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The Legal Framework for Electronique Money and Cryptocurrencies: Challenges of Régulation and Monétaire Sovereignty

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Abstract

This study aims to analyze the legal framework for electronic money and cryptocurrencies, focusing on the challenges related to financial oversight and monetary sovereignty in light of rapid digital transformation. The study distinguishes between electronic money, as a payment instrument subject to the supervision of monetary authorities, and cryptocurrencies, which are based on decentralization and blockchain technology, thus posing unprecedented challenges to traditional legal frameworks.

The study seeks to highlight the extent to which current legislation can keep pace with these developments, particularly concerning combating financial crimes, protecting consumers, and ensuring the stability of the financial system. It also discusses the impact of the proliferation of cryptocurrencies on state sovereignty in issuing currency and controlling monetary policy, given the absence of a central regulatory body.

The study concludes that the legal framework for digital money is still evolving, and that achieving a balance between encouraging financial innovation and ensuring effective oversight requires the development of flexible regulatory frameworks and increased international cooperation to maintain financial stability and the monetary sovereignty of states.

Keywords: Electronic money, cryptocurrencies, financial oversight, monetary sovereignty, monetary policy, financial technology

Introduction:

The world has witnessed radical transformations in recent decades affecting various aspects of economic life, particularly with the rise of the digital revolution, which has reshaped the concept of money and its traditional functions. Whereas money was once limited to physical forms issued by monetary authorities, new forms of money have emerged, relying on digital technology, most notably electronic money and cryptocurrencies, representing a qualitative leap in the global financial system.

This transformation has contributed to accelerating financial transactions, reducing costs, and enhancing financial inclusion. However, it has also created unprecedented legal and regulatory

challenges, especially concerning the extent to which countries can control these new forms of money and maintain their monetary sovereignty.

Cryptocurrencies, most prominently Bitcoin, are the most significant manifestation of this transformation. They are based on a decentralized system that is not subject to the authority of central banks, raising profound questions about their legal legitimacy, the possibility of regulating them, and their impact on financial stability.

In this context, countries, including Algeria, are striving to establish legal and regulatory frameworks to keep pace with this development. However, the divergence in legislative positions among countries reflects the complexity of this field, especially given the cross-border nature of these currencies. Hence the importance of this study, which aims to analyze the legal system of electronic money and cryptocurrencies, evaluate the effectiveness of the mechanisms for monitoring them, and the extent of their impact on the monetary sovereignty of the state.

Research problem :

To what extent can the legal system keep pace with the development of electronic money and cryptocurrencies while ensuring a balance between financial innovation and maintaining monetary sovereignty and oversight?

Sub-questions:

- What is the legal classification of electronic money and cryptocurrencies?
- Can cryptocurrencies be considered legal tender or merely digital assets?
- To what extent are national legislations effective in regulating this phenomenon?
- How do cryptocurrencies affect the role of central banks?
- Can countries maintain their monetary sovereignty in the context of financial decentralization?

Hypotheses:

- Current legislations are insufficient to keep pace with the rapid development of digital currencies.
- Cryptocurrencies represent a real threat to monetary sovereignty.
- Risks can be mitigated through flexible legal regulation and effective international cooperation.

Section One: The Conceptual Framework of Electronic Money and Cryptocurrencies

Over the past decades, the world has witnessed profound transformations in the nature of financial transactions as a result of the rapid development of information and communication technologies. Traditional forms of money (paper or metallic) are no longer the sole means of exchange; rather, new and more advanced and flexible forms have emerged, most notably electronic money and cryptocurrencies. This transformation has been driven by the need to accelerate financial operations, reduce costs, and enhance transaction security, particularly in light of the expansion of the digital economy and e-commerce[1].

[1] Mohamed Abdel Qader Hatem, Electronic Money: Its Reality and Legal and Economic Prospects, Dar Al-Jami'a Al-Jadeeda, Alexandria, 2018, pp. 25–30.

Electronic money is considered a modern extension of traditional money, as it represents monetary value stored electronically and used in payment transactions through digital platforms, typically under the supervision of formal financial institutions. In contrast, cryptocurrencies have emerged as an innovative financial phenomenon based on cryptographic technologies and blockchain systems.

