما قمنا بأجراء مقابلة ، اعتمادا على المعلومات والدارسات السابقة التي تم الاطلاع عليها، حيث توصلت الدراسة إلى الدور الهام الذي يلعبه كل من الذكاء الاصطناعي والتكنولوجيا المالية في التطوير والرفع من كفاءة القطاع المصرفي، كما وتوصلنا إلى مجموعة من الاقتراحات والتوصيات تمكن الجاز من تطبيق استراتيجيتها الخاصة والتوجه نحو الاستثمار في التكنولوجيا.

الكلمات المفتاحية: التكنولوجيا المالية، الخدمات المالية، الذكاء الاصطناعي.

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Introduction

Banks are currently one of the main pillars which countries depend on to develop their economies. Economic processes and trade transactions play an important role in linking economic processes and trade transactions in order to reinvigorate all sectors that contribute to building each country's economy. Due to the importance of banks in economic operations, it is necessary to activate these enterprises in order to increase their administrative efficiency and to work towards achieving their objectives and strategies within the framework of the banking financial environment.

Commercial banks have been instrumental in the banking sector. In fact, they contribute to expanding the size of the market by facilitating and stimulating financial and commercial transactions. Recent banking developments have been accompanied by a number of trends contributing to a certain degree of reduction in banks' ability to achieve their profit and growth goals easily. In addition, it created a competitive environment where banks strive to provide the best services and facilities to grow their profits and continue their activity.

In recent decades, banks witnessed a great degree of dynamism and complexity due to waves of globalization and accelerated innovations. The latter has put banks in various countries under a major challenge: keeping pace with these shifts driven by large financial companies in order to maintain market share and expand further into new markets. This has led her to come into contact with AI, which is a relatively recent field. emerging as a computer science that is interested in studying and understanding the nature of human intelligence and simulating it to create a new generation of smart computers, Which can be programmed to accomplish a lot of tasks that need a high capacity of inference, deduction and perception which is a characteristic of a human being and is included in the list of intelligent behaviors of a human being that the machine

could not have acquired before.

I. Problem statement

From the above, the problem of the research revolves around the following question:

What is the reality of fintech and artificial intelligence in supporting Algeria's financial and banking sector?

To reach the depth of this question, several questions will be asked that will be of interest to the researchers in this work:

II. Research Questions:

- ✓ What is the role of fintech in supporting the financial sector?
- ✓ How does Artificial intelligence affect banking operations?
- ✓ How was the impact of the Coronavirus pandemic on the use of financial technology in banking operations?
- ✓ What are the Bank's most important fin-tech and artificial intelligence applications?

III. Hypothesis

In light of the research problem, we can formulate the following hypothesis:

First hypothesis: fin-tech plays a significant role in supporting the financial sector.

Second hypothesis: Artificial intelligence has significantly affected banking operations through the use of security and accuracy programs.

Third hypothesis: third hypothesis: The coronavirus pandemic has rapidly and broadly affected the use of fin-tech in banking operations.

IV. Importance of the study

Modernity of the topic of financial technology and artificial intelligence.

Lack of research, according to our information about the importance of this subject in supporting and developing the banking sector.

The importance of this study lies in knowing the development taking place in the field of financial technology and artificial intelligence, which contribute to raising the performance of financial and banking institutions.

V. Research objectives

The aim of this study is to look at the most important and recent developments in the financial and banking sector, so that many of the transactions and financial and banking services that used to take place traditionally are time-consuming to complete. It is currently done through a few clicks on the computer or mobile phone and this is due to the development of artificial intelligence and fin-tech.

To learn about the concept of financial technology, its characteristics, and its most important fields.

To know the importance of artificial intelligence in supporting the banking sector.

VI. Reasons for choosing the topic

- ✓ To figure out the importance of fin-tech and artificial intelligence in banks.
- ✓ To fill the gap of artificial intelligence in the banking sector.
- ✓ Highlight the uses of fin-tech and artificial intelligence in the banking sector.
- ✓ Previous studies were quite limited .

VII. Previous studies

Some previous efforts of researchers in this field were reviewed, in order to know their scientific effort and the variables they dealt with, some of which can be benefited from in the current study, and the following is a presentation of some of them:

Hicham Allag, Hafaf Farid, Artificial Intelligence Applications in Financial

Institutions: An Introduction to Activating Financial Inclusion, Journal of Economics and Sustainable Development, Volume5, Issue1, 2022.

The study aimed to study the contribution of the application of artificial intelligence in financial institutions to enhancing levels of financial inclusion, which has long been a difficult target for governments, whether in developed or developing countries. It was achieved by relying on artificial intelligence algorithms, and the study concluded that artificial intelligence effectively contributed to the availability of financial services.

Alaach Ahmed, The Role of Fintech in Supporting Financial Activity and Innovation Bahrain Experience, Creative Magazine, Journal 09, Issue 01, Blida University, 2019.

The study aimed to address the topic of fin-tech by referring to Bahrain's experience if this sector in the past few years constitutes a revolution in the field of global and Arab financial systems. Our study meets the previous study in the first chapter of the research on fin-tech, and differs with the previous study that we have addressed the subject of artificial intelligence in the banking sector.

Alison Luis, George William lamb, Artificial intelligence and augmented intelligence collaboration, regaining trust and confidence in the financial sector, liver pool, 2018.

The study seeks to show that several banks and fin-tech start-ups invest in artificial intelligence and that there are a number of challenges arising from the use of artificial intelligence.

VIII. Research Limitation

Every study has limits, the spatial limits represent the study sample institutions, and the temporal limits represent the time period in which the study was applied, as follows:

- ✓ **Time limits:** the study was conducted during the period from:

- ✓ **Theoretical aspect:** from October to the first week of April.
- ✓ **Applied aspect:** from 2nd week of April to 2nd week of June
- ✓ **Spatial boundaries:** Al Salam Bank, M'sila branch, was selected as a field study for our topic.

IX. Methodology

In order to reach the aspirations of the study and to meet the various aspects of the topic and to analyze its dimensions as well as to answer the research questions, the curricula commonly used in financial and economic studies is the descriptive approach in the theoretical aspect. Various concepts, terminology and theoretical information will be used from previous studies. Then, we will use the analytical method in the applied aspect and we will make an interview analysis in order to achieve the study's objective and guide the interview to the desired direction.

X. The study structure

The study is divided into two chapters. The first chapter is relied on the concept of financial technology and artificial intelligence, which in turn contains three topics : the first topic is related to financial technology, the second deals with artificial intelligence, while the third topic focuses on the relationship between them.

The second chapter deals with the applied study of this one. It will address the identification in the first section for the institution under study and the second section to the applied study of this institution through the interview.

Chapter One

Chapter one : General information about financial technology and artificial intelligence in banks

1.1 Introduction :

Financial technology is the result of technological progress in the financial aspect of the global economy. It showed a new and emerging financing face embodied in emerging companies, which represented a challenge to traditional banks on the one hand and on the other hand a fierce competitor that may reduce their investment opportunities, as this technology contributes to several Advantages that are reflected on the funded investors on the one hand and on the beneficiaries of financial services on the other hand, which contributes to advancing the pace of progress in countries and may lead them to several risks due to this development, as the development of this type of technologies requires a special incubating environment and legislative regulations that ensure their good functioning and ensure safety users at the same time. The investment in financial technology has increased significantly recently all over the world, and it is likely to continue to increase, given that financial technology is not only related to the financial services sector, but to all businesses that deal with the financial services industry and emerging (Fin-tech) companies using Block chain technologies. And cryptocurrencies, artificial intelligence and others to provide financial services to consumers in a faster, low-cost, safer and more efficient way. To find out more about some of the mysteries of this chapter.

1.2 Financial technology

An overview of financial technology

The first requirement: an overview of financial technology.

Financial technology is an innovative mechanism for improving the financial and banking services systems and processes provided such as electronic payment services, transferring funds between individuals and facilitating borrowing or financing as well as savings. Financial technology also contributes to innovative products to support beneficiaries of the financial and banking services industry (companies, business owners and individuals) to better manage their financial operations, especially with the increasing use of the Internet and smartphones.

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1.2.1 The concept of financial technology

Financial technology has received a large volume of definitions despite the recent studies that have addressed it, which have led to differing opinions on the accuracy of its concept, but before addressing the concept of financial technology, an idea must be taken about the emergence and development of the latter over time.

1.2.2 The emergence and development of financial technology

Today, the world is undergoing a qualitative shift from a cash to a non-cash economy, thanks to financial technology services, which can bring about radical changes in the financial services sector, where financial technology provides services to many individuals and companies in quick, easy and less expensive ways¹. It is not a new and modern phenomenon, banking and financial services institutions have a long history of adopting technology through stages, which can be shortened below²:

A. Phase I (1866-1967): At this stage, the first transatlantic cable was developed and the ATM was invented, and technology and finance came together to blow up the first period of financial globalization;

B. Phase II (1967-2008): At this stage, financial technology remained dominant within the traditional financial services industry, which used financial technology to provide financial products and services, which saw the beginning of electronic payments, clearing systems, ATMs and online banking;

C. Phase III (2008-present): Since the global financial crisis, new startups have emerged, which have begun to provide financial products and services directly to companies and the general public. Due to the most prominent factors that contributed to the embrace of.

¹ - Wissam Benfadh, Hakim Ben Hassan, **Reality of the Use of Fintech in the Arab World, Journal of Administrative and Financial Sciences**, vol. 4, No. 03, Amhamed University, Boumerdes, Algeria, 2020, p. 113.

² - Saeed Harfush, **Fintech is a promising industry in the Arab world**, afaq Scientific Journal, vol. 11, No. 03, University of Gulf (Faculty of Economics Sciences, Department of Management Sciences), 2019, p. 725.

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The world's financial technology and the expansion of its developments factors¹:

A. Technological development: The most notable feature of financial technology is the lack of positive constraints that can hinder its progress, which has contributed to the increased pace of this progress and acceptance, highlighting new potential that has the capacity to adapt and the low cost of technology has contributed to this growth, where it has decreased by 31% over the past 10 years, new technology is able to improve the flexibility of the systems of institutions such as banks².

B. Availability of finance: There is easy access to finance enabling entrepreneurs and founders to start new projects, with venture capital investments amounting to \$13.6 billion globally in 2016.

C. Changing customer expectations: Changing their demands for digital services are calling for innovative solutions by traditional players such as financial technology companies, and about 63.1% of consumers worldwide accept the use of financial technology products and services.

D. Regulatory support: Governments and regulatory authorities, by supporting this type of technology, are reducing barriers to their investors. Some governments have recognized the important role of financial technology companies in facilitating and complementing the traditional roles of financial services companies, and in 2016 governments through five countries announced the development of San box regulatory laboratories at their level.

