

The Need for Legal Adaptation of Bitcoin in Light of the Inevitability of Survival

Dr. Messah Ouafae¹, Dr. Bessachi Houda², Dr. Lakaf Aicha³

¹Yahia FARES University - Medea (Algeria), ouafae.messah@gmail.com

²Yahia FARES University - Medea (Algeria), dr.bhouda92@gmail.com

³University of Tissemsilt (Algeria), lakafaicha@gmail.com

Received: 06/2023, Published: 06/2023

Abstract :

The global monetary system has undergone significant transformations, with the emergence of encrypted virtual currencies, most notably Bitcoin, which has gained widespread popularity due to its unique characteristics distinguishing it from traditional currencies. Despite its growing usage, the legal aspects surrounding the use of Bitcoin remain unclear, necessitating an urgent need for examination. This study aims to explore the concept, characteristics, and advantages of Bitcoin in order to understand its nature and establish legal provisions for its regulation. The study concludes that these currencies have become inevitable and cannot be ignored; instead, they must be embraced. Attempts to establish a traditional counterpart and link legal adaptation to it have proven to be insufficient due to the distinctive features and nature of virtual currencies. Therefore, regulating and governing their use can only be achieved through enhanced collaboration among various entities and international organizations, emphasizing the need to transition from decentralization to centralized governance as the crucial step forward

Keywords : electronic money, bitcoin, legal adaptation, determinism, prohibition.

Tob Regul Sci. TM 2023;9(1): 2758-2772

DOI: doi.org/10.18001/TRS.9.1.190

1. Introduction

The development in the means of communication, the emergence of the Internet, and subsequent technological progress have been reflected in the establishment of innovative electronic and digital cash systems. Initially, the response involved transitioning from paper to electronic means of supporting currencies. However, this change did not diminish countries' control over these currencies, as represented by their central banks. With transaction stability and the implementation of legal regulations, a currency emerged that solely operates within the realm of the Internet. It is subject to a decentralized payment system known as decentralized virtual currencies, with Bitcoin being the most renowned example.

In the absence of any central reference or oversight authority governing its issuance or circulation, and considering the challenges and problems it entails, our focus has been on how to organize and regulate this currency. It lacks a legislative aspect with the appropriate organizational structure, prompting us to delve into research on how to legitimize its use. Ignoring the reality of these currencies, which have become inevitable and undeniable, is not a viable option. Instead, we must address them and exercise control over their transactions and circulation by implementing a comprehensive set of controls and provisions to mitigate risks and prevent illegal usage.

2. Problematic

In the midst of the growing allure of virtual currencies, spearheaded by Bitcoin, the latter has achieved significant momentum, revolutionizing and differentiating itself across countries worldwide. It has become an undeniable reality and an inevitable phenomenon that demands coexistence rather than ignorance. However, this reality is shrouded in ambiguity and presents a perilous environment. Hence, our problem statement revolves around finding a balancing approach that capitalizes on the advantages of these currencies while overcoming the formidable obstacles they face.

One of the critical challenges lies in the absence of a robust infrastructure for these currencies, compounded by the inability to exert centralized control within their decentralized system. Consequently, our task is to explore legal provisions that accommodate their unique nature and attempt to organize and adapt them in a manner that strikes a balance between innovation and regulation that takes into account their lack of centralization.

3. Bitcoin : The Second Generation of Electronic Money

Electronic money has asserted its prominence in the global economy, thanks to the ongoing digital and technological revolution sweeping the world, particularly within the financial and banking sectors. At the forefront of this revolution is Bitcoin. In this section, we will delve into a number of general concepts related to electronic money and subsequently discuss Bitcoin as the leading encrypted virtual currency, as outlined in the following proposition :

3.1 Electronic Money as an Entry Point for Electronic Trade Settlement

Electronic money emerged as a natural outcome of the knowledge and information renaissance, alongside the advent of technology, computers, and the Internet. These advancements have given rise to new forms of exchange known as electronic commerce, which necessitated a new settlement method suitable for its purposes. In this regard, we aim to explore its concept, developmental stages, and the characteristics that distinguish it.

