



Digital Transformation in the Monetary and Banking Sector: “Digital Banks as a Model”

Keltoum Benguerrach

Faculty of Law and Political Science, March 19, 1962 Djillali Liabes University , Sidi Bel Abbes , Algeria

Member of the Real Estate Activity Laboratory

Email: keltoum.benguerrach@univ-sba.dz

Received: 13 July 2025 **Accepted:** 27 January 2026 **Published:** 27 March 2026

Abstract: Digital banks are among the most modern topics in the Algerian banking field in particular and the international one in general, due to the highly advanced systems and technologies on which they rely, enabling them to provide their services in the shortest time and at the lowest cost. This results in attracting a large number of customers and thus eliminating the problem of cash liquidity, leading to the achievement of sustainable economic growth. Through this paper, I aim to shed light on the legal framework of digital banks and the extent of its adequacy in addressing the legal and technical issues arising from the banking transactions they conduct.

Keywords: Information and Communication Technology – Financial Technology – Digital Banks – Legal Rule.

Received: 05 March 2024

Revised: 15 May 2024

Accepted: 10 June 2024

Introduction:

Technological developments in the field of information and communication systems, along with the widespread use of technology and the internet, have led to significant transformations in the field of finance and business. Digital banks are considered one of the most important manifestations of digital transformation in the monetary and banking sector.

Regulation No. 24-04 dated October 13, 2024, concerning the specific conditions for licensing the establishment and authorization to operate a digital bank, is considered¹, Instruction No. 25-02 dated March 2, 2025 subsequent to it is among the first legal foundations for regulating the operation of digital banks in Algeria², in implementation of the provisions of Articles 77 and 90 of Law No. 23-09 dated June 21, 2023, containing the Monetary and Banking Law.³

Digital banks are currently considered one of the most important mechanisms for enhancing financial inclusion and the optimal solution for eliminating the problem of cash liquidity, thereby achieving sustainable economic growth.

Given that digital banks are of great importance due to their novelty and the highly advanced systems and technologies they incorporate, which enable them to provide services in the shortest time and at the lowest cost, this paper aims to shed light on the legal framework of digital banks and the extent of its adequacy in addressing the legal and technical issues arising from the banking transactions they conduct.

The study of this issue requires adopting both the descriptive and analytical approaches, by addressing the legal framework of digital banks in Algeria (first section), and then identifying the risks and challenges facing digital banks in Algeria and in various countries around the world (second section).

First Section: The Legal Framework of Digital Banks in Algeria

First: The Concept of Digital Banks

Determining the concept of digital banks is of great importance due to the novelty of this type of bank and the ambiguity surrounding its definition, especially with the emergence of non-banking institutions that provide certain electronic banking services to their clients via the internet.

1- Definition of Digital Banks

A- Doctrinal Definition of Digital Banks

The term digital banks is used to refer to various financial transactions related to the bank, which are carried out by customers remotely using any means of remote communication such as smartphones, computers, or any other device.

Various terms have been used in doctrine to refer to this type of bank, including, but not limited to: electronic banks, virtual banks, internet banks, remote or online banks, home banks, new banks, and invisible banks.⁴

Digital banks have been defined in doctrine through several definitions, including the one that considers them as: "a banking system at any day, at any time, and in any place, consisting of a diverse set of alternative delivery channels, products, and services developed and deployed by a banking institution or a microfinance institution, enabling consumers to access banking information and conduct financial and non-financial transactions using electronic devices, such as, but not limited to: ATMs, the internet, mobile phones, smartphones, tablets, and others."⁵

They have also been defined as: a bank that allows the client to deal with it from any location "through a line provided by the bank, enabling the client to carry out all transactions with the bank without having to physically go to the bank's premises."⁶

Accordingly, it can be said that a digital bank is a financial institution that relies on financial technology to offer its products and services to the public through remote communication means.

B- Legislative definition of digital banks

The Algerian legislator used the term "digital bank" for the first time in the provisions of Articles 77 and 90 of the Monetary and Banking Law No. 23-09.

A digital bank, according to Article 02 of Regulation No. 24-04 concerning the specific conditions for licensing the establishment and authorization to operate a digital bank, is defined as: "any bank that provides banking services and products exclusively through channels..."

The Egyptian legislator has also defined the digital bank as a bank "that provides banking services through digital channels and platforms using modern technological techniques."⁷

According to the UAE Financial Services Regulatory Authority, a digital bank is defined as: "a bank that accepts deposits and conducts other related financial service activities primarily through electronic or digital means instead of direct physical interaction with the client."

In Saudi Arabia, a digital bank is defined as a bank "that conducts banking activities primarily through digital channels such as the internet and mobile applications."⁸

It is observed that the Algerian legislator, like other legislations, has defined digital banks, thereby settling the doctrinal debate surrounding their definition. In this context, the Algerian legislator, like other legislations, requires that for a bank to be considered digital, its activity must be offered exclusively via the internet. However, it must have a registered head office in Algeria, designated for administrative purposes and for handling customer complaints. Thus, the Algerian legislator has benefited from the experience of some countries where digital banks lacked a physical presence and suffered significant failure.⁹

Accordingly, the digital bank adopted by the Algerian legislator in the Monetary and Banking Law, and subsequently in Regulation No. 24-04, which specifies the conditions for licensing the establishment and authorization to operate a digital bank, represents the third model of electronic banks identified by American and European supervisory and regulatory authorities.¹⁰

However, the Algerian legislator, like other legislations, requires that this digital bank must have a registered office (i.e., a physical presence), although this physical presence is not intended for conducting banking activities but rather for administrative purposes and for handling customer complaints, as previously indicated.

The Algerian legislator also permitted, under Article 07 of Regulation No. 24-04, digital banks to open digital branches without having a physical presence on the ground.