¹ ouaba Abd al-Rahim, Zahra Aoukasem, **Financial Technologies in djelfa, States Between the Novelty of the Phenomenon and the Speed of Assimilation**, Journal of Economic Studies, No. 38 of 2019, pp. 355-356

² Enoto Lukanga, **Fintech: Unlocking the Potential of Middle East and North Africa**, Afghanistan, Pakistan, Caucasus and Central Asia, Regional Economic Outlook, KMPG Report, p. 3.

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1.2.3 The definition of financial technology

Due to the novelty of the term Fintech, which is an abbreviation for Financial Technology, attempts to define it have been numerous by academics, financial companies and even international bodies.

The International Stability Council defined financial technology as: "Financial innovations using technology that can develop new business models, applications, processes or products that have a significant impact on financial markets and institutions, and on the provision and provision of financial services.

The Digital Research Institute in Dublin, Poland, defines technology as "modern technological inventions and innovations in the financial sector, including a range of digital programs used in banks' financial operations, including transactions with customers and financial services such as money transfer, currency exchange, interest rate accounts, profits, investment expected profits and other banking operations."

The Basel¹ Committee on Banking Supervision defined financial technology as any financial technology or innovation that results in a new business model, process or product that has an impact on financial markets and institutions.

Also academic Schueffel Patrick of the Institute of Management in Fairburg, Switzerland, in an article in the Journal of Innovation Management in 2016, explained that the term financial technology has gained global acceptance around the world and is about to find its way into financial dictionaries, according to the Oxford English Dictionary defines it as "computer software and other techniques used to support or enable banking and financial services, it can be said that it is an

¹ Patrick Schueffel, **Taming the Beast: A Scientific Definition of Fintech**, *Journal of Innovation Management*, 2016, p35, view at: 10/04/ 2022, 15:00), online: <https://journals.fe.up.pt/index.php/IJMAI/article/viewFile/322/221>

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economic industry consisting of companies using technology to make financial services more efficient¹.

Nicoletti Bernardo, author of the joint book *Studies in Financial Services Technology*, defined it in his intervention entitled *The Future of Financial Technology* as "innovative business models and initiatives that benefit from ICT in financial services, or can be considered an industry made up of organizations using new financial technology to support or enable financial services.

Through the tariffs provided, we can deduce the definition of financial technology as: technology used by startups to challenge traditional companies to harness them in the financial services sector, rather than maintaining traditional tools, ranging from cash payment applications to cash payment programs and applications, to complex programs and applications such as artificial intelligence and big data.

1.3 Characteristics of the importance and types of financial technology

Financial technology is a term that combines the technological aspect with the financial aspect, resulting in an area interested in financial transactions using and exploiting all the resulting modern technology smartphones, networks, electronic commerce, digital currencies... Etc., where the latest technology has been directed to the development of financial services, it is provided by companies that have exploited technology in the service sector, a late step compared to other areas such as media (media technology), trade (e-commerce), money (electronic money).

1.3.1 The characteristics of financial technology

The most important characteristics of financial technology can be placed in the following points:

- A.** Financial technology is a set of knowledge, skills, methods, financial and banking methods;
- B.** Technology with its different concepts is not a goal per se, but a means used by financial and banking institutions to achieve their objectives;

¹ Bernardo Nicoletti, ***the Future of FinTech***, Springer International Publishing, Switzerland, 2017, p 12, view at:(10/04/2022, 17:03), online: <https://icpf.ir/wp-content/uploads/2018/05/The-future-of-fintech.pdf>

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A. Banking financial service is the main area of application of technology;

D. The application of technology is not limited to the performance of the financial and banking service, but extends to methods administrative.

1.3.2 the importance of financial technology

Financial technology is of great importance at present, especially in some countries of the Middle East and North Africa¹. Financial technology would facilitate access to finance for individuals and SME owners who lack adequate banking services, thereby achieving higher and more inclusive growth for all segments of the population. Banks can rely on technological means to raise efficiency, strengthen risk management and promote compliance with regulations and rules. Among the most important benefits of financial technology are:²

- ✓ promoting innovation and innovation in the financial sector and development of economic transactions;
- ✓ the digitization of the financial sector and the achievement of credibility and transparency;
- ✓ promoting the desire for transactions, client win-win and expansion of the financial sector;
- ✓ facilitating the availability of sources of finance to various SMEs;
- ✓ facilitating major business transactions and contributing to the expansion of financial activities;
- ✓ the use of financial technology ensures regulatory compliance, risk reduction and financial stability.

¹ Wahiba Abd al-Rahim, Saifeddin Tali, **Regulatory Technology Implications as a Regulatory Framework for Fintech on the Business Environment International Conference on Business Information Technology and Knowledge Economics**, Faculty of Business, Balqa Applied University, 28-29 March 2019, Jordan, p. 2.

² – Abdelghani Mulodi, Fathih Alali, **Innovation in Fintech as a digitization mechanism and its contribution to reducing paper use**, Economics and Environment Journal, Vol. 3, No. 2, Ahmed Draya University, Adrar-Algeria, 2019, p. 15.

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1.3.3 Types of financial technology

Long after the advent of financial technology, financial technology has evolved and resulted in types summarized as follows¹:

A. Digital Banking: These banks allow people to handle online banking operations, to improve the customer experience, online banks use innovative technologies such as voice and face studies, online banking programs enable customers to manage more aspects of their online accounts than visit a traditional bank, the online banking program allows customers to manage accounts, view transaction history, pay bills, etc.

B. Insurance: Most modern insurance companies use applications to reach new customers, these companies are more flexible than traditional insurance companies, and they use modern technologies such as IoT, big data science and other digital solutions to provide a better customer experience. The data obtained allows companies to make personal presentations, dynamic pricing and recommendations. In addition, real-time data flow allows insurance companies to effectively control risk and boost sales.

C. Tech Regulatory Operations Management: Regulatory and compliance management helps solve regulatory problems and challenges by applying innovative technologies, reg Tech allows banks to adhere to the rules and conduct continuous analysis, which can group, store and monitor unique customer passwords on multiple devices, and also use the financial risk management programs they manage by pre-detecting and analyzing potential risks and taking precautions to minimize or reduce them.

D. Capital Finance: As financial technology companies transfer equity financing, some companies are connecting certified investors to checked mobile vehicles. Others use the crowdfunding model and allow anyone to invest in new businesses. These companies simplify the fund-raising process for businesses. Raising virtual funds is easier for investors, as everything can be done online.

E. Consumer Banking: Consumer banks are another category of the financial technology market. Traditional banks charge high fees, so companies in this category are an alternative to consumers, and they have access to underfunded consumers.

1.3.4 Benefits and challenges to financial technology

Contemporary technology has left a new area that blends financial knowledge with technological skills in providing financial services and improving the internal performance of companies and institutions, called "financial technology", and attention to and investment in financial technology appears to have been highly

¹ Types of fintech in the Arab world, website vapulus, updated on: 11/04/2022 at the line :/
<https://www.vapulus.com/ar>

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popular between 2014 and 2018. provided by this field. Global investment in financial technology increased significantly, from \$928 million in 2008 to \$4 billion in 2013, then grew to \$20 billion in 2015 and is expected to reach \$46 billion by 2020, thanks to technological advances and innovative financial products, according to research firm Value AD.

1.3.4 The benefits of financial technology

(Villasenor) believes that many exciting things happen at the intersection of digital technology and financial services. The ecosystem thrives when you start up in financial technology companies, thanks in part to a global \$14.5 billion injection of project funding in 2015, up from \$7.3 billion in 2014. Financial technology companies are formulating and introducing a wide range of solutions that predict an impact on almost everyone, which will expand access, flexibility and innovation in financial services. In addition, financial technology helps make tremendous progress in providing financial services to many people who have previously been excluded from the formal financial system¹.

Hodge believes that the emergence of financial technology can be a blessing and a curse in itself for traditional financial service providers. Experts say that financial technology companies have better tools than others to communicate with customers and CRM programs, and because they are able to analyze customer behavior via social media, they have a broader understanding of what consumers want, which enables them to sell more products at higher profit margins in return we find that traditional banks and insurance companies are at risk of being late in the digital service race. (Betrand Lavayssiere), managing partner at Zeb Financial Services UK, says traditional financial services providers need to adopt financial technology more quickly to speed up their digitization projects." He also believes that traditional banks and insurance companies are hampered by their traditional systems and cannot make a shift to increase and improve their digital range easily,

¹ MENA Fintech venture report, p7

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which is why financial technology companies achieve attractive acquisition targets."¹

New business models based on new technological advances and market developments have changed the profile of financial intermediaries, with hedge funds, private equity firms and other capital market actors enjoying greater leverage in financial markets than in the past as shadow banks grow. New technology coupled with complementary regulatory reforms has also led to the growth of high-speed electronic communications networks and alternative trading platforms that serve as a real alternative to traditional exchanges. Banks and internet brokers have also formed a real competition for banks and traditional brokers. Automated fund management companies own traditional banks and intermediaries, for example (Wealthfront) billions of dollars on demand and radically change the wealth management business that was dominated by financial managers. Internet platforms, such as Second Market and Shares Post, have made it easier for people to trade securities to private companies and Crowdfunding entities, such as Kiva, as well as Kicks tarte, have provided people in large cities and small villages around the world with unprecedented access to capital. Peer-to-peer lending sites (P2P) such as Prosper and Lending Club offer a legitimate alternative to traditional financial intermediaries by linking lenders to borrowers. Appel Pay, Square and Venmo have changed brokerage in payment systems. The emergence of "bitcoin" has created a whole new currency for transactions free of traditional banking intermediaries, since banks are a safe warehouse and a money transfer center, it has been found that the use of the block chain Financial technology block chain can not only help streamline the process, it will have a significant impact on improving security and reducing costs, for those benefits and advantages. Swiss Bank and British Barclays Bank have started applying block chain technology to speed up the background billing rate. Here financial

¹ - Structural Zion, **Ibtisam Aliyush Qarboua, IT is a new economic revolution**, Journal of Jurisprudence for Legal and Economic Studies, vol. 07, No. 03, 2018, p. 51.

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technologies have been creating unprecedented pressure on traditional financial institutions by revealing new value proposals through innovative, non-traditional and technology-based business models. This brings a completely different logic, bringing about fundamental changes in the structure and objectives of the organizations, which are not the majority.

Financial technology constraints and challenges

As important as financial technology and its growing evolution, it can pose a significant threat that should be carefully cautioned against and all precautions should be taken to ensure the safety, integrity and stability of the banking and financial sector, as it presents both opportunities and challenges for banks and other financial institutions. If we look at the financial technology start-up market, we will note that it has been very successful in providing a lot of diversified financial services, such as services, payments, cryptocurrencies, money transfer, crowdfunding, wealth management and insurance services, which ultimately overshadows the future of traditional financial services¹.