3.1.1 Defining Electronic Money

- Electronic money (e-money) is defined by the European Central Bank as "an electronic store of monetary value on a technical device that may be widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transaction but acting as a prepaid bearer instrument."
- Broadly speaking, electronic money refers to a stored value or prepaid product where a record of funds or value available to the consumer for multipurpose use is stored on an electronic device owned by the consumer, such as a prepaid card, chip, or mobile phone.
- Electronic money represents the monetary balance recorded electronically on a "stored-value" card. These cards, often referred to as "smart cards," are equipped with an embedded microprocessor capable of storing a monetary value. Another form of electronic money is network money, which involves software enabling the transfer of value on computer networks, especially the internet. Similar to a traveler's check, a digital money balance is a floating claim on a private bank or other financial institution that is not tied to any specific account. Such money is issued by both public and private institutions worldwide.

Based on the above, we can derive a comprehensive definition of electronic money as encrypted data stored on an electronic medium, representing financial value transferred directly from the consumer to the merchant without the need for a third party. This transfer is based on the agreement of the involved parties rather than being mandated by law, as is the case with traditional money.

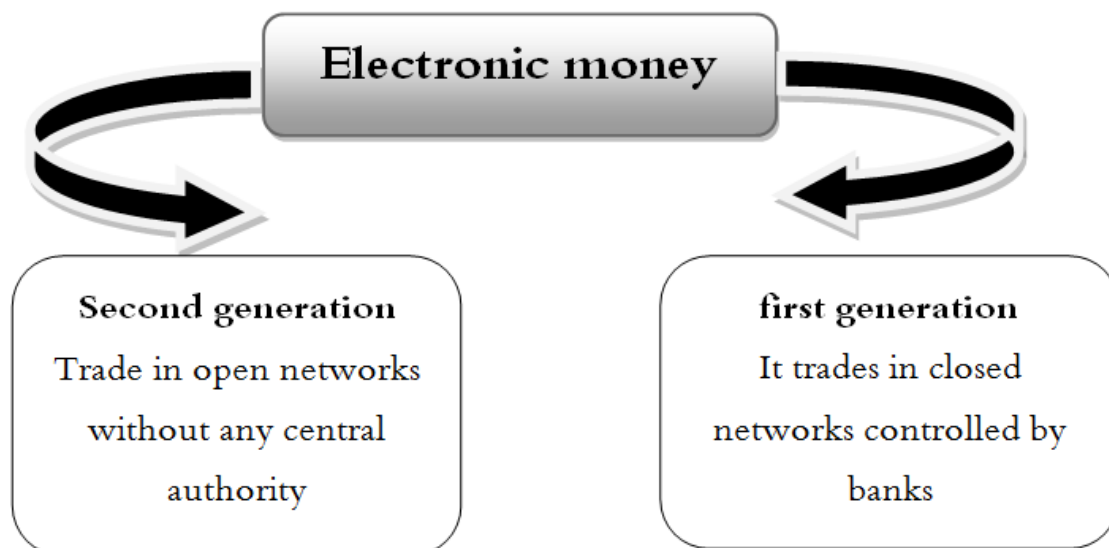
3.1.2 Stages of Development of Electronic Payment Systems

The evolution of electronic payment systems can be categorized into two distinct generations :

- **First-generation Electronic Payment Systems :** These systems operate within closed networks that are tightly controlled and monitored by banks. They commonly utilize electronic plastic cards as a means of conducting transactions. Due to the centralized nature of these closed networks, a high degree of control can be exerted over them.
- **Second-Generation Electronic Payment Systems :** This category comprises systems that operate within open networks, outside the direct control of banks. The key differentiating factor between the two generations lies in the control and oversight mechanisms. The decentralized nature of open networks poses challenges in effectively regulating the risks associated with these systems, as they extend beyond regional boundaries.

It is important to note that the transition from first-generation to second-generation electronic payment systems has introduced a shift from closed, bank-controlled networks to open networks with decentralized governance, thus presenting unique risk management complexities.

Figure 01 : Evolution of Electronic Payment Systems



Source: الرايس مراد، تحديات النقد الافتراضي "البتكوين"، مجلة دراسات - العدد الاقتصادي-، جامعة الأغواط، المجلد 10، العدد 02، جوان 2019، ص 253.

3.1.3 Characteristics of Electronic Money

Just like physical paper currency, electronic money also includes the following four features¹:

- **Store of Value** : Just like physical currency, electronic money is also a store of value, the only difference being, that with electronic money, the value is stored electronically unless and until withdrawn physically.
- **Medium of Exchange** : Electronic money is a medium of exchange, i.e., it is used to pay for the purchase of a good or when acquiring a service.
- **Unit of Account** : Just like paper currency, electronic money provides a common measure of the value of the goods and/or services being transacted.
- **Standard of Deferred Payment** : Electronic money is used as a means of deferred payment, i.e., used for the tools of providing credit for repayment at a future date.