1- Stages of the emergence of digital banks

A- Pre-emergence stage (previous phase)

The emergence of digital banking products dates back to the 1960s, beginning with the appearance of plastic cards at the end of the 1960s, which spread during the 1970s. These cards diversified in types and sources, coinciding with the spread of automated teller machines (ATMs), particularly in the United States and Europe. This was followed by the emergence of various digital banking services, such as telephone banking, which is considered by doctrine as the beginning of the exceptional growth of these banking products.¹¹

The emergence of these digital banking activities is attributed to the impact of developments in the field of information and communication technology, which have influenced various aspects of life, particularly the commercial and economic fields. Banks, as engines of economic growth within any state, were not immune to these technological developments.

Algeria is considered among the countries that have made significant progress in upgrading their banking system, especially with the expansion of e-commerce and the shift towards a digital economy. This began with the development of electronic payment methods.¹² as a preparatory stage for the emergence of digital banks. The legislator explicitly embodied this orientation since 2005 by adopting a type of electronic payment instrument, namely payment and withdrawal cards, in the provisions of Article 543 bis 23 of Law No. 05-02 amending and supplementing the Commercial Code. In addition, the Bank of Algeria issued in 2005 the real-time gross settlement system and the electronic clearing system instead of paper-based processing.

As a result of most customers' reluctance to adopt the withdrawal card issued by the company SATIM¹³ due to the risks associated with it, as previously indicated, financial institutions replaced it with the withdrawal and payment card (La carte CIB). This card enables its holder to withdraw cash from automated teller machines and, at the same time, to use it as a means of payment for goods and services purchased from various commercial establishments affiliated with the interbank electronic payment network. In practice, using the card as a means of payment requires that the merchant be a client of the bank issuing the card.

The withdrawal and payment card is divided into two main types: a standard card and a gold card. Both allow withdrawal and payment services and are issued by the bank or the postal and telecommunications institution to customers under certain conditions. The difference between them lies in the fact that the gold card provides its holder with several advantages, most notably that the withdrawal and payment limits are higher than those of the standard card.

In the same context, financial institutions adopted networks of automated teller machines across various public and private institutions and in different service facilities such as airports, ports, and hotels. This was well received by the general public due to the many advantages and benefits it offers.¹⁴ Since withdrawal and payment cards, in both their types, allow their holders to use them locally, that is, within the country, without international use, financial institutions in Algeria, as a second step, proceeded to contract with global banking card networks such as MasterCard and Visa Card, in order to obtain authorization to issue internationally recognized bank cards. Among these cards is the global electronic payment card "CIB Visa Gold," authorized by the global organization "Visa Card." Holding this type of card allows Algerian users to access various global markets via the internet, shop freely, and participate in the movement and transfer of funds to and from abroad electronically and securely.¹⁵

It is noted that the use of this type of card in Algeria is continuously increasing, reflecting the success of such cards in developing e-commerce in Algeria.¹⁶

In addition to the card system used as an electronic payment tool in Algeria, the company SATIM established mobile payment services, which represent an advanced stage in the evolution of electronic payment in Algeria. This is one of the key areas on which the Algerian government relies to upgrade its banking system.

To achieve this, Algeria Post officially launched a new mobile payment service via QR code, “BaridiPay,” to facilitate the settlement of purchase payments.¹⁷ It later launched the new mobile application service E-Paiement espace client for electronic payment in Arabic and French, aimed at enhancing recharge services and bill payments.¹⁸

The Algerian government confirmed that the launch of this service represents “a qualitative technological leap in the field of electronic payment in Algeria,” highlighting that it is a strategic option that cannot be dispensed with in the future, given the evolution of the use of information and communication technology and the shift toward a digital economy, especially with the expansion of e-commerce.

In this context, Algeria introduced a set of measures and procedures aimed at promoting the electronic payment system and installing it for merchants free of charge, along with supporting them through a set of incentive measures, in order to limit the spread of the COVID-19 pandemic. The launch of mobile payment services came in implementation of Article 111 of Law No. 19-04 dated December 11, 2019, containing the Finance Law for 2020¹⁹, which states: “Every economic operator must make electronic payment means available to the consumer, in order to allow him, upon request, to settle the amount of his purchases through his bank or postal account legally domiciled at an approved bank or Algeria Post.”

In the same context, and within the framework of developing electronic banking services to support the orientation of public authorities within the state toward activating digital transformation in the banking sector and other sectors, the Algerian legislator provided in the Monetary and Banking Law No. 23-09, which repeals Law No. 03-11 on money and credit, in its Article 02, that: “currency may take a digital form called the digital Algerian dinar.” It is considered a means of payment according to Article 73 thereof.

The legislator also confirmed, through Articles 77 and 90, that: “the Monetary and Credit Council may authorize the establishment of investment banks and digital banks.” Thus, Law No. 23-09 is the first law to provide for the establishment of digital banks in Algeria.

B- The stage of the emergence of digital banks and the impact of the COVID-19 pandemic in accelerating the adoption of this type of bank:

Digital banks represent a highly advanced stage in the evolution of the banking system within any country. They are among the outcomes of the global financial crisis of 2008 and began to appear around 2009, coinciding with the use of the internet to provide new banking products and services.²⁰

The emergence of the first digital bank in the strict sense, or in its exclusive concept, dates back to 2015 with the British bank Monzo, which was established as the first bank without a physical branch, reaching more than 860,000 clients at the international level. In the Arab world, the Saudi Meem Bank is considered the first digital bank, established on May 15, 2016, without physical branches. It was followed by the establishment of the first digital bank in the United Arab Emirates, Mashreq Bank, in 2017, which later became known as Mashreq Neo in June 2021.²¹

The repercussions of the COVID-19 pandemic had a significant impact on the development of the banking system in Algeria and abroad. Banks launched new banking services in line with the requirements of social distancing to prevent the spread of the pandemic. These services, most notably mobile payment services, allow customers to pay and settle their transactions without the need to visit a bank or its branch. In addition, electronic branches of traditional banks were created, and artificial intelligence applications and other digital technologies were employed in operational processes.