The strong competition of traditional financial institutions and financial technology companies in the provision of financial services has led many banks to seek some changes in their business models, through greater reliance on technology and investment in their own infrastructure. Financial technology has faced many obstacles and challenges since the start of the digital transition and the trend towards banking and electronic payment rather than cash transactions. These challenges are penetration offences and how to pass Fin-Tech's financial technology legislation, as a result of some technical obstacles between financial institutions and the services provided. So we will review the most significant impediments and challenges of fin-tech²:

¹ Villasenor ,**Ensuring Cyberse curity in Fintech : Key Trends And Solutions**,2016,p15, view an: (12/04/2022, 17:50).

² Hodge , **challenges of fintech**, 2017,p18. View an: (12/04/2022, 17:50).

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a. Hack crimes: Getting rid of cyberattacks is one of the biggest challenges facing companies and governments worldwide and, given the sensitive nature of the customer data it maintains, they are of great concern to Fintech companies due to the launch of more complex attacks by cybercriminals. The number of major data breaches appears to have risen in 2018, with hack offences increasing by 480% from 2017 to 2018, with every attack costing financial institutions millions and with an increasing number of financial technology-dependent enterprises the number of crimes will increase more and more. This has seen institutions devote more time and money in an effort to thwart these attacks, with companies spending an average of \$11.7 million on cybersecurity.

b. Big Data Technologies: Big Data Technology is both a blessing and a curse. It can be used to aggregate data for customers from social media networks and consumer databases so that it can help serve customers better while protecting their own interests. But sorting unregulated big data for information is not easy, it requires sophisticated data analysis technology if financial institutions want to take advantage of it, but fortunately new data analysis solutions always emerge.

c. Policies and laws: Only four of the 18 Arab States in the first third of the global classification on lack of complexity and facilitation of corporate creation could have been more active in the fin-tech sector. But there are a lot of additional laws imposed on this sector, Once a startup starts providing its services it is expected that it will work on a narrow scale in order to obtain a license, this company will therefore request high amounts of investment before the service stage. This led many companies to seek cooperation and engagement with large banks at an early stage, and if appropriate laws are facilitated for "Ventek" by regulators, will attract more companies, and also reduce corporate relocation.

d. Human Capital: Entrepreneurs have stated that they have difficulty with financial sector expertise besides programmers. Employment has become a challenge for fin-tech companies. Not the complexity of building a strong team,

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but the more comprehensive idea is that 64% of employees find that dealing with big companies is better for them and more attractive for them to go to, leaving start-ups. But the reassuring thing is that there are 4 of the 5 entrepreneurs who have previous experience in this field and it is worth noting that of the 5 founders who were already previously entrepreneurs.

E. Customer distrust of digital technology: Not all people trust fin-tech especially in developing and poor countries because of their lack of knowledge of fin-tech. This technology is new to some States, so awareness of the importance of this technology must be disseminated and advertising campaigns must be published to show them the benefits they will derive from the latter.

Fintech start-up environment

The financial sector has not embraced innovation earlier than in other areas such as industry, trade, services and communications, but fin-tech start-ups have secured more than \$63 billion in investment since 2010.

Fintech start-ups are developing in several phases that can be divided into¹:

- a.** "The emerging incubator environment: Represents most start-ups that are still in the ideas phase, where corporate finance is slowly taking place, while entrepreneurs try to deal with laws, acquire customers, and make partnerships. Among the countries present at this stage are Africa, Southeast Asia, and the Middle East.
- b.** Incubating Environment: These companies sweep a large customer base and three-digit annual investment rates, increasing the strategic imperative for stakeholders' cooperation with new companies. Among the countries present at this stage are Australia, China, South America.

¹ Kamel Zouq, **Investment Revolution in the Fintech Industry Facts and Statistics of Opportunities and Challenges**, Journal of the Institute of Economics, vol. 23, Issue 01, 2020, p. 342.

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c. Advanced incubator environment: It is which reaches the stage of gratification, fewer deals but larger sizes focus on high value companies (more than USD 1 billion), investment growth on a slow year-over-year basis. Only the first drivers of the market have reached this stage: the United States of America and some European countries.

service race. (Betrand Lavayssiere), managing partner at Zeb Financial Services UK, says traditional financial services providers need to adopt financial technology more quickly to speed up their digitization projects." He also believes that traditional banks and insurance companies are hampered by their traditional systems and cannot make a shift to increase and improve their digital range easily, which is why financial technology companies achieve attractive acquisition targets."

New business models based on new technological advances and market developments have changed the profile of financial intermediaries, with hedge funds, private equity firms and other capital market actors enjoying greater leverage in financial markets than in the past as shadow banks grow. New technology coupled with complementary regulatory reforms has also led to the growth of high-speed electronic communications networks and alternative trading platforms that serve as a real alternative to traditional exchanges. Banks and internet brokers have also formed a real competition for banks and traditional brokers. Automated fund management companies own traditional banks and intermediaries, for example (Wealthfron) billions of dollars on demand and radically change the wealth management business that was dominated by financial managers. Internet platforms, such as Second Market and Shares Post, have made it easier for people to trade securities to private companies and Crowdfunding entities, such as Kiva, as well as Kicks tarte, have provided people in large cities and small villages around the world with unprecedented access to capital. Peer-to-peer lending sites (P2P) such as Prosper and Lending Club offer a legitimate

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alternative to traditional financial intermediaries by linking lenders to borrowers. Appel Pay, Square and Venmo have changed brokerage in payment systems. The emergence of "bitcoin" has created a whole new currency for transactions free of traditional banking intermediaries, since banks are a safe warehouse and a money transfer center, it has been found that the use of the block chain Financial technology block chain can not only help streamline the process, it will have a significant impact on improving security and reducing costs, for those benefits and advantages. Swiss Bank and British Barclays Bank have started applying block chain technology to speed up the background billing rate. Here financial technologies have been creating unprecedented pressure on traditional financial institutions by revealing new value proposals through innovative, non-traditional and technology-based business models. This brings a completely different logic, bringing about fundamental changes in the structure and objectives of the organizations, which are not the majority.

Financial technology constraints and challenges

As important as financial technology and its growing evolution, it can pose a significant threat that should be carefully cautioned against and all precautions should be taken to ensure the safety, integrity and stability of the banking and financial sector, as it presents both opportunities and challenges for banks and other financial institutions. If we look at the financial technology start-up market, we will note that it has been very successful in providing a lot of diversified financial services, such as services, payments, cryptocurrencies, money transfer, crowdfunding, wealth management and insurance services, which ultimately overshadows the future of traditional financial services.

The strong competition of traditional financial institutions and financial technology companies in the provision of financial services has led many banks to seek some changes in their business models, through greater reliance on technology and investment in their own infrastructure. Financial technology has

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faced many obstacles and challenges since the start of the digital transition and the trend towards banking and electronic payment rather than cash transactions. These challenges are penetration offences and how to pass Fin-Tech's financial technology legislation, as a result of some technical obstacles between financial institutions and the services provided. So we will review the most significant impediments and challenges of fin-tech¹:

a. Hack crimes: Getting rid of cyberattacks is one of the biggest challenges facing companies and governments worldwide and, given the sensitive nature of the customer data it maintains, they are of great concern to Fintech companies due to the launch of more complex attacks by cybercriminals. The number of major data breaches appears to have risen in 2018, with hack offences increasing by 480% from 2017 to 2018, with every attack costing financial institutions millions and with an increasing number of financial technology-dependent enterprises the number of crimes will increase more and more. This has seen institutions devote more time and money in an effort to thwart these attacks, with companies spending an average of \$11.7 million on cybersecurity.

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¹ Abdelghani Mulodi, Fatiha Alali, **Innovation in Fintech as a Digitization Mechanism and its Contribution to Paper Reduction**, Economics and Environment Journal, Vol. 3, No. 2, Ahmed Daraya University, Adrar-Algeria, 2019, p. 15

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that it will work on a narrow scale in order to obtain a license, this company will therefore request high amounts of investment before the service stage. This led many companies to seek cooperation and engagement with large banks at an early stage, and if appropriate laws are facilitated for "Ventek" by regulators, will attract more companies, and also reduce corporate relocation.

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1.4 Artificial Intelligence in Banks

The field of artificial intelligence has made incredible progress. It has become a particular term of circulation and has contributed to the automation of the data analysis process. To the extent that some fear the control of machines and the decay of the role of humans, although reality is still far from approaching this perception, The onset of artificial intelligence after World War II is driven by the development of computer software that simulated human intelligence in gaming and devised solutions to some puzzles that, in turn, led to the evolution of traditional systems and that then crystallized into AI systems. Based on the foregoing and through this study

1.4.1 artificial intelligence.

what is artificial intelligence.

Artificial Intelligence ¹is one of the branches of computer science and one of the fundamental pillars of today's technology industry. AI is also more about being

¹ Zine Abdel Hadi, Artificial Intelligence and Expert Systems in Libraries, Academic Library, First Edition, Cairo, 2000, p. 21

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able to think and analyze data than it is about a particular form or function.

Although AI provides visions of high-performance, human-like robots that dominate the world, it strives to significantly enhance human capabilities and contributions.

1.4.2 The history of artificial intelligence.

There are many references to the history of AI in studies, research, books, etc., some of these references go back to AI in ancient times and some associate them with the advent of computer and others to the 1950s.

Some studies have been developed in Table 1-1, which shows the history of artificial intelligence :

Decades	Named	Main area of interest
1950s	Dark Ages	Neural Networks
1960s	The Age of Causation	Mechanical logic
1970s	Fantasy transformation	Knowledge Engineering
1980s	Enlightenment Movement	Learning Machine
1990s	Gothic Revival (Return (Dark Ages	Review of neural networks

Source: Zine Abdel Hadi, Artificial Intelligence and Expert Systems in Libraries, p22.

It is noted from this table that researchers in this field call each given node a given name and borrowed those nomenclature from the nomenclature of medieval European history during the Church's domination and beyond, referring to the history of artificial intelligence and the kind of work that prevailed at the time

He founded the modern field of artificial intelligence research at a conference on the campus of Dartmouth College in the summer of 1956. These attendees became the leaders of AI research for several decades, especially John McCarthy and Marvin Minsky, Allen Noel and Herbert Simon who founded artificial intelligence laboratories at MIT, Carnegie Mellon University (CMU) and Stanford.

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By the mid-1960s, this research had been generously funded by the United States Department of Defense, and these researchers made the following predictions¹:

a. " 1956, e. a. " Simon: "Machines will be able in 20 years to do whatever work man can do."

b. In 1967, Marvin Minskai: "Within a generation. The problem of creating "artificial intelligence" will be solved significantly. "

But they failed at Ed RK difficulty some of the problems they faced. In 1974, in response to criticism from Sir James Lighthill of England and sustained pressure from Congress to fund more productive projects, the US and British governments cut off funding for all unguided exploratory research into artificial intelligence, the first setback in artificial intelligence research. In the early 1980s, AI research saw a new awakening through the commercial success of expert systems, an AI program that mimics the analytical knowledge and skills of one or more human experts. By 1985, AI market research profits reached more than \$1 billion, as governments began funding again. A few years after the collapse of the Lisp Machine (a programming language) in 1987, AI research experienced another but longer setback. In the 1990s and early 21st century, AI had greater successes, albeit somewhat behind the scenes. Artificial intelligence is used in logistics and bias extraction.