3.2 Bitcoin as the Most Prominent Cryptocurrency

As we mentioned previously, electronic money appeared as an economic imperative for the emergence of electronic commerce, After the banks controlled most of the financial transactions, the means of payment turned to work under open networks that are not subject to any authority, Which produced the most widespread currency, which is the Bitcoin currency, which raised a lot of ambiguity around it about its reality and meaning. From here, what is the Bitcoin currency ? What are the roots of its inception ?

3.2.1 What Does Bitcoin Mean ?

The Need for Legal Adaptation of Bitcoin in Light of the Inevitability of Survival

Bitcoin is a peer to peer electronic cash system², Bitcoin is a so-called virtual currency that has been devised for anonymous payments made entirely independently of governments and banks. In recent years, Bitcoin has generated a great deal of attention on several fronts. Bitcoin payments are based on a new interesting technical solution and function differently to traditional payments³.

Bitcoin is a virtual currency circulating on the Internet since 2009, it is a substitute for fiduciary money by an anonymous computer scientist who uses the pseudonym of Satoshi Nakamoto. Unlike hard currency, Bitcoins are not printed, but rather "mined" thanks to the computing power of computers within a global network of volunteer developers⁴, Bitcoin was created as a way for people to send money over the internet. The digital currency was intended to provide an alternative payment system that would operate free of central control but otherwise be used just like traditional currencies⁵.

From the foregoing, we conclude that Bitcoin is only an electronic virtual currency, which is dealt with electronically and does not have any tangible physical presence, not issued by any official party and stored in an electronic wallet, relying on an automated program designed to find and manage the currency supply, The researcher also believes that the concept of Bitcoin is characterized by a lot of variation, as there is no unified definition that represents a framework that brings it together, as narrowing the scope of its concept would identify and limit the risks that it faces.

3.2.2 The History of Bitcoin

Bitcoin was the first cryptocurrency created and is now the most valuable and well-known. It was first launched in January 2009 by a computer programmer or group of programmers under the pseudonym Satoshi Nakamoto⁶, he posted a paper to a cryptography mailing list in 2008 with the title "Bitcoin: A Peer-to-Peer Electronic Cash System," This paper laid out the schema for a peer-to-peer network that would foster a "system for electronic transactions without relying on trust. After the dissemination of the paper, the actual platform for Bitcoin transactions came into being through the release of the first open-source Bitcoin-Client and the concomitant issuing of Bitcoins. Nakamoto mined the first block of Bitcoins with a reward of 50 Bitcoins. This block is commonly referred to as the "genesis block⁷."

and released as open-source software in 2009, Bitcoins are created as a reward for a process known as mining, They can be exchanged for other currencies, products, and service, Its transactions are verified by network nodes through cryptography and recorded in a public distributed ledger called a block chain⁸.

The Bitcoin supply was capped from the beginning by Nakamoto. The maximum number of coins stipulated to be in existence was 21 million. As of May 10 year 2023, there were 19.36

million Bitcoins in existence⁹, The following is a presentation of the most important stations that the Bitcoin currency went through in its inception:

Table No. 01 : The Most Important Stations for the Origination of the Bitcoin Currency:

the years	Events
2008	August 18: Registration of the domain name "bitcoin.org" October 31: Bitcoin design paper published November 09: Bitcoin project registration at SourceForge.net
2009	First Bitcoin transaction.
2010	First Bitcoin purchase (02 pizzas for 10,000 BTC)
2013	An introduction to the block chain, which allows users to create smart contracts. Banque de France warns of risks related to crypto assets.
2014	The bankruptcy of the first bitcoin exchange platform, MtGox, after the theft of 650 thousand bitcoins, and as a result, the price of bitcoin fell sharply
2017	Bitcoin price reached its highest level in December at around €16,000. And then it fell to less than 7,000 euros in May 2018
2018	The theft of the equivalent of \$530 million during the hacking of the Japanese platform. The G20 called on the bodies to set basic standards for monitoring virtual currencies.

Source: Prepared by the researcher based on:

-Michael Crosby, Nachiappan and others, BlockChain Technology, Sutardja Center for Entrepreneurship & Technology Technical Report, October 16, 2015, p 05.