Some banks also introduced electronic payment bracelets based on contactless payment technology, enabling users to pay for purchases by wearing an electronic bracelet on the wrist and completing transactions within seconds by passing it over any point of sale (POS). Banks have also developed more advanced automated teller machines to meet a wider range of customer needs.²²

Moreover, the repercussions of the COVID-19 pandemic had a significant impact in accelerating countries toward establishing digital banks as a highly advanced stage in the evolution of the banking system within any state, as previously indicated.

Algeria,²³ like some other countries, hastened to establish the legal frameworks for creating this type of bank. This was done through the Monetary and Banking Law No. 23-09, Regulation No. 24-04 concerning the specific conditions for licensing the establishment and authorization to operate a digital bank, as well as Instruction No. 25-02 dated March 2, 2025 concerning the specific conditions for licensing the establishment, approval, and

operation of digital banks. It should be noted in this regard that before the issuance of these legal texts regulating the operation of digital banks in Algeria, the Bank of Algeria granted authorization and approval to the first digital bank, Banxy, which can be accessed via smartphone at any time. It was launched by Natixis Algeria, a subsidiary of the Natixis group belonging to BPCE, and entered into operation on April 23, 2018²⁴. Approval was later granted to the branch of "T.G. Ziraat Bank Algeria."²⁵

At a later stage, two other digital banks were launched, namely STC Bank and the Saudi Digital Bank, in June 2021.

Second: Conditions governing the operation of digital banks in banking activities

The conditions governing the operation of digital banks in banking activities vary from one country to another, depending on the financial and monetary legislations and regulations issued by central banks within each state.

However, with reference to Algerian legislation, Regulation No. 24-04 requires, for digital banks to operate banking activities, the necessity of obtaining prior authorization, in addition to obtaining approval after authorization for establishment, as follows:

1- Authorization

A- Conditions and procedures for obtaining authorization

A-1 Formal conditions for obtaining authorization

The establishment of a digital bank is subject to the same conditions as those required for establishing a bank or financial institution in its traditional form. Thus, it is required, in order to obtain authorization, that the digital bank be a legal entity and take the form of a joint-stock company,²⁶ as it is considered the most appropriate and optimal model for accommodating large-scale activities in the commercial field in general and in the banking sector in particular.

The digital bank, as it takes the form of a joint-stock company, is subject to the provisions governing joint-stock companies in the Commercial Code, insofar as they do not conflict with the provisions of the Monetary and Banking Law.

For the protection of those dealing with digital banks, and given the specificity of their activity and the risks associated with it, the legislator has prohibited the establishment of a digital bank in the form of a branch of a foreign bank, pursuant to Article 04 of Regulation No. 24-04 concerning the specific conditions for licensing the establishment, approval, and operation of a digital bank.

Finally, in order to grant the digital nature to this type of bank, it is required that its activity be offered exclusively via the internet. However, it must have a registered head office in Algeria, which serves as its main center, designated for administrative purposes and for handling customer complaints, in accordance with Article 06 of Regulation No. 24-04. Nevertheless, the digital bank is not permitted to open branches other than those referred to as digital branches, which operate entirely in an automated manner. It may also provide its services to customers through its own network of banking robots or by using those belonging to other banks, in accordance with Article 07 of the same regulation.

A-2 Substantive conditions for obtaining authorization

To obtain authorization, a digital bank must meet the following substantive conditions:

Conditions relating to the minimum capital: In order for a digital bank to conduct its banking activity, it must, in accordance with Article 96 of the Monetary and Banking Law No. 23-09, have fully paid-up capital in cash equivalent to at least the amount determined by a regulation adopted by the Council pursuant to Article 64 of the same law.

Article 02 of Regulation No. 24-02 dated February 6, 2024, concerning the minimum capital of banks and financial institutions operating in Algeria,²⁷ sets the minimum capital of a digital bank at ten billion Algerian dinars (10,000,000,000 DZD).

Article 03 of the same regulation requires that the minimum capital amount be fully paid in cash before submitting the application for approval, as the digital bank, like traditional banks and financial institutions, may only commence its banking activity from the date of obtaining approval and its notification through publication in the Official Gazette, as will be clarified.

The legislator also required, under Article 99 of the Monetary and Banking Law No. 23-09, the identification of the source of the funds contributing to the capital, in order to prevent banking activity from being used for unlawful purposes such as money laundering and terrorist financing.

Conditions relating to founders: The legislator requires, for obtaining authorization, the verification of the status of the persons providing the funds (founders), as well as the justification of the source of their funds, in order to verify their identity, legal capacity, integrity, and, where applicable, that of their guarantors.²⁸ For the protection of public savings and the stability of the banking sector, founders must also possess the necessary competence and professional experience in the banking and financial field in general, and in online banking services in particular. In the same context, and to ensure this, the legislator, under Article 87 of Law No. 23-09, prohibits any person convicted of crimes affecting moral integrity (trust and honor) or financial integrity from being a founder of a digital bank, a member of its board of directors, or from directly or indirectly managing, administering, or representing it in any capacity, or being granted the right to sign on its behalf.²⁹

The legislator also required, under Article 05 of Regulation No. 24-04 mentioned above, that a bank subject to Algerian law and participating in the digital bank must hold at least 30% of the capital among all other shareholders, in order to ensure control over its management and operation in a manner that serves the state's monetary policy.