Artificial intelligence research has seen another but longer setback. In the 1990s and early 21st century, AI had greater successes, albeit somewhat behind the scenes. AI is used in logistics, data extraction, medical diagnosis and many other fields throughout the technology industry. This success is due to several factors: the great power of computers today,² the increased focus on solving specific sub-problems, the creation of new relationships between the field of artificial

¹ All you need to know about AI, accessed on 12/12/2022, 16:38, at:

<https://www.for9a.com/lear>

² Younes Saleh alnour. Yaqub, using AI technology in process re-engineering by application at the General Company of Pharmaceutical and Medical Supplies in Nineveh, Journal of Future Research, vol. 03, No. 39, University Humpback College, Iraq, 2012, p. 33.

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intelligence and other areas of work in similar problems. Above all, researchers began commitments to strong mathematical curricula and strict scientific standards. So the onset of the field of artificial intelligence dates back to the 1950s, where a group of scientists took a new approach to producing smart machines based on recent discoveries in neuroscience and using new mathematical theories of information and relying on the invention of devices based on the essence of mathematical logic. The first record event in the field of artificial intelligence is the publication of scientific research entitled "Computing Machinery and Intelligence" by the British sports scientist Alan Turing, where he invented a test if passed by the device that is classified as intelligent. This test is a question asked by someone known as Judge and directed to someone else and to a device¹.

at the same time, if the referee cannot distinguish between person and device, the device passes the IQ test or logic test and is classified as a smart device.

Artificial intelligence has gone through many stages from its inception to the present day, so it is important to have a general idea about the stages of development of artificial intelligence over the years. The most important of the above are summarized below²:

The first time the word "robot" was mentioned dates back to 1921 when the Czech writer Karl Chapek used it in his play "Global Rossum Robots." The word was derived from "robot", which means work. Alan Turing was one of the most important influencers in the development of artificial intelligence, publishing a 1951 article entitled "Computing Machinery Computing Intelligence" and in which he proposed a simulation game that later became known as the Turing Test. The birth of AI as a real science was in 1956 during a summer workshop named "Dartmouth Research Project on AI," in which John McCarthy, inventor of the

¹ William Krams, Seven Hubs of Intelligence, Nile Valley for Distribution, Egypt, 2011, p. 09.

² Sahib Khazaleh, AI properties, accessed on: 20/03/2022, 23:11, on the site: [https://mawdoo3.com/Properties AI Artificial Intelligence](https://mawdoo3.com/Properties_AI_Artificial_Intelligence)

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programming language LISP, used the term "artificial intelligence" for the first time. The main objective of this workshop was to seek ways to enable the machine to simulate aspects of human intelligence. During the 1960s and 1970s, researchers in the field of artificial intelligence began using computers to identify images, translate languages and understand guidelines and instructions in human language. Artificial intelligence subdivisions have begun to emerge in various aspects of life. The big achievement was 2016 when Google developed

An¹ artificial intelligence software named Alpha Go that managed to defeat the world champion in the complex Go board game. This achievement was a really big step in machine learning because Alpha Go learned the rules of the game and was able to play at an expert level on its own without any previous programming. The fields of artificial intelligence and its applications continued to evolve in subsequent years as well, and its applications formed in working life. the intelligent automated "Sofia" is capable of building near-real relationships with humans. AI technologies were also used in mobile phones through help apps such as Google Assistant, Siri and others.

1.4.3 Artificial intelligence concept

Artificial² intelligence consists of two words: intelligence and artificial word, each of which has meaning. Intelligence according to Webster's dictionary is about understanding new and changing circumstances or situations. In other words, the keys to intelligence are to perceive, understand, and learn new situations or circumstances. The word synthetic or synthetic is actually related to the manufacture or manufacture, and thus the word is called all things that arise as a result of the activity or act done through the manufacture and formation of objects

¹ Mustafa Allozi, **Artificial Intelligence in Business**, 11th Annual Scientific Conference on: Business Intelligence Knowledge economics, Faculty of Economics and Administrative Sciences, University of Zaytouna Jordan, Amman, Jordan, 23-26 days, 2013

² Shukla S, & Vijay J, **Applicability of artificial intelligence in different fields of life**, International Journal of Scientific Engineering & Research, 2013, p 28.

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that are distinct from those already present and naturally generated without human intervention.

Artificial intelligence is a term that usually includes a lot of mental abilities related to the ability to analyze, plan, solve problems and speed of mental simulation, as well as the ability to think abstract, collect and coordinate ideas, capture languages and speed.

Learning. Although people's general notion of intelligence encompasses all these things and may make them strongly related

Memory, however, psychology studies intelligence as a behavioral advantage independent of creativity, personality, wisdom and even memory-related conservation power.

Artificial intelligence is: "One of the science branches of computer science, by which computer software can be created and designed that mimics the human intelligence style so that the computer can perform some of the tasks instead of the human that require thinking, understanding, hearing, speaking, and movement in a logical and orderly manner."

1.5 Characteristics, objectives and benefits of artificial intelligence

1.5.1 the characteristics of artificial intelligence.

Artificial intelligence has helped to enhance business capabilities in all areas, and has given companies the ability to demonstrate and upgrade all their potential to the highest levels, increasing business efficiency and speed and value, contributing to business continuous development, and increasing the number of business interactions, due to the continuous development of related tools and software.

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Artificial intelligence has become a very important part in many aspects of smart life, and has many characteristics that have made it an effective investment in many areas¹:

- Applying artificial intelligence to devices and machines enables them to plan and analyze problems using logic;
- Recognize voices, speech and the ability to move things;
- Discerned Artificial Intelligence devices can understand and analyse inputs well to deliver outputs that meet user's needs efficiently;
- enables continuous learning, where the learning process is automated and subjective without being monitored and supervised;
- Capable of addressing the vast amount of information to which it is exposed;
- Can observe similar patterns in data and analyze them more effectively than human brains;
- Can find solutions to unfamiliar problems using its knowledge capabilities;

1.5.2 Artificial Intelligence objectives.

The main objective of intelligence intelligence is to provide a full scientific interpretation of human intelligence or of animals or machines while clarifying common principles characteristic in all three species. It must be recognized that the problem in this matter is that we know very little of these common principles at the present time. Overall, there are three main objectives of artificial intelligence² :

- a. Make devices smarter;
- b. Understanding what intelligence is;
- c. Make hardware more useful.

¹ Federation of Arab Banks, **Fintech and Artificial Intelligence in the Financial and Banking Sector**, accessed on 15/04/2022 at the link: <https://uabonline.org/ar>

² The site mentioned above.

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In other words, AI systems aim to:

- a.** Ensure that knowledge is stored, analyzed and systematic rules are stored to deal with it and that its facts are accessed;
- b.** Acquiring, modernizing and maintaining accumulated human knowledge and investing in problem-solving;
- c.** Optimal investment of scientific and applied knowledge and expertise and overcoming problems of damage, inadequacy and forgetfulness
- d.** Generate or develop new knowledge and expertise and activate computerized knowledge and use it in decision-making.

1.5.3 the benefits of artificial intelligence.

One of the great benefits of artificial intelligence is that it can process enormous amounts of data without any trouble, much more quickly and effectively than any human being. AI software can also make rudimentary decisions based on that data, and can teach itself to draw new conclusions from it through the process we call machine learning. Its benefits are¹:

- a.** "Agriculture: Artificial intelligence is used to monitor climatic weather conditions to know the most appropriate times for agriculture. The soil situation is also known to identify cultivable species and research ways to improve crop quality and increase crop productivity;
- b.** Field of Medicine: Artificial Intelligence helped achieve greater accuracy especially in diagnosing diseases and identifying appropriate treatments based on the type of disease with high accuracy;

¹ Shukla S, & Vijay J, **Applicability of artificial intelligence in different fields of life**, International Journal of Scientific Engineering & Research, 2013, p 28

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C. Recruitment area: AI facilitates screening and reading of applicants' CVs to identify competencies;

d. Customer Service: Use AI very much in customer service and consumer communication.

Especially on the subject of mobile phones, where support is provided to human energies in listening and responding to customers simply.

1.5.4 areas of use of artificial intelligence.

Artificial Intelligence sub-domains have now evolved to benefit many workplaces around the world with the aim of improving products and earning revenues in addition to earning higher profits. AI fields used vary greatly. The most commonly used AI areas are as follows:

a. " Artificial intelligence with other scientific fields include: communication, time management, health and safety, education, goals and information needs, games, entertainment and activities, products, procurement and marketing, opportunistic planning and increased perception.

b. Artificial intelligence in science and smell LKL of: automated discovery, experimental design, resource dispensing, data interpretation, biology, chemistry, medicine, climate.

c. Artificial intelligence and infrastructure include: transport, business decision-making, agriculture, engineering, architecture, energy and conservation.

d. Artificial intelligence and metaphor for consumers includes KL of: evolving relationship with calculation, sensing, logic and learning, customized smart applications, products and services, challenges and fleeing with data and privacy.

e. Artificial intelligence and research fields: It contains the following research areas: perception and performance methods, inference and reasoning methods,

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cognitive science, neural knowledge networking models, and distributed artificial intelligence.

f.artificial intelligence and applied fields: natural language processing, computer vision technology, speech and voice recognition technology, expert systems technology, computer smart learning and education systems.

1.6 Fintech and Artificial Intelligence in the Banking Sector

In¹ recent decades, the banking environment has been characterized by a great degree of dynamism and complexity owing to waves of globalization and accelerated innovations. The latter has put banks in various countries under a major challenge: to keep pace with these shifts driven by large financial firms in order to maintain market share and expand further into new markets.

1.6.2 the relationship between fin-tech and artificial intelligence

Digital development is one of the most important pillars of the future of the financial and banking sector, as customers increasingly move towards implementing their banking transactions through electronic applications and smart solutions. Within this framework, artificial intelligence and Fintech have a real ability to change the structure of traditional financial services². Financial technology can make financial services faster, safer, transparent and accessible, especially for the large segment of the population that does not deal with the banking sector. On the other hand, the rapid development of fin-tech services and start-ups that provide innovative financial solutions that simulate what banking sectors offer and streamline banking operations poses a threat that must be hedged and take all precautionary measures that achieve the safety, integrity and stability of the banking and financial sector.

¹ Federation of Arab Banks, **Fintech and Artificial Intelligence in the Financial and Banking Sector**, accessed on 15/04/2022, at the link: <https://uabonline.org/ar>

² Federation of Arab Banks, **Fintech and Artificial Intelligence in the Financial and Banking Sector**, accessed on 19/04/2022 at the link: <https://uabonline.org/ar>

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We can say that artificial intelligence systems can provide analysis of historical data, real-time statistics and accurate reports from all electronic systems and investment tools, using fin-tech, which in turn shows the patterns and trends of indicators, stocks and trades, which supports the decision-making process.