They are characterized by decentralization and the absence of control by a central authority, which has sparked widespread debate regarding their legal and economic nature.

From this standpoint, this section aims to establish a clear conceptual framework for both electronic money and cryptocurrencies by defining them, identifying their characteristics, and highlighting the similarities and differences between them, in addition to addressing the major challenges they pose in both legal and economic contexts. Understanding these concepts is a fundamental step toward analyzing their impact on traditional financial systems and the future of monetary transactions in the digital age.

Subsection One: The Nature of Electronic Money

The rapid advancement of payment and communication technologies has reshaped the concept of money and its traditional functions, with electronic money emerging as one of the most prominent manifestations of this transformation in the modern digital environment. Financial transactions are no longer exclusively dependent on physical cash; instead, they are increasingly conducted through electronic means that offer speed, efficiency, and reduced risks associated with handling cash.

Electronic money is defined as a digital means of payment representing monetary value stored electronically, which can be used to carry out various financial transactions such as purchasing, transferring, and making payments online or through smart devices. It is also characterized by ease of use and transferability, as well as its support for the rapid expansion of e-commerce and digital services.

This subsection aims to shed light on the nature of electronic money by defining its concept, outlining its key characteristics, and distinguishing it from other modern payment methods, thereby contributing to a better understanding of its growing role in contemporary financial systems

First: Definition of Electronic Money

.1Linguistic Definition[2]:

The term electronic money consists of two words:

Money: the plural of “monetary unit,” referring to anything used as a medium of exchange, a unit of account, and a store of value.

Electronic: derived from the term “electron,” referring to anything conducted through digital means or using modern technological systems.

Accordingly, the linguistic meaning of electronic money refers to money that is used or circulated through digital electronic means instead of the traditional physical form.

[2] Ibn Manzur, Lisan al-Arab, entry "Naqd", Dar Sader, Beirut: no date, vol. 3, p. 425.

Second: Terminological Definition

.1Legal Terminological Definition of Electronic Money[3]

Legally, electronic money is defined as a monetary value stored electronically, representing a liability on the issuing entity. It is accepted as a means of payment by parties other than the issuer and is used to conduct financial transactions by digital media without the need for physical cash circulation. Such money is typically subject to the supervision of monetary authorities and regulatory bodies to ensure financial system stability and consumer protection.

.2Economic Terminological Definition of Electronic Money

From an economic perspective, electronic money is considered a modern form of money that performs the traditional functions of money (a medium of exchange, a unit of account, and a store of value). However, it is characterized by being fully digital and is used by electronic payment systems, thereby contributing to faster transactions, reduced transaction costs, and enhanced market efficiency within the digital economy.

Third: Its Characteristics and Types

Electronic money possesses a set of characteristics that distinguish it from traditional money, the most important of which are:

Digital nature: It does not have a physical form but exists as electronically stored data.

Relative general acceptability: It is accepted as a means of payment by entities that adopt it (such as merchants, digital platforms, and financial institutions).

Speed and efficiency: It enables financial transactions to be completed instantly or within a short time compared to traditional methods[4].

Ease of use: It can be used by smartphones or computers without the need to carry physical cash.

Electronic storage capability: It is stored in cards, digital wallets, or electronic accounts[5].

Transferability: It can be easily transferred between individuals or institutions by electronic networks.

Regulatory oversight: It is usually issued and supervised by banks or monetary authorities, unlike cryptocurrencies.

Relative security: It relies on encryption and security technologies, despite the presence of risks such as hacking or fraud.

Types of Electronic Money

Electronic money can be classified into several types according to the method of use or storage:

First: According to Storage Method[6]

Card-based electronic money:

Such as prepaid smart cards that contain stored monetary value.

Network-based electronic money:

[3] Directive 2009/110/EC, issued by the European Parliament Council of the European Union, on the regulation of electronic money institutions, 2009, Article 2.

[4] Article (2) Paragraph (2) of the European Parliament and Council of the European Union, 16 September 2009.

[5] European Central Bank, Security Objectives of Electronic Money Systems, Frankfurt, 2003, pp. 9-15

[6] International Monetary Fund, Fintech: The Experience So Far, Washington, 2019, pp. 7–10.

Such as electronic wallets and digital accounts connected to the internet.