Conditions relating to managers: The legislator stipulated, in Article 98 of the Monetary and Banking Law No. 23-09, that the management of the digital bank's activity must be entrusted to "at least two persons occupying the highest positions in the hierarchical structure, who are responsible for effectively determining the activity of its branches in Algeria and are accountable for its management. These two appointed persons must occupy the top positions in the hierarchical structure and must be residents."

It is noted that the legislator has required the principle of plurality in management, known as the "four-eyes rule" (La règle des quatre yeux), without requiring the allocation of a specific management field to any of them, with the aim of ensuring continuity of management in the event of the absence of one of them.³⁰

Finally, the manager must meet the same conditions required of the founder in terms of integrity and ethics, in addition to technical competence and managerial capacity in line with the specific nature of digital banking activity and the risks associated with it.

B- Procedures for obtaining authorization

The applicant for authorization must submit the request to the President of the Monetary and Banking Council, accompanied by a file in two copies, one of which must be digital.³¹

This file must include a number of documents related to the banking activity of the digital bank, including the following:³²

- An explanatory presentation of the project in terms of vision, objectives, and motivations, particularly those related to expected profits, contribution to economic growth and sustainable development, and financial inclusion; a brief description of the proposed digital services and products and identification of the target customers; in addition to a detailed technical and economic study, including in particular the policies adopted to achieve the project, a market study describing the banking sector and its growth patterns, an assessment of strengths, weaknesses, opportunities, and threats, and the definition of a marketing strategy targeting customers.
- The draft articles of association, which must include, in particular, the company name, its legal form, its corporate purpose and nature of activity and related operations, the address of its registered office, its duration, its share capital, the rights and responsibilities of shareholders and managers, the designation of principal managers at incorporation, the identification of members of the deliberative body and the duration of their mandates and powers, and the identification of at least the statutory auditors.
- Identification of the founders providing the funds and the beneficial owners.
- Assessment of expected risks and the strategy for mitigating them.
- Identification of the technology and resources required to implement the infrastructure.
- Determination of expected profits over a period of five years.
- Determination of the planned regulatory framework.

- A brief description of the specific systems, in accordance with the applicable regulatory frameworks, including:

- ✓ Information and disclosure system.
- ✓ Internal control and risk management system.
- ✓ Accounting system.
- ✓ Prudential system.
- ✓ System for the prevention and combating of money laundering, terrorist financing, and proliferation financing of weapons of mass destruction (LCB-FT).
- ✓ Policy on confidentiality and protection of data, funds, and assets.

In addition to the main file containing these documents, the applicant must also, in accordance with Articles 08 of Regulation No. 24-04 and 05 of Instruction No. 25-02, submit a complementary file including the following elements:

- A description of the information system architecture.
- References, policies, systems, and measures intended to be implemented in the field of information system security, specifying the various planned security policies.
- Systems and measures planned to secure the information system and manage cybersecurity risks.
- Systems and measures related to incident management and business continuity.

After submitting the file (main and complementary) to the President of the Monetary and Banking Council, the latter examines the authorization request in accordance with the general rules governing the licensing of traditional banks and financial institutions, as provided in the Monetary and Banking Law No. 23-09. Following examination, the Council may either: approve the request and grant authorization by decision, which becomes effective from the date of its notification, noting that this decision does not authorize the digital bank to commence banking activity until it obtains approval, as will be explained; or reject it by a reasoned decision notified to the applicant. The applicant may challenge this decision before the Administrative Court of Appeal of Algiers, in accordance with Article 95 of the Monetary and Banking Law No. 23-09.

2- Approval

Obtaining authorization is not sufficient for digital banks to commence banking activities in Algeria, as is the case with traditional banks and financial institutions operating in the Algerian banking sector; rather, an application for approval must be submitted³³ to the Governor of the Bank of Algeria within a maximum period of twelve (12) months, starting from the date of notification of the decision granting authorization for establishment, in accordance with Article 06 of Instruction No. 25-02.

The applicant must attach to the approval request a file also consisting of two copies (one of which is digital), including all the elements and documents specified in Article 07 of the same instruction.

The request must also be accompanied by an evaluation report prepared by an independent external audit firm. This report must include an assessment of the information system, security requirements, and technical risk management relied upon for the implementation of the project, and verification thereof after its completion. The evaluation report must include, at a minimum, the elements specified in Article 10 of Regulation No. 24-04.

After submitting the file to the Governor of the Bank of Algeria, the latter examines it in accordance with the general rules governing the approval of traditional banks and financial institutions, as provided in the Monetary and Banking Law No. 23-09. Approval is granted by a decision of the Governor and is published in the Official Gazette of the People's Democratic Republic of Algeria, in accordance with Article 100, paragraph 04 of the same law. The digital bank granted approval must notify the Governor of the Bank of Algeria two working days before commencing its activity, in accordance with Article 12 of Instruction No. 25-02.

Digital banks may carry out all operations provided for in Articles 68 to 75 of the Monetary and Banking Law No. 23-09, in particular receiving funds from the public, credit operations, Islamic banking operations, as well as providing and managing payment instruments for customers, in accordance with Article 11 of Regulation No. 24-04. They must, during the exercise of their activity, comply with the same prudential rules and conditions applicable to traditional banks, in addition to the specific prudential rules set out in Article 12 of Regulation No. 24-04, relating to the ceiling imposed on each client's deposits and the granting of loans to small and medium-sized enterprises rather than large enterprises.

Digital banks may be exempted from these prudential rules and conditions after a period of five (05) years from the date of commencement of their activity, provided that they obtain authorization from the Bank of Algeria and increase their capital to at least 150% of the minimum required capital.