Financial intermediaries are provided with financial information and data to help them achieve a better understanding of the market and make correct and sound decisions.

1.6.2 The role of artificial intelligence and financial technology in raising the efficiency of the banking sector

Most enterprises seek to invest in modern fin-tech applications and tools and artificial intelligence. According to PwC, AI is expected to contribute about \$7.15 trillion from the global economy in 2030, divided into \$6.6 trillion coming from higher productivity rates and \$1.9 trillion as a result of increased consumption in light of higher quality of goods produced. At the Arab level, the region's share is expected to be 2%, as industrial intelligence applications will contribute about \$320 billion to the Middle East economy by 2030, equivalent to 11% of GDP. So the key role that both fin-tech and AI play in the banking sector is to get a proper and accurate view of the data with a low level of error and good money protection by combating money laundering. AI technologies detect the pattern of incoming data containing money laundering, such as Bank-BI Fraud Detection, which makes early disclosure of any fraudulent transactions that provide bank warnings about

The advantages of artificial intelligence in the banking sector are many, so that banks can get a proper and accurate view of their data with a low level of error by using it. Banks have also been able to improve quality, analyze more efficient data, understand customers' needs and provide an equal customer experience.

1.6.3 Opportunities and risks arising from the application of fin-tech in banking operations

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Owing to their small size and limited prevalence in the Arab region in general, start-ups do not act as direct competitors of Arab banks, but in the Arab region seek partnership and cooperation with banks¹. The selection and successful application of appropriate fin-tech remains a challenge for banks, especially those with a weak innovative culture, so partnering with financial technology start-ups can help banks maintain market share by offering innovative banking products to their clients.

Financial technology's opportunities for the financial and banking sector can be reviewed by: enhancing financial inclusion, providing better and more customer-friendly banking services, the potential positive impact on financial stability due to

Increased competition and the role of regulatory technology (Reg Tech) in improving bank compliance. On the other hand, the main risks that may arise from applying technology in banking operations include strategic risks, operational risks, compliance risks, outsourcing risks, cyber-risk and liquidity and finance risks.

¹ Fintech: **Digital Development is one of the most important pillars of the future of the financial and banking sector**, Arab Banking Federation Magazine, Issue 467, 2019. s rights ", p. 46.

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Conclusion:

The investment in financial technology and artificial intelligence, especially in the banking sector has recently increased worldwide has increased significantly recently. , since financial technology has a very important role in the development of the financial services sector using multiple technologies, the most important of which is artificial intelligence, the most influential element only the latest Pivotal changes in the patterns of customer interaction in the banking sector in light of increased competition, artificial intelligence has become one of the indispensable necessities to achieve growth for banks, or even to continue or build in an environment where competitiveness increases day after day, especially after what the world has been exposed to in light of the Corona pandemic.

Chapter Two

2.1 Introduction

2.2 Introducing Al Salam Bank of Algeria

In this topic, we will discuss the definition and development of Al Salam Bank Algeria, as well as its organizational structure.

What is Al Salam Bank Algeria?

In this requirement, we will discuss the definition of the Salam Bank, its most important functions and objectives, as well as the bank's organizational structure

2.2.1 Introducing AL-Salam Bank of Algeria

At an important stage in Algeria's history, which is witnessing profound economic developments that will attract many capital and investors and the beginning of a new era promising a comprehensive renaissance that will pervade Algeria. These variables continue to be Al Salam Bank's initiatives to create a new banking structure in order to keep pace with the requirements of economic development in all vital facilities in Algeria through modern banking services derived from our established principles and values, and constitute a cornerstone of all business movements and concepts.

Al Salam Bank will provide a wide range of high quality banking services and products according to the highest global quality standards tailored to the needs of the market, traders and investors. The most important priorities are to devise modern solutions and to be expeditious in decision-making and accurate in their implementation so that it remains always the first choice of all those looking to achieve progress and prosperity in Algeria.

Al Salam Bank will engage in the activities of a global commercial bank based on the banking system based on the principle of productive interests and shared aspirations and will be the banker of modernization and change, and will continuously strengthen its leadership in the banking sector through the high banking experience of its distinguished team s banking sector ", thus providing state-of-the-art technological innovation at the Bank's headquarters in order to ensure the effectiveness and smoothness of services and to stabilize the lead in supporting the Algerian banking sector.

Algeria has great investment opportunities. Here you have a large segment of the Algerian society looking forward to new banking services through which to realize its ambitions in all economic facilities. The Algerian market is witnessing a

real revolution in the field of investment projects, with approximately 6,162 Algerian projects worth \$10 billion. In addition, foreign investment amounted to approximately \$50 billion as of mid-last year.

2.2.2 the origins and development of Al Salam bank :

The foundations of Al Salam Bank in Algeria came as a result of Emirati-Gulf-Algerian cooperation. The establishment of the bank was announced in June 2006, with a paid-in and subscribed capital of (2.7) billion Algerian dinars, equivalent to nearly 100 million US dollars, with the aim of providing the latest banking services that keep pace with the march Development in Algeria, and facing future challenges in the local, regional and global markets, adopting the highest standards of quality in performance, with a focus on achieving the highest percentage of returns for customers and shareholders alike.

The list of the bank's founders includes a number of the most important personalities and financial institutions, including:

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2.2.3 AL SALAM Bank's message

Providing innovative modern banking services that keep pace with Algeria's evolution and urbanization, and face future challenges in local, regional and global markets, adopting the highest standards of quality in performance with a focus on achieving the highest percentage of returns for both clients and shareholders.

We pledge to work diligently to strengthen our leading banking position in services and products and to carry the banner of change and modernization to achieve greater progress and prosperity for Algeria.

The vision of Al Salam Bank

In light of the major economic challenges and changes that the world is witnessing, Al Salam Bank - Algeria undertakes the task of embodying its distinguished vision in the field of banking services, to provide the best ways to achieve development, prosperity and urbanization in Algeria and to harness all available energies in order to ensure the accurate implementation of the proposed strategies and plans

2.2.4 Al Salam Bank's objectives :

We look forward to upgrading the banking sector to distinctive levels, making a qualitative shift in the nature and patterns of banking transactions and providing the best services that meet all the needs of our valued customers through innovative banking solutions. Our future strategy and activities will be centered on the development of vital plans that will revitalize the economic, industrial and commercial situation and achieve a comprehensive renaissance in all areas for the service and progress of society at all levels.

Al Salam Bank Principles

A commitment by the Bank for Salam to provide the best banking services in accordance with international standards, in conformity with Algerian laws in the area of cash and loan, and a strong belief that our behavior is a translation of our long-standing values and principles, which constitute a cornerstone of our movements; We place all our energies and resources in the service of Algerian society, based on the principle of transparency and transparency with our clients, shareholders and investors.

Al Salam Bank Systems:

In line with the requirements of the third millennium, a series of priorities have been identified, including harnessing the latest technological innovations to enhance the level of service in our banking institution. Through state-of-the-art equipment, modern technologies and advanced equipment, these high-performance systems will support the Bank's productivity and provide all modern practical ways

to upgrade our banking services to competitive levels in order to keep pace with the ongoing development in the countries of the region and the world.

Banking:

Excellence, innovation and accuracy in performance. Innovation of distinctive banking solutions, determination of decision-making, speed of delivery and accuracy of performance s Bank of Salam ", which is an effective contributor to the consolidation of relations between workers and clients, These factors form the basis of their permanent loyalty to Al Salam Bank as their first choice. Our most important priority will be to emphasize the efficiency and full coordination of our personnel and human resources, respect for all roles and the importance of their excellence in developing creative ideas, innovating productive programs and banking solutions that meet the needs of both customers and markets, leading to the Bank's prosperity, the progress of society and the growth of all sectors of the economy in general.

Al Salam Bank enjoys the highest ethical standards based on genuine principles and principles, as well as reliance on state-of-the-art technology to provide a range of products and services that match the world's best standards. While committed to our goal of providing the best and fastest services to our valued customers, Al Salam Bank has developed a range of services that are granted as an opportunity to access our assets from anywhere in the world. These services include:

- Secretariat boxes.
- ATMs deployed in many vital areas.
- Telephone banking services.
- Online banking services.
- SMS mobile banking services).
- Customer Contact Center services.

✓ **Savings accounts:**

This account is accessible to families on appropriate terms. The savings account allows you to invest your savings safely.

✓ **Investment Deposit Accounts:**

This account gives you the opportunity to invest your excess capital or treasury in profitable operations and projects. This account is rewarded at the end of each period according to the profits earned by the investments.

✓ **Real Estate Finance :**

In order to acquire a new home, Al Salam Bank gives an opportunity to finance through Murabaha, Ijara, Istisna'a.

- a. Funding duration: up to 20 years.
- b. The possibility of financing 80% of the value of the property.

✓ **Car Purchase Finance :**

Salam Bank gives the opportunity to acquire a new car by financing through Murabaha:

- a. Rapid processing of funding requests.
- b. Funding duration: up to 5 years or 60 months
- c. Financing within 80% of the cost of acquisition.

✓ **Consumption financing :**

Salam Bank grants appropriate funding to meet the needs of all household electrical items and furniture purchases, through Murabaha.

- a. Funding duration: 5 years or 60 months
- b. 100% of the cost of acquisition.
- c. Rapid processing of funding requests.