Second: According to the Nature of Use[7]

Prepaid electronic money:

It is loaded in advance with a monetary value (such as recharge cards).

Bank account-linked electronic money:

Such as payment cards or applications linked to bank accounts.

Third: According to the Issuing Authority

Issued by banks and financial institutions:

This is the most widespread type and is subject to legal regulation and oversight.

Issued by private companies (FinTech)

Such as digital wallets and electronic payment applications.

Third: Distinguishing It from Traditional Payment Methods

Electronic money differs from traditional payment methods in that it does not rely on the physical circulation of cash but is instead conducted through digital systems. It also offers greater speed and lower costs; however, it requires a technological infrastructure, unlike traditional money, which is characterized by universal acceptance and does not require a technical intermediary.

Second Section: The Nature of Cryptocurrencies

The global financial system has witnessed unprecedented developments in recent years with the emergence of cryptocurrencies as one of the most prominent manifestations of the transition toward the digital economy. These currencies have arisen as a result of technological advances in cryptography and blockchain technology, offering a new model of money based on decentralization and eliminating the traditional intermediation of financial institutions and banks.

Cryptocurrencies are characterized as digital assets that are created and traded by distributed electronic networks, granting them a high degree of independence and transparency. However, this also raises numerous legal and economic challenges, particularly concerning the absence of a central authority overseeing them and the difficulty of subjecting them to traditional regulatory frameworks.

In this context, this section aims to examine the nature of cryptocurrencies by defining their concept and characteristics, clarifying their legal nature, and highlighting the challenges they pose to traditional financial systems—especially in relation to financial regulation and monetary sovereignty within a rapidly evolving digital environment.

First: Definition of Cryptocurrencies

.1Linguistic Definition

The term “cryptocurrencies” consists of two words:

Currencies: The plural of “currency,” referring to a medium of exchange used to purchase goods and services and to determine value.

Crypto (encrypted): Derived from “encryption,” which is the process of converting information into coded forms that are unintelligible except to those possessing the decryption key.

[7] World Bank, Digital Financial Services, Washington, 2020, pp. 12–18.

Accordingly, the linguistic meaning of cryptocurrencies refers to currencies that are secured and protected Using cryptographic techniques.
Second: Terminological Definition
Juristic definitions of cryptocurrencies have varied, among which the most prominent are:
They are encrypted digital units that are created and traded by a decentralized electronic network, without the need for a traditional financial intermediary.
They are also defined as:
Digital assets that rely on blockchain technology, used as a medium of exchange or a store of value, and characterized by decentralization and independence from any central monetary authority.
In a more comprehensive definition:
A digital monetary system based on cryptography that enables secure and direct financial transactions between users by the internet without the intervention of banks or financial institutions.
Second: Their Characteristics
Cryptocurrencies are distinguished by several key characteristics ,The most famous:
Decentralization: They are not subject to any governmental authority or central bank.
Encryption: The use of advanced cryptographic techniques to secure transactions.
Relative transparency: Transactions are recorded in a public ledger (blockchain.(
Global nature: They can be traded across borders with minimal restrictions.
High volatility in value.
Third: The Difference Between Cryptocurrencies and Electronic Money
The main differences can be highlighted as follows:
Issuing authority: Electronic money is issued by official entities, whereas cryptocurrencies are not subject to a central authority.
Regulation: Electronic money is subject to strict legal oversight, while cryptocurrencies are difficult to regulate.
Stability: Electronic money is relatively stable, whereas cryptocurrencies are highly volatile.
Legal acceptance: Electronic money is legally recognized, whereas the legal status of cryptocurrencies varies Between acceptance, regulation, or prohibition across countries.
Second Chapter: The Legal Regulation of Digital Money
The rapid development in the field of financial technology has led to the emergence of new forms of digital money, whetherin the form of electronic money subject to the supervision of monetary authorities or cryptocurrencies based on decentralization.
This reality has imposed complex legal challenges on traditional legislative systems, which were not originally designed to accommodate such modern financial innovations.
In this context, many countries have sought to establish legal and regulatory frameworks aimed at governing the use of digital money, in a manner that achieves a balance between encouraging financial innovation and ensuring the protection of the financial system from potential risks such as money laundering, terrorist financing, and electronic fraud. The role of central banks and regulatory authorities has also become increasingly prominent in setting rules It is related to the release

Tradingthese financial instruments, particularly with the growing interest in the issuance of central bank digital currencies (CBDCs.)