Second Section: Risks and challenges facing digital banks in Algeria and other countries of the world

First: Risks facing digital banks in Algeria and other countries of the world

Banking transactions in general, and those carried out by digital banks in particular, are accompanied by several risks that may hinder their development, including, for example:³⁴

- Risks related to cyber threats, which may endanger data security, privacy, and the overall operational continuity of banks.
- Risks related to misuse by the customer holding the card, such as using the card number in an unsecured program, allowing others access to the customer's personal data, or using it after its expiration or exceeding the authorized withdrawal limit through collusion with bank employees or merchants. The card may also be subject to misuse and fraud by third parties, such as in cases of theft, loss, or disclosure of the personal identification number.
- Risks related to hacking of certain accounts and breaches of the electronic protection system of payment instruments, whether by the customer or by third parties.
- Risks resulting from malfunction of the electronic system due to poor internet connectivity, lack of expertise, or inadequate monitoring of the programs designed for this purpose, in addition to the dependence of this system on other intermediary entities and institutions such as companies responsible for designing electronic systems, communication networks, and various intermediaries.
- Risks related to the ease of using electronic payment instruments for financing suspicious operations such as money laundering and terrorist financing, which may lead to their use as a means of committing such crimes. Moreover, the use of electronic payment instruments may make it difficult for tax authorities to monitor all sales and purchase transactions carried out through such means, thereby complicating the imposition of taxes on them.

Second: Challenges facing digital banks in Algeria and other countries of the world

Encryption is considered the most important means of providing trust and security between parties. It is also one of the major challenges facing digital banking operations in general and electronic payment services in particular, as the creditor and debtor are identified in an encrypted manner through a program designed for this purpose. This ensures the confidentiality of transactions in a secure way and protects the accounts of the parties from hacking and breaches. It also ensures the integrity of electronic documents and electronic signatures at the same time.³⁵

Encryption is defined as: "a process that provides trust in electronic transactions by using tools, means, or methods to transform information in order to conceal its content and prevent its alteration or unauthorized use."³⁶

There are several types of encryption: symmetric encryption (also called the symmetric key), asymmetric encryption (public key encryption), and a third type that combines both.³⁷

It should be noted in this regard that the Algerian legislator has not explicitly provided for encryption techniques to ensure the security and integrity of information and electronic signatures. However, by referring to Article 323 bis 01 of the amended and supplemented Civil Code, through which the legislator recognized the evidentiary value of electronic writing, this requirement can be inferred from the phrase: "...provided that it is prepared and preserved under conditions that ensure its integrity." By referring also to Law No. 15-04 dated February 1, 2015, which defines the general rules relating to electronic signatures and certification³⁸ repealed by Law No. 26-02 dated February 17, 2026, establishing the general rules relating to trust services for electronic transactions and electronic identification³⁹ It is noted that the legislator did not address the definition of encryption, limiting himself, in Article 02 paragraphs (08) and (09), to specifying its types.

The Algerian legislator also required, in Article 28 of Law No. 18-05 relating to electronic commerce,⁴⁰ in order to ensure the security and integrity of electronic transactions in general, and electronic payment services in particular, electronic payment platforms must be secured through an electronic certification system, in accordance with Articles 02 and 15 et seq. of Law No. 15-04 (repealed). This requires the existence of a neutral authority to provide this service, namely the National Authority for Electronic Certification, which is entrusted with carrying

out several tasks within the framework of supervision, monitoring, promotion, development, and regulation of activities related to trust services.⁴¹ which are understood as a set of electronic services that ensure the security and integrity of electronic documents and all electronic transactions.⁴²

The Boléro project, developed by the Society for Worldwide Interbank Financial Telecommunication (S.W.I.F.T), is considered a model to be followed, as it aims to provide “a system that ensures the secure exchange of electronic trade documents through the application of a centralized data system...”.⁴³

The Algerian legislator has also required that electronic payment platforms established and operated be subject to the mandatory supervision of the Bank of Algeria to ensure their compliance with operational requirements, data confidentiality and integrity, and the security of data exchange, in accordance with Articles 27 and 29 of Law No. 18-05 relating to electronic commerce.

To address cyber threats, Article 05 of Instruction No. 25-02 dated March 2, 2025 concerning the specific conditions for licensing the establishment, approval, and operation of digital banks in Algeria requires that all information and documents related to the systems and measures planned to secure the information system and manage cybersecurity risks be included in the authorization application file.

In the same context, the European Central Bank (ECB), in order to address these threats and risks, conducted Cyber Resilience Stress Tests on a group of banks in 2024 under its direct supervision to assess banks’ ability to respond to and recover from cyberattacks.⁴⁴

To ensure effective prudential supervision of digital banks, it is necessary to redesign prudential regulatory frameworks in line with the technological solutions available in the market, which now have a strong impact on the financial and banking system.

It is also necessary to activate multilateral cooperation to promote the global digital economy. Therefore, authorities must work to harness the benefits of digital technology and ensure that they are inclusive for all by coordinating their policies domestically and internationally, especially in light of the increasing cyber threats to the global financial system.⁴⁵

Conclusion:

The authorization for the establishment and accreditation of digital banks in Algeria is considered one of the key challenges that the Algerian government is focusing on, especially in light of the expansion of e-commerce and the shift toward a digital economy. Digital banks rely on artificial intelligence systems and financial technology to offer financial products and services, as well as in the field of banking supervision or governance. The use of such advanced technological systems results in ease of transactions, saving effort and costs, and reducing time. This, in turn, contributes to enhancing financial inclusion by integrating various segments of society into the formal financial system, increasing the number of users of the banking sector, and consequently addressing the problem of cash liquidity.

Accordingly, digital banks are considered one of the mechanisms adopted by the legislator to enhance financial inclusion, which is one of the main priorities of the Monetary and Banking Law No. 23-09 and one of the key objectives set within the Algerian government’s agenda.