✓ **Investment Certificats :**

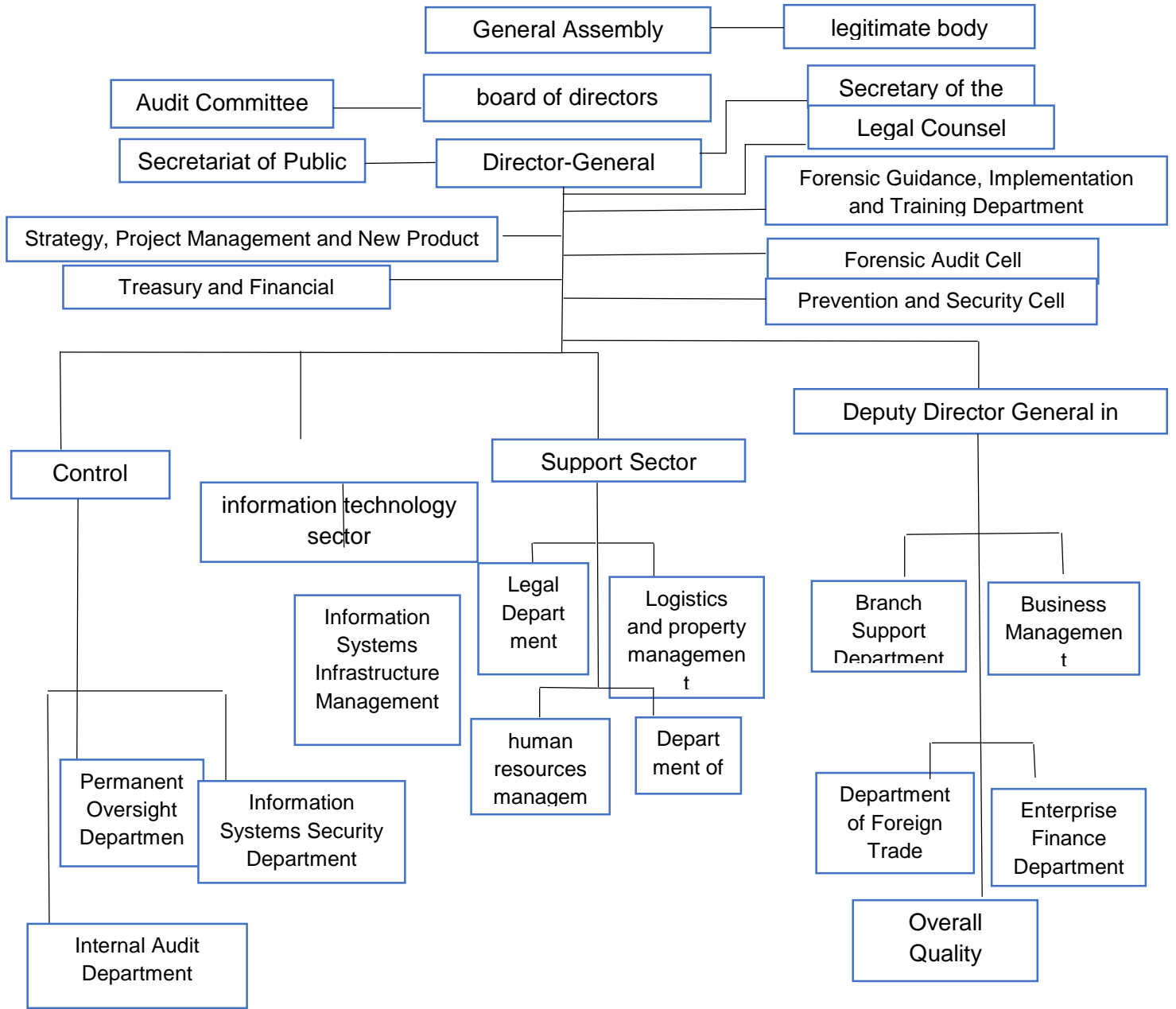
Can be written for 3 to 60 months, nominal and bearer, and receive reward at the end of each period depending on the profits earned by the investments made.

You can get your money back before the prescribed term. You can safely invest your capital.

✓ **Storage:**

Al Salam Bank shall place at its disposal as reservoirs for the preservation of property such as precious items, confidential documents safely noting: All conditions are subject to the approval of the competent authorities.

2.3 Organizational structure of the Algiers Salam Bank:



Source: Bank's documentation (IAEA)

- The most important electronic transactions.

Salam Bank Algiers provides two main types of digital transactions¹:

1-Salam Bank Cards

2-Online Services

Salam Bank Cards

Al Salam Bank promotes two types of cards:

a.Local cards in Algerian dinars:

1.Security Savings Card

2.Safe Payment Card

a.International Cards (Visa Card):

1. Salam Visa Golden:

2. Salam Visa Platinum

3. Salam Visa Prepaid

2-Online Services:

Al Salam Bank offers six products online as follows:

2.4 An overview of Al Salam Bank of the Liquefied Agency (2801)

In this requirement, we will address the identification of the Agency's most important functions and objectives, as well as the Agency's organizational structure.

2.4.1 Introduction to the Agency

Al Salam Bank was founded on December 05, 2019, under manual No. 2801 based in 361 residential Unit 02 Shop No. 01 in the state of Al M'sila.

¹ Documents provided by the Bank.

This branch is the first and only agency of the state and is therefore the second hierarchy in decision-making following the management of the main bank in Algiers. The Agency's current workforce is 09. The Agency is headed by a Director-General appointed directly by the Director-General of Al Salam Bank and is currently represented by Mr. BenSeddik Ibrahim.

This agency is a two-stores building:

✓ Ground floor: It is the only one currently used and includes the following interests:

- Director's Office
- Customer interest (enterprises and individuals)
- Interest of the Fund (institutions and individuals)
- Finance Cell
- Security Cell

Floor 1: This floor includes only the archives section.

2.4.2 Agency's functions

Opening of accounts of all kinds;

Management of payment methods (cheque, bank cards,...);

Study and grant funds;

Receipt of funds from clients;

Delivery of funds to customers;

For foreign trade operations, the Agency does not have the license to conduct foreign trade operations. Any such operations directed to Al Salam Bank are a Setif branch.

2.4.3 objectives and organizational structure

The Agency's objectives¹

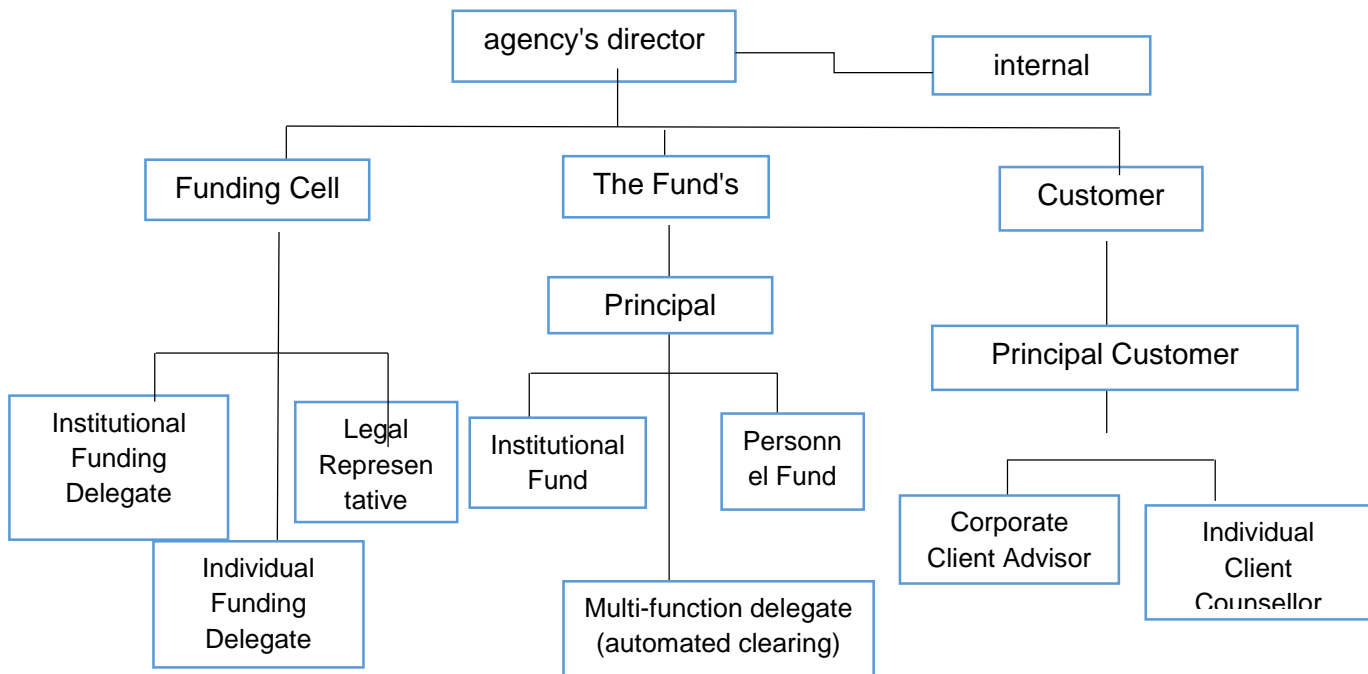
The Agency aims to contribute to the development of the national economy by providing investment-oriented financing that in turn creates positions of occupancy. It also aims to profit as a commercial banking institution. This year (2022) seeks to achieve the following objectives:

- Total assets of approximately 7 billion Algerian dinars;
- Total liabilities of approximately 6.8 billion Algerian dinars;
- Total commitments amounting to 3.5 billion Algerian dinars;
- Total net income is estimated at DA 390 billion

Agency's organizational structure

¹ Information provided by the director.

Figure (2-3): Salam Bank Organizational Structure



4. Operating control tools applied in the bank (dashboard)

Al Salam Bank's application of the management control system relies on the dashboard, as a comprehensive tool for other tools and also as a short-term management tool.

2.5 Dashboard as a management control tool at the agency

2.5.1 The principles of the dashboard

The dashboard shall be placed at the disposal of the Administrator of the Agency, which shall allow him to obtain the Agency's general information, which is a means of ensuring the economic and social success of the Bank. It shall be completed and provided in a brief and concise manner and shall be curves, schedules and numbers indicating the Bank's condition if it is improving, stable or descending for the worse.

The dashboard helps the administrator:

- Measuring the achievement of the Agency's established objectives;
- Conduct corrective action;
- Decision-making;
- Prepare future decisions and monitor their implementation.

2.5.2 Proxy dashboard indicators

The dashboard at Al Salam Bank consists of a few indicators, and the latter can take several forms:

absolute values shown in the form of tables

Percentages

Interpreted forms of table content (graphic curves, relative circles, etc.)

The Agency's indicators are as follows

Deposit indicators : current accounts, savings accounts, accounts, bonds, investment, etc.

Funding indicators : divided into:

Direct Financing: Includes various types of financing used by Al Salam Bank and is divided into:

a. Institutional financing: Murabaha, Ijarah, Salam, Istisna 'a, Speculative and current accounts debited.

b. Individuals' finance: sale by installment and rent.

-Indirect funding: Documentary credits include documentary collections and letters of guarantee.

Income and expenditure indicators: total net income, total expenditure, etc.

Accrual indicators: Divided into:

-Late receivables: These include those of enterprises and individuals according to the duration of payment.

-Classified receivables: divided into classified receivables and net classified receivables.

- ✓ Other indicators: fund balance, deposit balance, liability balance outside financial position... etc.

2.6 Analysis and presentation of the results of the field study

Field study design:

After examining and studying the methodology of methods and tools of scientific research, and identifying their negativity and positivity, in order to give the theoretical study a proper applied dimension consistent with the problems and hypothesis of the study, it became clear that the interview method is the most appropriate and appropriate method for this study, because it provides data and information that serves the study well. Its ability to respond to the problem of the study, verify the validity of its assumptions, and the importance of the interview lies heavily in the fact that it is a direct means of communication between the researcher and those who have the necessary information to serve the study, and it helps us to explain the questions that some of the research ambiguities have, thus obtaining few answers.

The interview was used directly with the Director of Al-Salam Bank Al-M'sila Branch. This type of interview touched on the main axes of the study and the important points that came on the theoretical side in order to drop this aspect on the reality, knowing that the interview took into account the following points:

Analyzing interview questions:

➤ Financial technology questions

1. What is the capital of Al Salam bank?

Al Salam Bank is a company with shares whose capital is estimated :20.000.000.000.00 dz.