From this perspective, this section aims to examine the legal regulation of digital money through an analysis of various national and international legislations, and to assess their adequacy in addressing the challenges posed by this phenomenon, with a particular focus on issues related to financial oversight and monetary sovereignty within the contemporary digital environment.

First Requirement: Legal Regulation of Electronic Money

First: National and International Legislative Framework

Electronic money is subject to increasing legal regulation at both the national and international levels, given its importance in promoting the digital economy. Many countries have enacted specific laws governing electronic payment services, defining the conditions for issuing electronic money, licensing requirements, and consumer protection measures.

At the international level, organizations such as the World Bank and the International Monetary Fund contribute to the development of guiding principles aimed at enhancing financial inclusion and ensuring the stability of digital financial systems.

Second: The Role of Central Banks

Central banks play a pivotal role in regulating electronic money, as they are responsible for[8]:

Granting licenses to electronic payment institutions.

Establishing regulatory rules to ensure financial system stability.

Monitoring compliance with laws related to anti-money laundering and counter-terrorism financing[9].

Supervising payment systems to ensure security and efficiency.

Many central banks are also working toward the development of official digital currencies (CBDCs) as a regulated and secure alternative to private electronic money.

Third: Supervisory Mechanisms over Electronic Payment Institutions

Regulation relies on a set of mechanisms ,The most famous[10]:

- Imposing capital requirements and financial guarantees.
- Compliance with Know Your Customer (KYC) procedures[11].
- Implementation of anti-money laundering (AML) and counter-terrorism financing (CTF) rules[12].
- Technical oversight to ensure the security of information systems.

Protection of user data and ensuring transaction confidentiality

Second Requirement: Legal Regulation of Cryptocurrencies

[8] Bank for International Settlements ،Central Bank Digital Currencies ،2020 ،p18–10 .
[9] International Monetary Fund ،Behind the Scenes of Central Bank Digital Currency ،2020 ،p14–6 .
[10] The same reference
[11] Financial Action Task Force ،International Standards on Combating Money Laundering and the Financing of Terrorism ،2012 p15 - 10
[12] European Central Bank ،Oversight Framework for Electronic Payment Instruments ،2009 ،p13–7 .

First: Positions of Different Legislations (Prohibition, Regulation, Conditional Permission)

States have adopted varying approaches toward cryptocurrencies, which can be classified into three main trends:

Total prohibition: Some countries ban dealings in cryptocurrencies due to the risks associated with them.

•**Regulation**: Other countries have adopted laws to regulate their use and trading.

•**Conditional Permissibility**: Allowing them under specific regulatory controls.

This variation reflects the absence of a unified international legal framework, which further complicates regulation.

Second: Regulation of Trading Platforms

Cryptocurrency trading platforms are a focal point in legal regulation. Countries adopting a regulatory approach require them to:

•Obtain official licenses.

•Comply with anti-money laundering regulations.

•Implement user identity verification procedures.

•Ensure transparency and risk disclosure.

These measures aim to reduce illicit activities and enhance investor confidence.

Third: Legal Issues (Legal Classification, Liability)

Cryptocurrencies raise several legal issues, most notably:

•**Legal Classification**: Are they considered money, financial assets, or digital commodities?

•**Legal Liability**: The difficulty in determining liability in cases of fraud or losses due to their decentralized nature.

• **Jurisdiction**: The complexity of determining the competent court due to their transnational nature. It is clear that the legal regulation of digital money faces increasing challenges, especially in light of the rapid development of financial technology, which calls for the adoption of flexible and sophisticated legal frameworks that balance innovation and legal protection.

Section Three: Challenges of Oversight and Monetary Sovereignty

The rapid spread of digital currencies, whether in the form of electronic money or cryptocurrencies, has led to profound challenges that affect the core of financial oversight and monetary sovereignty. Monetary authorities are no longer able to fully control the money supply or track financial flows as they did in the traditional system, especially given the cross-border nature of these digital instruments[13].