- banque de France, le bitcoin, juillet 2018, p 01.

3.2.3 Techniques for Obtaining Bitcoins

The issuance of Bitcoin currency relies on several technologies, with a central technological feature being a global public ledger that encompasses all completed Bitcoin transactions. This ledger is composed of interconnected blocks, each containing a list of operations and the hash of the preceding block, forming a comprehensive record known as the blockchain. Consequently, it is imperative to delve into the concept and principles underlying blockchain technology in order to provide a detailed and comprehensive explanation.

3.2.3.1 The Concept of Blockchain Technology

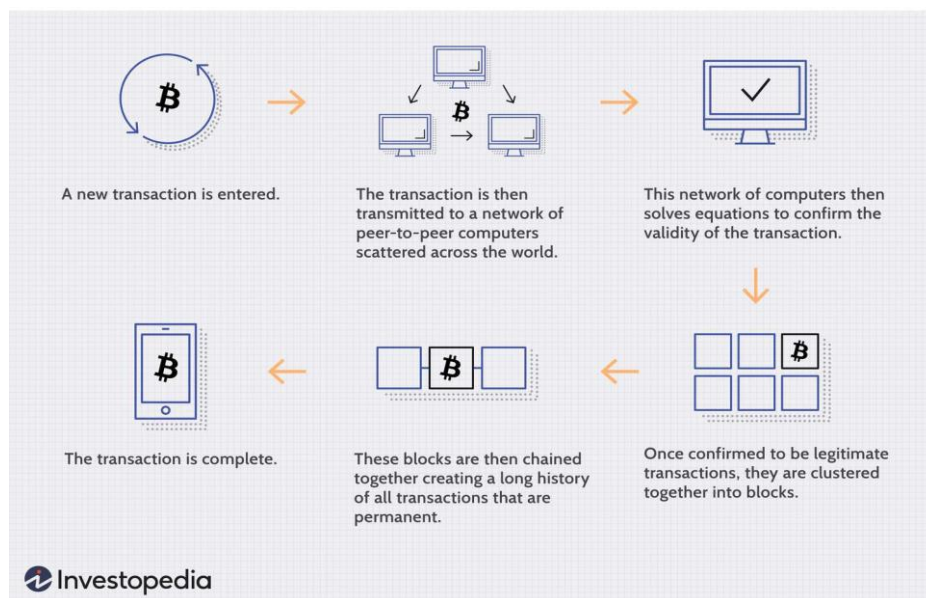
The Need for Legal Adaptation of Bitcoin in Light of the Inevitability of Survival

The emergence of the blockchain was accompanied by the emergence of Bitcoin, which made some people not differentiate between them and consider them two sides of the same coin, but originally they are different. After getting to know the concept of Bitcoin previously, we will learn about the meaning of the blockchain to remove any confusion :

- A ‘blockchain’ is a particular type of data structure used in some distributed ledgers which stores and transmits data in packages called “blocks” that are connected to each other in a digital ‘chain’. Blockchains employ cryptographic and algorithmic methods to record and synchronize data across a network in an immutable manner¹⁰.
- A blockchain is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties. Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. And, once entered, information can never be erased¹¹.

Finally, we conclude by saying that the blockchain is the main platform for the Bitcoin currency, but this does not prevent it from being used in many other applications, and it serves as a record in which all financial movements and assets are kept, so that each group of operations is collected in one block, and then encrypted This block and a new process is not added to the block unless its integrity and correctness are verified by the members. For a better understanding of blockchain technology, we present the following figure:

Figure 01: Blockchain Mechanism



Source: Adam hayes, **blockchain facts: what is it, how it works, and how it can be used**, Retrieved 22, 05,2023, from <https://www.investopedia.com/>

Suppose that person A wants to transfer money to person B, as this transaction is represented via the Internet, which carries a set of encrypted information, so that this information is transmitted