2. What is the legitimate formula adopted in consumer finance?

The legitimate formula adopted in consumer finance is sale by installment

3. What products do Al Salam Bank provide to companies ?

Products provided by Al Salam Corporate Bank are: Finance Operations

1. Foreign trade
2. Investment and Savings
3. Services.

3. How much do you adopt fintech to develop your services?

Al Salam Bank is one of the leading banks in accreditation to fintech in all its services whenever available in the number language 90% The electronic side (electronic transfer) is approved in parallel with the traditional services representing 10%

Example: Consumer Finance Formula Corporate Finance Loans

4. Can Islamic financing formats be digitized based on financial technology?

Yes, Islamic financing formats are digitized as a first experience.

5. What are the mechanisms for promoting fintech applications?

First : Bank cards, which are two types of national cards, as a security card, as well as employee cheque, account.

My security card is a savings account for traders and professionals.

International foreign cards such as Visa Salam

Also online services: Documentary Accreditation

Pre-settlement service

Salam Is Direct For Companies

Salam is direct for individuals

Salam Smart Bank for Individuals

Salam Smart Banking for Companies

6. How effective and evolving is the fintech and innovation unit in the bank's organizational structure?

The Bank's remote cell has been dedicated to the development of fintech and innovation in all financial services.

7. What is the most used program at Salam Bank?

The most used software is a direct application and my salam that allows access to the account and make transfers

8. What is the role of fintech in supporting the financial sector?

The role of fintech is very important and vital provides: speed security, trust, more customers, accuracy, less cost, keeping up with the times.

9. How can electronic services improve the quality of the bank's services in question?

Evolution of the Bank - raising the level of sales - less cost - increasing competitiveness and its impact was positive for both parties

Analysis:

Through our interview with the director of the Algerian Al-Salam Bank, M'sila Agency, and his answer to the questions related to financial technology, it became clear to us that Al-Salam Bank is one of the leading banks in the field of financial technology, and this is through its use of a range of financial applications, just as Al-Salam Bank has preceded public banks Especially in its financial transactions and Islamic financing formulas, digitizing and dealing with them, and that financial technology has received a distinct demand from customers, and this is due to the important pillars on which it is based, such as trust, credit and accuracy.

➤ artificial intelligence questions:**10. Does the bank have a clear and comprehensive development of how to organize its work based on AI technologies?**

Artificial intelligence has been applied in answering social media questions (answering via robot) and is exclusively for Salam Bank only. The universal use of artificial intelligence in Algeria remains limited to several legal reasons, including legal problematique.

10. How ready is the bank to integrate AI technologies into its functional structures and the cases to be assigned?

It can be said that Salam Bank is very ready to integrate AI technology into its structure

11. What are the scientific and intellectual qualifications for future staff to deal with these techniques?

It is necessary to qualify human resources with special technologies, especially technology that allows control of artificial intelligence technologies.

12. How to train and prepare employees to receive these technologies?

Specialized training courses are approved by the Directorate of Human Resources in cooperation with the Directorate of Information Systems, in which employees in this sector are technically qualified to control them (trainings not currently available).

Reference to the experience of answering questions of social media sites (Media and Communication Cell) A 1-3 month training course was organized with specialized institutions to control this technology

13. What is the importance of introducing artificial intelligence technologies to increase their competitiveness and increase their market value?

Indeed, AI technology inevitably contributes to increased competitiveness, especially with accelerated technological development.

14. How can the experience of Artificial Intelligence help start-ups and entrepreneurship embraced by Al Salam Bank achieve their desired growth and goals?

If AI is adopted it has a direct impact on startups (because it depends on the development of technology) it will especially help to lead the business and this will reflect positively on these companies.

15. Has artificial intelligence contributed to the promotion and spread of Islamic banking services?

Since it has not yet been used in Islamic banking products, in the future it will inevitably contribute to financial finance and the development of financial services.

16. What is the latest AI software at Salam Bank?

The only program is the robot that answers the questions of social media platforms. The bank cell also works remotely on the program of opening a remote bank account without having to move individuals personally to the bank.

17. How does AI affect banking operations?

It will have a significant potential impact in the future.

18. What is the strategy to implement AI by al Salam Bank?

The Bank's strategy of applying artificial intelligence is the method of grading from products that are less used in fintech to more used in fintech and artificial intelligence in the sense of starting from bank cards and then to online services and then e-loan and as the ultimate goal of reaching the use of artificial intelligence where the Bank is subject to several conditions, including the legal aspect..

19. Are all operations at Al Salam Bank digitized?

Yes 90% of operations digitized

10% in-person attendance

Special institutions such as foreign trade and loans because the central bank sets special conditions for them.

20. How can cybercrime risks arising from the application of financial technology in the Bank of Salam be controlled?

Within the framework of risk control, a directorate (Information Security Cell) has been created that uses the latest technologies that can confront any Siberian risk. That is to say, all Salam Bank operations are 100% secured only remains the risk of mistakes made by customers.

21. What are the risks associated with applying financial technology in AL Salam Bank, for example reputational risk operational risk Strategic risk?

The primary risk is operational risks related to information systems such as penetration and others.

Controlled or confronted by the intervention of the information security system cell.

In contrast, there are unmanageable risks such as Internet interruption.

Also reputational risk second in case of customer account hack

Strategic risks as an example of not keeping pace with technological and other developments

22. Are there human competencies familiar with Islamic banking and financial technology?

Yes for fintech competencies exist and these efficiencies are developed as the bank develops the human worker is qualified by remote courses.

23. Is there a direction to carry out human tasks through artificial intelligence?

Yes E-Financial Services is a start to Artificial Intelligence

The Bank is moving towards the use of artificial intelligence.

24. How has the coronavirus pandemic affected the use of fintech in banking operations?

Quarantine procedures prompted the bank to think about using advertising campaigns to use bank cards (increased usage)

This has led to increased demand for cards as well.

Head to May Salam or Direct

Launch **E-TAISSIR** by electronic installment without the need to move to the headquarters where the product is selected and send paperwork online. Upon the arrival of the commodity at home, the original paperwork is received and the product is delivered to the customer. This process is exclusive to Salam Bank

Also (win pay) (code QR) purchase by scanning code QR without the need to place cards in the TPE device was launched late 3 months ago.

Analysis:

In our interview with the Director of Al Salam Bank, M'sila Agency, regarding the reality of artificial intelligence and the extent of its importance in its financial dealings, it became clear to us that the bank is interested in this technology, especially with regard to its financial transactions or in its organizational structure, despite the presence of some legal problems related to artificial intelligence. However, the bank and by using various strategies, including the use of products that rely on financial technology less used to products that use financial technology most used, as for the risk control framework, a directorate (information security cell) has been created that uses the latest technologies that can confront any risk , meaning that the operations of Al Salam Bank are 100% insured The only risk remains in the mistakes made by the dealers, and this is according to the statement of the bank's manager, which means that the bank is on the right path towards artificial intelligence, and the bank is conducting training courses for employees in order to prepare them for effective and efficient work, which in turn leads to the reduction of human and operational errors, and thus Al Salam Bank is one of the safest banks in its dealings and the least risky in its procedures.

Analyze customer answers:

It is evident from the answers obtained during our interviews with some customers, Al Salam Bank M'sila In terms of service and technological development at the bank, customers are increasingly moving towards the implementation of their banking transactions through electronic applications and smart solutions and their satisfaction, especially the level of services provided by the bank, given the difficulty of gaining customer confidence due to fear of fraud and piracy. Within this framework, both financial technology and artificial intelligence have a real ability to change the structure of traditional financial services.

2.7 Conclusion

Reached in this chapter through field study Financial technology is a newly created sector that will provide all kinds of traditional financial services but in a more sophisticated, faster and accurate manner and format, It has also been found that banks have made significant strides in this area. " AL SALAM BANK", although modern, and the selection and successful application of appropriate fintech remains a challenge for banks by offering innovative banking products to their customers

In summary, we conclude that Al Salam Bank has paid great attention to leveraging financial technology and artificial intelligence to develop its services like other banks.

Conclusion

Given the world's technological revolution in the financial and banking sector, the trend towards adopting the use of fin-tech innovations, digitization and artificial intelligence has become an urgent necessity dictated by the rapid transformation of the banking environment. innovations that have helped to save effort and time improve capacities and obtain satisfactory results.

Through our study of the reality of fin-tech and artificial intelligence in the banking sector, we have reached the following points

I. Test hypotheses

Based on the case study and analysis of the results of the interview with the bank manager, the validity of the hypotheses formulated at the beginning of the study was verified as follow:

a. " First hypothesis: Fintech plays a major role in supporting the financial and banking sector.

The study validated the first hypothesis, confirming that fintech played a significant role in supporting the financial and banking sector.

b. Second hypothesis: AI significantly influenced banking operations through the use of security and accuracy programs.

The study validated the second hypothesis, confirming that artificial intelligence has a significant impact on banking operations through the use of security and accuracy programs.

c. Third hypothesis: The coronavirus pandemic has quickly and broadly affected the use of fintech in banking operations

The study validated the third hypothesis, confirming that the coronavirus pandemic quickly and broadly affected the use of fintech in banking operations.

II. Results of the study:

In the light of this study's theoretical and applied aspects, the following conclusions:

- The Bank's adoption of financial technology and artificial intelligence has become imperative and necessary;

- Artificial intelligence is applied in the bank by using a chatbot to answer questions from social media platforms
- AI is a modern field of knowledge that is concerned with all activities and processes that gain the machine or computer the ability to reasonably conclude with the aim of accomplishing many difficult, complex and accurate tasks that were performed manually.
- Despite the advantages of investing in artificial intelligence, there are a number of challenges that may prevent the wide application of these applications
- The application of fintech in the banking sector has a number of pros, including increased customer satisfaction and closer proximity, cost relief and time gain.

III. Recommendations and suggestions

- Strategic thinking, direction and focus of strategic efforts Experimentation in development before expansion in use Stimulate investment in fin-tech.
- Preparation of training or training programs for the human component, especially with regard to applications of artificial intelligence and how to utilize them Providing grants to start-ups
- Attempt to establish trust among fin-tech operators and raise awareness
- Identify the field of fintech and realize it from global investments after the coronavirus crisis.

IV. Study Prospects

Addressing the topic of fintech and artificial intelligence and their role in supporting the financial and banking sector, we have made it possible to continue it by other researchers by studying the following topics:

- The role of artificial intelligence in supporting creative projects
- The impact of financial technology on the competitiveness of emerging enterprises

- The impact of the coronavirus pandemic on fintech and artificial intelligence in the financial and banking sector
- Difficulties and challenges in the rapid spread of financial technology.

appendices

UNIVERSITY OF MOHAMED BOUDIAF - M'SILA
FACULTY OF ECONOMIC, COMMERCIAL SCIENCES, AND MANAGEMENT
SCIENCES

OPTION: DEPARTMENT OF FINANCIAL SCIENCES AND ACCOUNTING
FINANCE AND BANKS

Interview

We have the honor to put in your hands these questions that are part of a master's degree study specializing in finance and banks, aimed at addressing the theme: "**The reality of fintech and artificial intelligence in supporting the financial and banking sector- Case Study: AL SALAM BANK M'SILA**".