Cryptocurrencies, in particular, are a major source of these challenges, due to their decentralized nature and the absence of an official issuing authority, which limits the ability of central banks to regulate them or integrate them into monetary policies. Digital currencies also raise issues related to combating financial crimes, such as money laundering and terrorist financing, in addition to the difficulty of tracking transactions and ensuring consumer protection[14].

[13] Bank for International Settlements ‹Annual Economic Report ‹bazel ‹2021 ‹p95–85 .

[14] International Monetary Fund ‹Global Financial Stability Report ‹wachenton ‹2021 ‹p110–102 .

In this context, this section aims to analyze the most prominent challenges facing countries in regulating digital currencies and their impact on monetary sovereignty, while highlighting the need to develop more effective legal and regulatory mechanisms that are compatible with the nature of the evolving digital economy.

The first requirement: Challenges of financial oversight

The proliferation of digital currencies, especially cryptocurrencies, has complicated the tasks of financial oversight by monetary authorities due to their decentralized nature and the difficulty in tracing their transactions. This reality has given rise to new challenges related to combating financial crimes, ensuring the transparency of operations, and protecting the financial system from digital risks. Consequently, it has become necessary to reconsider and develop traditional oversight mechanisms to align with the specific characteristics of the digital environment[15].

First: The difficulty of tracing transactions

The difficulty of tracing transactions is one of the most prominent challenges facing regulatory authorities in the field of digital currencies, especially given cryptocurrencies' reliance on encryption technologies and their decentralized nature. These currencies do not pass through traditional financial institutions such as banks, but rather their transactions are executed directly between users via distributed networks, which reduces the possibility of regulatory intervention or oversight of financial operations[16].

Furthermore, the use of advanced encryption technologies lends a high degree of confidentiality to transactions, as they are recorded under pseudonyms (digital addresses) instead of the real identities of the parties, which complicates the process of identifying users and tracing the sources or destination of funds. While some blockchain networks offer transparency in transaction recording, linking these transactions to real people remains challenging and requires advanced technology and international cooperation.

This challenge is further complicated by the emergence of additional tools and technologies such as non-custodial wallets and mixing services, which aim to obscure the flow of funds and enhance privacy, but which could be exploited for illicit activities such as money laundering or terrorist financing.

Therefore, the difficulty in tracking transactions is not merely a technical challenge, but a genuine legal and regulatory issue. This necessitates the development of modern mechanisms that combine technology and legal regulation, and strengthen international cooperation to ensure the effectiveness of financial oversight in the digital environment.

Second: Money Laundering and Terrorist Financing Risks

Cryptocurrencies open the door to their exploitation in illicit activities, such as money laundering and terrorist financing, due to the high degree of privacy and the ability to conduct semi-anonymous transactions they offer. The absence of traditional financial intermediaries,[17] and the reliance of these currencies on digital addresses instead of real identities, allows users

[15] Financial Action Task Force ،Virtual Assets Red Flag Indicators ،2020 ،p8–3 .
[16] Financial Action Task Force ،Guidance for a Risk-Based Approach to Virtual Assets ،2019 ،p20–14 .
[17] Financial Action Task Force ،Guidance for a Risk-Based Approach to Virtual Assets ،2019 ،p.20–14

to transfer funds across borders quickly and without effective oversight, making them an attractive tool for criminal networks[18].

The danger of this lies in the ability of illicit actors to use advanced technologies to conceal the source of funds, such as cryptocurrency mixing services or transfers across multiple digital wallets, which complicates tracking and investigation. Furthermore, the global nature of cryptocurrencies enables them to circumvent national restrictions, complicating law enforcement efforts and limiting the effectiveness of national jurisdictions. Faced with these risks, many countries have moved quickly to adopt stricter regulatory frameworks, including imposing Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements on cryptocurrency trading platforms, as well as subjecting them to oversight by financial authorities. The Financial Action Task Force (FATF) has also played a pivotal role in this area by issuing recommendations aimed at enhancing transparency, most notably the "Travel Rule," which requires virtual asset service providers to exchange customer information when conducting transactions[19].

However, these efforts still face significant challenges, particularly given the continuous development of anonymity technologies and the emergence of decentralized platforms that are not subject to direct oversight. This necessitates enhanced international cooperation and the development of advanced regulatory and technological tools that balance financial security requirements with the protection of innovation in the digital sphere.