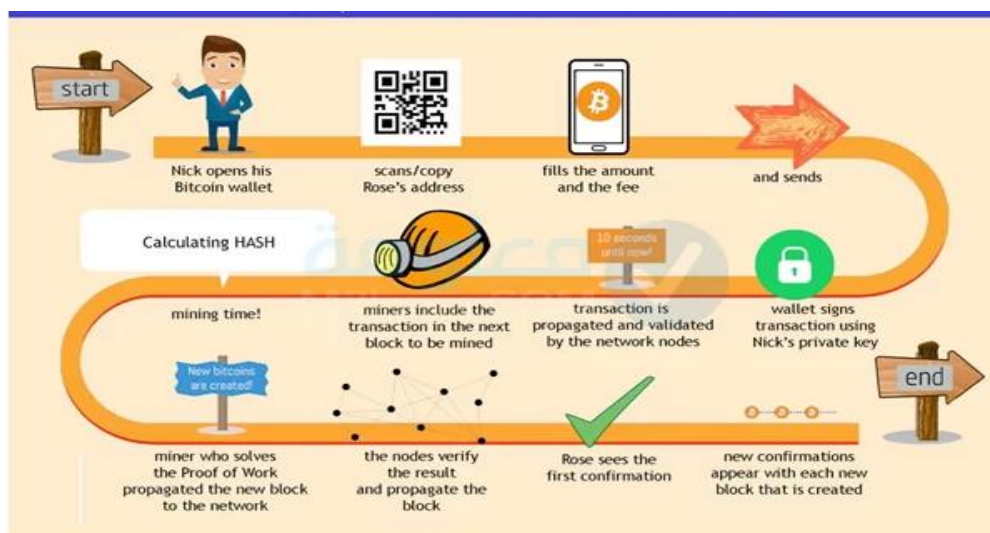
to a group of specialized computers, where the network parties verify the validity of the transaction by solving a complex equation, and after Ensuring the legitimacy of transactions is collected in the form of a block and added to the block chain and encrypted so that it cannot be changed or modified, which provides a transparent record of transactions, and in the end the process is completed quickly and safely and the money is actually transferred from person A to person B.

3.2.3.2 Principles of Working of Blockchain Technology

The blockchain system is based on three main principles, which are the basis for the operation of this system, and within the framework of which all transactions are completed :

- **Distributed Database :** In simple terms, the blockchain can be thought of as a distributed database. Additions to this database are initiated by one of the members (i.e. the network nodes), who creates a new "block" of data, which can contain all sorts of information. This new block is then broadcasted to every party in the network in an encrypted form (utilizing cryptography) so that the transaction details are not made public. Those in the network (i.e. the other network nodes) collectively determine the block's validity under a pre-defined algorithmic validation method, commonly referred to as a "consensus mechanism", Once validated, the new "block" is added to the blockchain, which essentially results in an update of the transaction ledger that is distributed across the network. In principle, this mechanism can be used for any kind of value transaction and can be applied to any asset that can be represented in a digital form¹².
- **Open Ledger:** A open ledger is an open-access network anyone can join at any time. The open ledger is fully decentralized, and no single entity controls the blockchain network. open ledgers are also the most secure blockchains ; they maintain a pseudo-anonymous system for their users' identities. While all transactions are recorded publically, user identities remain private¹³.
- **Mining:** Mining is defined in the protocol, implemented in software, and is an essential function in managing the Bitcoin network. Mining verifies transactions, prevents double-spending, collects transaction fees and creates the money supllly. Mining also protects the network by piling tons of processing power on top of past transactions. Mining verifies transactions by evaluating them against the transactions that happened before, transactions cannot spend bitcoins that do not exist or that were spent before, they must send bitcoins to valid addresses and adhere to every rule defined by the protocol. With a frequency that is targeted at every 10 minutes, mining creates new blocks from the latest transactions and produces the amount of bitcoins defined by the current block reward (50 BTC until late 2012). Miners also verify blocks produced by other miners to allow the entire network to continue building on the blockchain¹⁴ The following figure explains the steps for mining Bitcoin:

Figure 02 : Bitcoin Mining Stages



Source: Retrieved 22/01/2023, from <https://www.netaawy.com>

The series of steps for the currency mining process begins with recording the data of this transaction, which includes the sending person A, the receiving person B, and the amount of the transaction, and then the wallet of the person A announces that it has paid the transaction amount to the wallet of the person B, and the transaction information is broadcast to the contract group in order to start the process Confirmation of this transaction, and after reviewing and ensuring the integrity of the transaction, the contract broadcasts the transaction to the Bitcoin network, and as we mentioned previously that no transfer process takes place without the mining process occurring, as the latest transactions are collected within a block and after its creation, miners compete to find the hash for solving the block and obtaining a reward Mining, and finally this block that includes the transaction is added to the block chain and the transaction is transformed from pending to confirmed.