It is only enough to mark (x) for each answer in the appropriate box that reflects your opinion.

Knowing that the information you will provide will be treated strictly confidential and for the purposes of scientific research only.

Students :

EMBARKI YASSAMINE

BENKECHIDA SAMIA

Personal informations :

Sex: female male

Educational Level : Post-graduate university high school

Seniority of the bank account: 6 months a year two years

The person: trades Company an employee

Second area :

- **Bank account type :** saving Account investment deposit account other
- **Used Services:** Mobile banking Internet banking Other
- **Reason for choosing the bank:** Islamic Bank Good Services

The Bank's excellence in its use of fintech

- **Level of satisfaction with the bank's services:** Accepted

Unacceptable

- **Most used electronic transactions:**

Al Salam Bank cards

Online Services

used cards

Savings Card (AMNITI)

Payment card (AMENA)

Peace Card Visa Gold

Peace Card Visa Platinum

Salam Visa Prepaid Card

- **The use of financial technology during the Corona pandemic:**

Low Medium High

- **Would you advise others to deal with Al Salam Bank:**

Yes No

UNIVERSITY OF MOHAMED BOUDIAF - M'SILA

FACULTY OF ECONOMIC, COMMERCIAL SCIENCES, AND MANAGEMENT
SCIENCES

OPTION: DEPARTMENT OF FINANCIAL SCIENCES AND ACCOUNTING
FINANCE AND BANKS

Interview

Mr. Director

We have the honor to put in your hands these questions that are part of a master's degree study specializing in finance and banks, aimed at addressing the theme: "**The reality of fintech and artificial intelligence in supporting the financial and banking sector- Case Study: AL SALAM BANK M'SILA**".

Knowing that the information you will provide will be treated strictly confidential and for the purposes of scientific research only.

Students:

EMBARKI YASSAMINE

BENKECHIDA SAMIA

Personal informations :

Sex : female male

Educational Level : Post-graduate university high school

Banking Experience:

Less than 5 years

from 5 to 10 years

Second axis :

Financial technology questions:

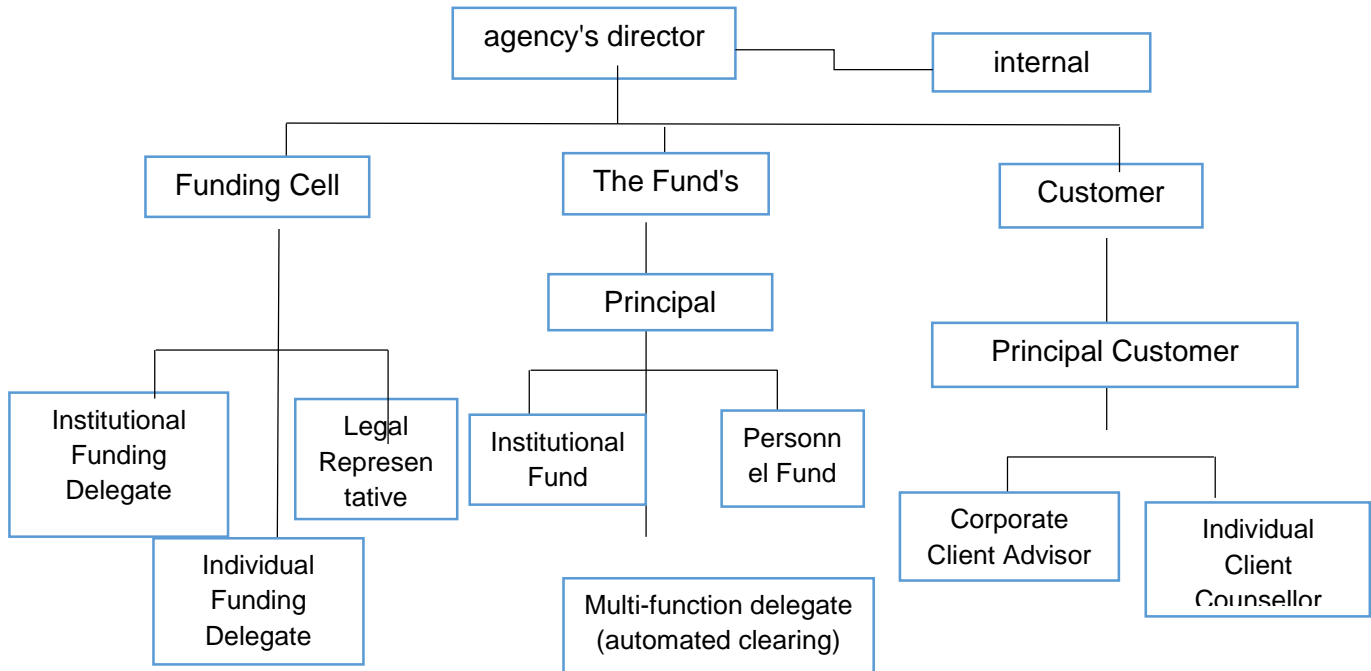
1. What is the capital of Al Salam bank?
2. What is the legitimate formula adopted in consumer finance ?
3. What products do Al Salam Bank provide to companies ?
4. How much the bank relies on the financial technology to develop your services?
5. Can Islamic finance be digitized using financial technology?
6. What are the mechanisms for promoting fintech applications?
7. How effective and evolving is the fintech and innovation unit in the bank's organizational structure?
8. What is the most used program at Salam Bank?
9. What is the role of fintech in supporting the financial sector?
10. How can electronic services improve the quality of the bank's services in question?

Artificial Intelligence questions:

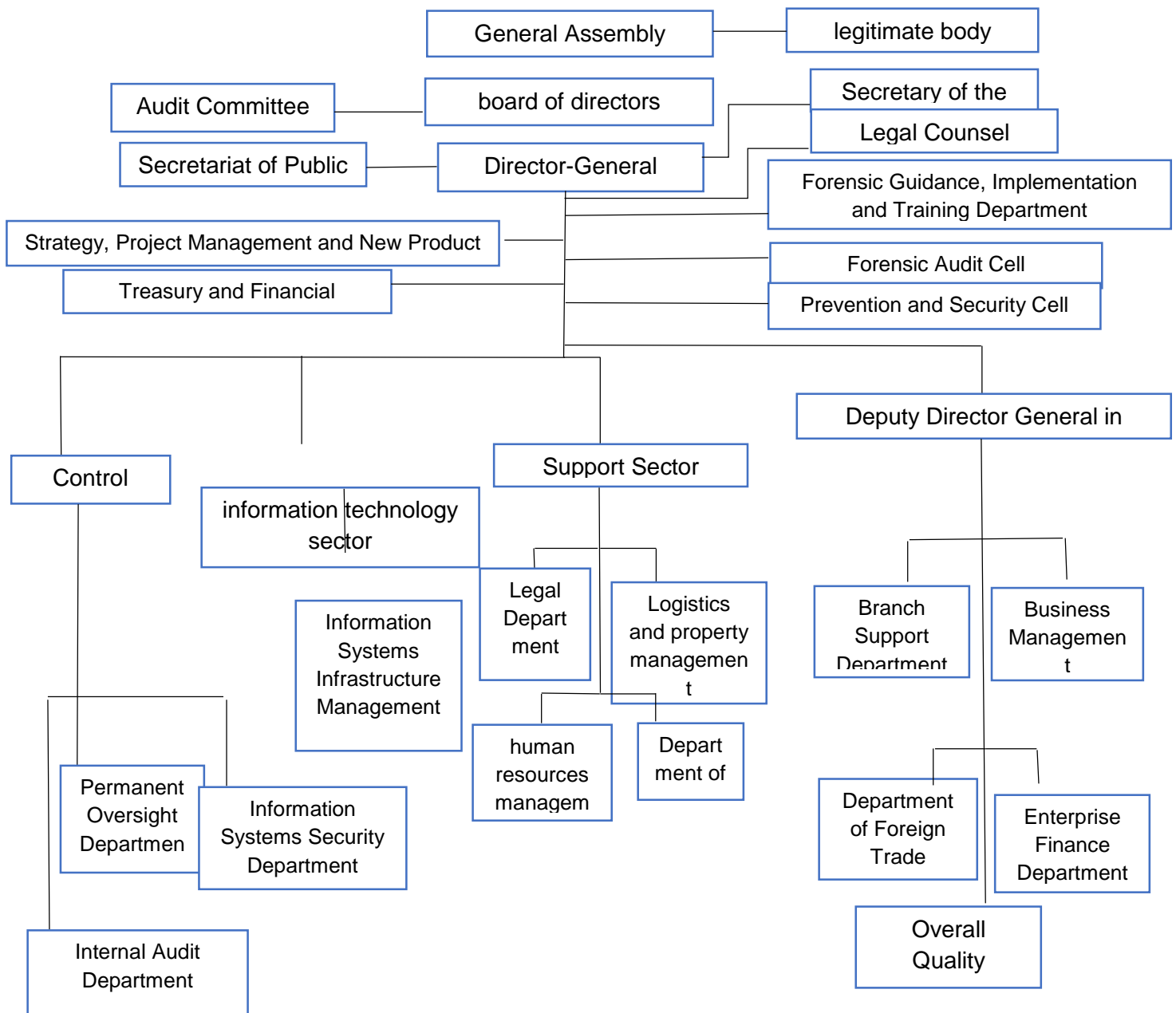
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15. What is the importance of introducing artificial intelligence technologies to increase their competitiveness and increase their market value?

16. How can the experience of Artificial Intelligence help start-ups and entrepreneurship embraced by Al Salam Bank achieve their desired growth and goals?
17. Has artificial intelligence contributed to the promotion and spread of Islamic banking services?
18. What is the latest Artificial Intelligence software at Salam Bank?
19. How does Artificial Intelligence affect banking operations?
20. What is the strategy to implement Artificial Intelligence by Al Salam Bank?
21. Are all operations at Al Salam Bank digitized?
22. How can cybercrime risks arising from the application of financial technology in the Bank of Salam be controlled?
23. What are the risks associated with applying financial technology in Al Salam Bank, for example reputational risk operational risk Strategic risk?
24. Are there human competencies familiar with Islamic banking and financial technology?
25. Is there a direction to carry out human tasks through artificial intelligence?
26. How has the coronavirus pandemic affected the use of fintech in banking operations?

Figure (2-3): Salam Bank Organizational Structure



2.3 Organizational structure of the Algiers Salam Bank:



Source: Bank's documentation (IAEA)