Third: Tax Evasion

The cross-border nature of cryptocurrencies complicates the efforts of tax authorities, as these currencies enable individuals and companies to transfer digital assets and conduct transactions across global platforms without being bound by geographical borders or local financial regulations. This makes it difficult to determine the applicable tax jurisdiction, especially when transactions occur through digital wallets or platforms that are not clearly regulated within the country.

Furthermore, the semi-anonymous nature of these transactions hinders tax authorities' ability to track taxpayers' actual profits, whether generated from trading, investment, or even mining-related activities. The lack of accurate data on user identities and transaction volumes makes it difficult to calculate taxable income or verify submitted declarations, thus creating opportunities for tax evasion or avoidance.

This challenge is exacerbated by the diverse uses of cryptocurrencies, such as holding them as investment assets, using them for payments, or converting them into traditional currencies through foreign platforms, which creates loopholes.

Legal ambiguity surrounds the determination of the taxable nature of digital assets (are they treated as currency, a financial asset, or a commodity?). This ambiguity leads to varying tax treatment across countries and provides some taxpayers with opportunities to exploit legislative differences.

[18] Financial Action Task Force ،International Standards on AML/CFT ،2012.15
[19] Europol ،Internet Organised Crime Threat Assessment (IOCTA) ،2021 ،p.60–55

Faced with these challenges, many countries have begun developing legal and regulatory frameworks aimed at integrating digital assets into the tax system. This includes imposing disclosure obligations, monitoring trading platforms, and fostering international cooperation for the exchange of financial information. However, the effectiveness of these measures remains contingent on the level of coordination between countries and the adoption of integrated technical and legal solutions that allow for a balance between collecting public revenues and keeping pace with digital financial innovation.

Second Requirement: The Impact of Cryptocurrencies on Monetary Sovereignty

The proliferation of cryptocurrencies poses a direct challenge to the concept of monetary sovereignty, given that they operate outside the control of central banks and are not subject to traditional issuance or regulatory policies. This has led to a decline in the ability of countries to control the money supply and direct monetary policy, raising questions about the future role of the state in managing the financial system amidst rapid digital transformation.

First: The Declining Role of the State in Issuing Money[20]

Cryptocurrencies pose a fundamental challenge to the principle of state monopoly on money issuance, a key aspect of monetary sovereignty. Unlike traditional money issued by central banks and subject to specific monetary policies, cryptocurrencies are created through decentralized technological mechanisms outside the formal institutional framework. This allows individuals and institutions to use and transact with them without going through the traditional financial system.

This weakens the state's ability to control the money supply, as not all financial transactions pass through regulated channels, making it difficult to measure the real money supply within the economy. This situation also affects the effectiveness of monetary policy tools, such as controlling interest rates or managing inflation, because a portion of economic activity may shift into a realm beyond the reach of these policies.

Furthermore, the spread of cryptocurrencies may reduce demand for the national currency, especially in cases where the latter suffers from instability or a loss of confidence. This could lead individuals to prefer digital assets as an alternative, threatening the stability of the monetary system and limiting the state's ability to direct the economy. This shift also raises legal and sovereignty issues related to the state's ability to enforce its financial and tax laws and ensure compliance within a cross-border digital space. Therefore, cryptocurrencies are not merely a financial innovation, but pose a genuine challenge to the state's authority in managing its monetary system, necessitating a rethinking of legal frameworks and monetary policies to align with this new reality.

Second: Competition with Official Currencies

Cryptocurrencies compete with national currencies in a number of applications, particularly in international transactions and cross-border transfers, due to their speed of execution and relatively lower costs compared to traditional currencies.

[20] European Central Bank ‹Crypto-Assets: Implications for Monetary Policy ‹2019 ‹p12–6 .

With traditional banking systems, the absence of financial intermediaries allows for direct transfers, making cryptocurrencies an attractive option for individuals and businesses, particularly in environments with banking restrictions or high transfer fees[21].

This competition intensifies in countries with weak local currencies or high inflation, where individuals turn to cryptocurrencies as a store of value or a hedge against the erosion of purchasing power. In such cases, cryptocurrencies may become a partial or even de facto substitute for the national currency in some daily transactions, leading to a decline in demand for the local currency.