However, despite the existence of a legal framework (legislative and regulatory texts) to regulate and organize this type of bank, the actual implementation of digital banks on the ground still raises many legal and technical issues resulting from their banking transactions. Therefore, for the successful practical operation of this type of bank, it is necessary to:

- Invest in infrastructure to ensure its compliance with the requirements of digital banking operations, as well as to combine efforts to develop communication networks and connect digital banks to global networks.
- Ensure coordination and cooperation between various actors in the banking sector, as digital banking operations are no longer limited to banks and financial institutions in their traditional or digital forms, but now also involve electronic payment institutions, major information and communication technology companies, and large commercial enterprises. Therefore, digital banking operations concern not only digital banks but also those responsible for protecting competition and data, and the Bank of Algeria must organize and supervise cooperation with these entities.

- Recognize that while digital banks offer advantages such as saving effort, reducing costs, and saving time, in developing countries they may limit access for vulnerable groups, as they require significant investment in infrastructure (such as communication networks and internet connectivity).

List of Sources and References:

First: Books in Arabic

1. Books

- [1] Ahmed Abdel Alim Al-Ajmi, *Electronic Payment Systems and Their Impact on Central Bank Authorities*, Dar Al-Jami'a Al-Jadida, Alexandria.
- [2] Boukaaban Akkacha, *Algerian Banking Law in Light of Judicial Jurisprudence of the Supreme Court and the Council of State*, Dar Al-Khaldounia, Algeria, 2017.
- [3] Bel'Issaoui Mohamed Taher, *Banking Law (Regulation and Means of Payment)*, Ibn Al-Nadim Publishing and Distribution, 1st ed., Algeria, 2025.
- [4] Yasser Nadia Al-Bayati, *Electronic Signature via the Internet and Its Evidentiary Value – A Comparative Study with Islamic Jurisprudence*, Dar Al-Bidaya, (no place of publication), 2017.
- [5] Mohamed Hussein Mansour, *Electronic Liability*, Dar Al-Jami'a Al-Jadida, Alexandria, 2003.
- [6] Mounir Al-Janbihi and Mamdouh Al-Janbihi, *Electronic Banks*, Dar Al-Fikr Al-Jami'i, Alexandria, 2006.
- [7] Abdel Fattah Bayoumi Al-Hijazi, *Electronic Commerce and Its Protection*, Dar Al-Fikr Al-Jami'i, Alexandria, 2004.
- [8] Falah Hassan Thuwaini, *Digital Banks and Easy Access to Finance*, Al-Bayan Center for Studies and Planning, 1st ed., 2024.
- [9] Slih Bounqla, *The Legal Framework of Electronic Banking Operations, Part One*, Dar Al-Khaldounia, 1st ed., Algeria, 2021.

2- Journals and Periodicals:

- [1] Ismail Farag Sayed Ahmed Badr, "The Impact of the Shift to Digital Banks and Disclosure of Expected Credit Losses on Financial Sustainability (A Field Study)," *Scientific Journal for Financial and Administrative Studies and Research*, Vol. 13, No. 02, March 2022.
- [2] Belazem Mabrouk, "Financial Inclusion in Monetary and Banking Law," *Journal of Legal Studies and Research*, Vol. 09, No. 02, June 2024.
- [3] Douini Mokhtar, "Electronic Payment Methods and Their Contribution to the Development of E-Commerce in Algeria," *Algerian and Comparative Public Law Journal*, Faculty of Law and Political Science, Djillali Liabes University, Sidi Bel Abbes, Vol. 07, No. 01, June 2021.
- [4] Yetouji Samia, "Electronic Banking in the Context of Law 18-05 on Electronic Commerce," *Judicial Ijtihad Journal*, Mohamed Khider University, Biskra, Vol. 12, Special Issue, April 2020.
- [5] Soltani Hamid, "Digital Banks: Conditions for Licensing Their Establishment and Approval under Law No. 23-09," *Journal of Comparative Legal Studies*, Vol. 11, No. 01, June 2025.
- [6] Kroumi Hamid and Dahhak Najia, "The Reality of Electronic Payment Methods in Algeria," *Economic Studies Journal*, Al-Basira Center for Research, Consulting, and Educational Services, Algeria, Vol. 12, No. 24, August 2014.

3- Legal Texts

A- Foreign Laws:

1. Law No. 194 of 2020 concerning the Central Bank and the Banking System. Retrieved from: (<https://elec.eecourts.gov.eg/assets/laws>)
2. Decision issued by the Council of Ministers dated June 22, 2021 concerning additional guidelines and standards for licensing digital banks in the Kingdom of Saudi Arabia (purpose and scope of application). Retrieved from: (<https://rulebook.sama.gov.sa/ar>)

B- National Laws:

- [1] Law No. 05-02 dated February 6, 2005 containing the Commercial Code, as amended and supplemented.
- [2] Law No. 05-10 dated June 20, 2005 containing the Civil Code, as amended and supplemented.

- [3] Law No. 06-01 dated February 20, 2006 relating to the prevention and fight against corruption, Official Gazette of the People's Democratic Republic of Algeria, No. 14, dated March 8, 2006.
- [4] Law No. 15-04 dated February 1, 2015 defining the general rules relating to electronic signature and certification, Official Gazette of the People's Democratic Republic of Algeria, No. 06, dated February 10, 2015 (repealed).
- [5] Law No. 18-05 dated May 10, 2018 relating to electronic commerce, Official Gazette of the People's Democratic Republic of Algeria, No. 28, dated May 16, 2018.
- [6] Law No. 19-04 dated December 11, 2019 containing the Finance Law for 2020, Official Gazette of the People's Democratic Republic of Algeria, No. 81, dated December 30, 2019.
- [7] Law No. 23-09 dated June 21, 2023, Official Gazette of the People's Democratic Republic of Algeria, No. 43, dated June 27, 2023.
- [8] Law No. 26-02 dated February 17, 2026 defining the general rules relating to trust services for electronic transactions and electronic identification, Official Gazette of the People's Democratic Republic of Algeria, No. 14, dated February 18, 2026.
- [9] Regulation No. 24-01 defining the conditions for licensing the establishment and approval of a bank and a financial institution, Official Gazette of the People's Democratic Republic of Algeria, No. 18, dated March 13, 2024.
- [10] Regulation No. 24-02 dated February 6, 2024 concerning the minimum capital of banks and financial institutions operating in Algeria, Official Gazette of the People's Democratic Republic of Algeria, No. 18, dated March 13, 2024.
- [11] Regulation No. 24-04 dated October 13, 2024 concerning the specific conditions for licensing the establishment and approval of the operation of a digital bank, Official Gazette of the People's Democratic Republic of Algeria, No. 77, dated November 19, 2024.
- [12] Decision No. 25-02 dated January 16, 2025 concerning the approval of a bank branch, Official Gazette of the People's Democratic Republic of Algeria, No. 07, dated February 5, 2025.
- [13] Instruction No. 25-02 concerning the specific conditions for licensing the establishment, approval, and operation of a digital bank. Retrieved from the Bank of Algeria website: (<https://www.bank-of-algeria.dz>)

Second: Books in Foreign Languages

- [14] Françoise Pérochon & Régine Bonhomme, *Entreprise en difficulté: Instruments de crédit et de paiement*, LGDJ, 5th edition, Paris, 2001.
- [15] Françoise Dekeuwer-Défossez, *Droit Bancaire*, Dalloz, 6th edition, Paris, 1999.
- [16] Christian Gavalda & Jean Stoufflet, *Droit bancaire*, Litec, LexisNexis, 8th edition, 2010.

Third: Websites

- [1] Bank of Algeria website:(<https://www.bank-of-algeria.dz>)
- [2] Algeria Telecom: (<http://www.algeriatelecom.dz>)
- [3] (<http://www.bayancenter.org>)
- [4] (<https://www.banxybank.com/ar/banxy-au-quotidien>)
- [5] (<http://www.meghrebvoices.com>)

Footnotes:

- [1] Official Gazette of the People's Democratic Republic of Algeria, No. 77, dated November 19, 2024.
- [2] Retrieved from the Bank of Algeria website:(<https://www.bank-of-algeria.dz>)
- [3] Official Gazette of the People's Democratic Republic of Algeria, No. 43, dated June 27, 2023.
- [4] Mounir Al-Janbihi and Mamdouh Al-Janbihi, *Electronic Banks*, Dar Al-Fikr Al-Jami'i, Alexandria, 2006, pp. 09–10; Belazem Mabrouk, "Financial Inclusion in Monetary and Banking Law," *Journal of Legal Studies and Research*, Vol. 09, No. 02, June 2024, p. 102.
- [5] Ismail Farag Sayed Ahmed Badr, "The Impact of the Shift to Digital Banks and Disclosure of Expected Credit Losses on Financial Sustainability (A Field Study)," *Scientific Journal for Financial and Administrative Studies and Research*, Vol. 13, No. 02, March 2022, p. 156.
- [6] Mounir Al-Janbihi and Mamdouh Al-Janbihi, previous reference, p. 10.
- [7] Article 01 of Law No. 194 of 2020 concerning the Central Bank of Egypt and the banking system. Retrieved from: (<https://elec.eecourts.gov.eg/assets/laws/>) on: 24/03/2026 at 22:00.