This has significant economic and monetary implications, most notably a decrease in the effectiveness of monetary policy, as central banks lose some of their ability to control the money supply or influence liquidity levels within the economy. The decline in the use of the national currency may also lead to an increase in "digital dollarization," where non-national assets are used for trading and saving.

Furthermore, this shift may weaken consumer confidence in the local currency and affect the stability of the financial system, especially if there are no clear regulatory frameworks governing the use of cryptocurrencies. Therefore, it becomes essential for countries to strengthen the stability of their national currencies, develop official digital payment systems, and keep pace with financial innovation to mitigate the impact of this competition and preserve monetary sovereignty.

Third: The Role of Central Bank Digital Currencies (CBDCs)

In response to these growing challenges, many central banks have turned to developing what are known as Central Bank Digital Currencies (CBDCs), a modern form of money that combines the advantages of digital technology with the legal safeguards provided by the state. These initiatives aim to offer a legitimate and secure digital alternative that can compete with cryptocurrencies without relinquishing institutional oversight or monetary policy tools[22].

CBDCs offer central banks a range of advantages, most notably promoting financial inclusion by enabling individuals to easily access digital payment services, reducing transaction costs, and improving the efficiency of payment systems. They also give monetary authorities greater ability to accurately track financial flows, thus enhancing efforts to combat financial crimes such as money laundering and terrorist financing.

From a sovereign perspective, these currencies contribute to restoring the state's role in issuing currency and controlling the money supply, as they remain under the supervision of the central bank, ensuring their alignment with national monetary policies. It also helps to reduce the growing reliance on cryptocurrencies or digital foreign currencies, thus maintaining the stability of the national currency[23].

However, central bank digital currencies (CBDCs) also raise legal and technical challenges, such as protecting privacy, ensuring cybersecurity, and establishing a legal framework to regulate them. Their success also requires a sophisticated digital infrastructure and public trust in financial institutions.

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[21] International Monetary Fund ،The Rise of Digital Money ،2021 ،p25–18 .

[22] Bank for International Settlements ،Central Bank Digital Currencies: Foundational Principles ،2020 ،p12–1 .

[23] International Monetary Fund ،Behind the Scenes of CBDC ،2020 ،p18–10 .

Therefore, developing official digital currencies represents a strategic step towards adapting to the digital transformation in the financial sector and is an important tool for balancing technological innovation with maintaining monetary sovereignty and financial stability.

Conclusion:

In light of the rapid transformations taking place in the global financial system, electronic money and cryptocurrencies have emerged as a new reality imposing themselves on both the economic and legal levels. This study has shown that electronic money, despite its novelty, remains relatively subject to traditional legal and regulatory frameworks, while cryptocurrencies pose a real challenge to these frameworks due to their decentralized nature and the difficulty of regulating them. The proliferation of these digital tools has also revealed profound challenges to the effectiveness of financial oversight and the fight against economic crimes, in addition to their direct impact on countries' monetary sovereignty, particularly regarding central banks' ability to control the money supply and guide monetary policy.

Conversely, recent experiences have shown a growing trend toward developing new legal and regulatory frameworks, alongside initiatives to issue central bank digital currencies (CBDCs), as a means to keep pace with this transformation and ensure a balance between financial innovation and the requirements of economic stability.

Therefore, addressing the challenges associated with digital currencies necessitates adopting a comprehensive approach based on updating legislation, strengthening international cooperation, and developing effective regulatory and technological tools to ensure the protection of the financial system and the preservation of monetary sovereignty in the evolving digital environment.

Key Findings:

- Electronic currencies are subject to relatively clear legal regulation, unlike cryptocurrencies, which remain a subject of legal debate.
- Cryptocurrencies pose significant challenges to financial oversight, especially in the areas of traceability and compliance.
- These currencies represent a relative threat to countries' monetary sovereignty.
- The absence of a unified international framework increases the complexity of legal regulation.

Recommendations:

- Legislation must be updated to keep pace with digital development. • Strengthening international cooperation to combat financial crimes related to cryptocurrencies.
- Developing technical and legal oversight tools.
- Supporting central banks' move towards issuing official digital currencies (CBDCs).

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