- [8] Decision issued by the Council of Ministers dated June 22, 2021 concerning additional guidelines and standards for licensing digital banks in the Kingdom of Saudi Arabia (purpose and scope of application), p. 03. Retrieved from:(<https://rulebook.sama.gov.sa/ar>) on: 24/03/2026 at 22:00.
- [9] A British study conducted in 2015 confirmed that 33% of British consumers are not willing to deal with digital banks that have no physical presence. The same study also confirmed that Canadians prefer banks with physical headquarters, even if located in cafés. Slih Bounqla, *The Legal Framework of Electronic Banking Operations, Part One*, Dar Al-Khaldounia, 1st ed., Algeria, 2021, pp. 148–156.
- [10] The first model is the informational website, the second is the informational and interactive website, and the third is the transactional website, under which digital banks adopted by the Algerian legislator are classified. Slih Bounqla, previous reference, pp. 149–150.
- [11] Ismail Farag Sayed Ahmed Badr, previous reference, p. 153; Mohamed Hussein Mansour, *Electronic Liability*, Dar Al-Jami'a Al-Jadida, Alexandria, 2003, p. 126.
- [12] For a detailed review of the development of electronic payment methods in Algeria: Yetouji Samia, "Electronic Banking in the Context of Law 18-05 on Electronic Commerce," *Judicial Ijtihad Journal*, Mohamed Khider University, Biskra, Vol. 12, Special Issue, April 2020, p. 88 et seq.; Kroumi Hamid and Dahhak Najia, "The Reality of Electronic Payment Methods in Algeria," *Economic Studies Journal*, Al-Basira Center for Research, Consulting, and Educational Services, Algeria, Vol. 12, No. 24, August 2014, p. 148 et seq.
- [13] It is an abbreviation for Société d'automatisation des transactions interbancaires et de monétique, which is the monetary company for automated interbank transactions, affiliated with the Ministry of Finance. It has been tasked with developing and modernizing banking services, including upgrading the electronic payment system. As part of this effort, the company produced the first withdrawal card specific to each bank in accordance with internationally applicable standards and conditions. Yetouji Samia, previous reference, p. 88.
- [14] Douini Mokhtar, "Electronic Payment Methods and Their Contribution to the Development of E-Commerce in Algeria," *Algerian and Comparative Public Law Journal*, Faculty of Law and Political Science, Djillali Liabes University, Sidi Bel Abbes, Vol. 07, No. 01, June 2021, p. 202.
- [15] Kroumi Hamid and Dahhak Najia, previous reference, p. 152.
- [16] Douini Mokhtar, previous reference, p. 203.
- [17] Algerian Press Agency, August 23, 2020. Retrieved from:(<http://www.meghrebvoices.com>) on: 24/03/2026 at 18:00.
- [18] Algeria Telecom:(<http://www.algeriatelecom.dz>) , on: 24/03/2026 at 19:30.
- [19] Official Gazette of the People's Democratic Republic of Algeria, No. 81, dated December 30, 2019, p. 40.
- [20] Belazem Mabrouk, previous reference, p. 101; Soltani Hamid, "Digital Banks: Conditions for Licensing Their Establishment and Approval under Law No. 23-09," *Journal of Comparative Legal Studies*, Vol. 11, No. 01, June 2025, p. 194.
- [21] Falah Hassan Thuwaini, *Digital Banks and Easy Access to Finance*, Al-Bayan Center for Studies and Planning, 1st ed., 2024. Retrieved from:(<http://www.bayancenter.org>) on: 24/03/2026 at 19:00.
- [22] Ismail Farag Sayed Ahmed Badr, previous reference, p. 154.
- [23] After the Algerian legislator had prohibited the establishment of this type of bank without a physical presence under Article 59 of Law No. 06-01 dated February 20, 2006 relating to the prevention and fight against corruption, Official Gazette of the People's Democratic Republic of Algeria, No. 14, dated March 8, 2006.
- [24] Retrieved from:(<https://www.banxybank.com/ar/banxy-au-quotidien>) on: 25/04/2025 at 20:00.
- [25] Decision No. 25-02 dated January 16, 2025 concerning the approval of a bank branch, Official Gazette of the People's Democratic Republic of Algeria, No. 07, dated February 5, 2025, p. 24.
- [26] Article 91 of Law No. 23-09 containing the Monetary and Banking Law.
- [27] Official Gazette of the People's Democratic Republic of Algeria, No. 18, dated March 13, 2024.
- [28] Article 96 of Law No. 23-09 containing the Monetary and Banking Law.
- [29] Articles 08 of Regulation No. 24-04 concerning the specific conditions for licensing the establishment, approval, and operation of a digital bank, and 04 of Regulation No. 24-01 defining the conditions for licensing the establishment and approval of a bank and a financial institution, Official Gazette of the People's Democratic Republic of Algeria, No. 18, dated March 13, 2024.
- [30] Bel'Issaoui Mohamed Taher, *Banking Law (Regulation and Means of Payment)*, Ibn Al-Nadim Publishing and Distribution, 1st ed., Algeria, 2025, p. 57; Christian Gavalda & Jean Stoufflet, *Droit bancaire*, Litec, LexisNexis, 8th edition, 2010, p. 45.
- [31] Articles 08 of Regulation No. 24-04 concerning the specific conditions for licensing the establishment, approval, and operation of a digital bank, and 03 of Instruction No. 25-02 concerning the specific conditions for licensing the establishment, approval, and operation of a digital bank.
- [32] Article 04 of Instruction No. 25-02.

- [33] It should be noted that the French legislator, like Arab legislations such as Egyptian, Emirati, and Saudi law, does not require approval to conduct banking activities by traditional and digital banks and financial institutions, and suffices with the requirement of authorization. Boukaaban Akkacha, *Algerian Banking Law in Light of Judicial Jurisprudence of the Supreme Court and the Council of State*, Dar Al-Khaldounia, Algeria, 2017, p. 47.
- [34] For a detailed review of these risks: Mostafa Kamal Taha and Wael Anwar Bandaq, previous reference, pp. 333–337 et seq.; Ahmed Abdel Alim Al-Ajmi, *Electronic Payment Systems and Their Impact on Central Bank Authorities*, Dar Al-Jami'a Al-Jadida, Alexandria, 2013, p. 122 et seq.; Françoise Pérochon & Régine Bonhomme, *Entreprise en difficulté: Instruments de crédit et de paiement*, LGDJ, 5th edition, Paris, 2001, pp. 743–748; Françoise Dekeuwer-Défossez, *Droit Bancaire*, Dalloz, 6th edition, Paris, 1999, p. 83 et seq.
- [35] Mohamed Hussein Mansour, previous reference, pp. 123–124.
- [36] Abdel Fattah Bayoumi Al-Hijazi, *Electronic Commerce and Its Protection*, Dar Al-Fikr Al-Jami'i, Alexandria, 2004, p. 204.
- [37] Yasser Nadia Al-Bayati, *Electronic Signature via the Internet and Its Evidentiary Value – A Comparative Study with Islamic Jurisprudence*, Dar Al-Bidaya, (no place of publication), 2017, p. 255.
- [38] Official Gazette of the People's Democratic Republic of Algeria, No. 06, dated February 10, 2015.
- [39] Official Gazette of the People's Democratic Republic of Algeria, No. 14, dated February 18, 2026. It should be noted that, pursuant to Article 115 of this law, the implementing texts related to Law No. 15-04 remain in force until the issuance of the implementing texts of this law.
- [40] Law No. 18-05 dated May 10, 2018 relating to electronic commerce, Official Gazette of the People's Democratic Republic of Algeria, No. 28, dated May 16, 2018.
- [41] Article 48 of Law No. 26-02 defining the general rules relating to trust services for electronic transactions and electronic identification.
- [42] Article 02, paragraphs (14), (32), and (33) of the same law.
- [43] Nidal Salim Barham, previous reference, p. 178.
- [44] Falah Hussein Al-Thuwaini, previous reference, p. 22.
- [45] Same reference, pp. 24–25.