4. Bitcoin between International Acceptance and Legal Prohibition

Attitudes differ between those who reject and support the currency of Bitcoin. Many countries have adopted a position of rejection and have taken strict decisions prohibiting any activity for it at the official level. In contrast, we find that the scope of accepting virtual currencies, led by Bitcoin, has expanded and grown. This currency, which was widely spread and rejected as a result of the risks that may occur, Hence, we will try Presenting the most important international positions, while addressing Algeria's position, leading to an attempt to adapt and control the circulation of this currency.

4.1 The Most Important International Attitudes Towards Dealing with Bitcoin

The Need for Legal Adaptation of Bitcoin in Light of the Inevitability of Survival

The legal status of Bitcoin differs from one country to another and is still not defined. While some countries explicitly allowed its use, others prohibited and restricted its use. In the following table, we will try to address the most important international situations :

Table N 02 : Bitcoin From the Perspective of Some Countries of the World

Country	Legal status
China	Legal for individuals, illegal for financial institutions
Finland	Legal (it is regarded as a commodity)
France	Legal (unregulated)
India	Legal (unregulated, but the central bank has warned citizens against virtual currencies)
Iceland	Ban on purchasing bitcoin abroad and accepting bitcoin payments
Japan	Legal (no regulations)
Jordan	Illegal for banks. Stock exchanges and other financial and clearing institutions
Canada	Legal (still working on its regulation)
Colombia	Considering whether to ban BTC
Germany	Legal (status of private money)
Poland	Legal (no regulations)
Russia	Illegal
Singapore	Legal (authorities do not interfere in accepting BTC payments)
Switzerland	Legal (consider treating virtual currencies as any other currency)
Thailand	Illegal
Usa	Legal (many regulations)

Source: Anna Wiśniewska, **Bitcoin as an example of a virtual currency**, Institute of Economic Research, No. 1/2016, p 26.

4.2 Algeria's Position Towards Bitcoin

Most countries of the world have recognized the extent of the danger of dealing with virtual currencies, especially in the absence of any regulatory authority over them, but their wide spread across the world is a realistic fact that cannot be denied. It constitutes a catalyst for its acquisition, and the other factor is represented in the great risks involved in this dealing. This reflected a clear divergence in the positions of countries towards dealing with it, and Algeria was among the countries that rejected it, and its position was clear and explicit by prohibition through its internal legislation with the monitoring of penalties to be applied against violators.

Article 117 of Law No. 11-17 containing the Finance Law of 2018 states:

« The purchase, sale, use and possession of virtual currency is prohibited.

The virtual currency is the one that Internet users use over the Internet, and it is characterized by the absence of physical support such as coins, banknotes, and check or bank card payments.

Any violation of this provision shall be punished in accordance with the laws and regulations in force »¹⁵.

The text of Article 117 expressly prohibits dealing in virtual currencies either by possession, use or sale, and penalties are arranged for each violator of this prohibition. The legislator also gave a concept of the banned virtual currency as all virtual currencies used by Internet users, which are characterized by the absence of cover and material support such as coins and banknotes. And others, all of them are subject to the sovereignty of the state and central control, and thus Algeria has explicitly expressed its position on dealing in virtual currency.

After careful analysis of the available data, it is evident that Algeria continues to approach the World Wide Web and the virtual realm with utmost caution. However, in light of the present reality, particularly the accelerated transformative impact of the COVID-19 pandemic, the need for adaptation has become increasingly pressing. This new global landscape has given rise to indications of a paradigm shift towards a world order that emphasizes the integration of interests and orientations. Consequently, Algeria must proactively prepare to confront the challenges associated with openness, while devising comprehensive plans to address various scenarios. This includes a gradual transition towards digital transactions that respect privacy and maintain stability within its environment, all while effectively navigating the pressures arising from international developments.

4.3 Bitcoin Adaptation Procedures and Efforts

The legal and realistic challenges of using virtual currencies indicate the need to regulate them, in order to maintain economic stability and meet the requirements of individuals. In defining its provisions, from here there were many attempts to develop a legal adaptation for it, which was built on the basis of finding a traditional counterpart for these currencies and linking their adaptation to it, that is, the answer to the legal provisions related to this currency requires a legal description for it so that this currency takes a different ruling for each case according to its description.

This is what many studies dealt with, which tried to search for the legal nature that suits virtual currencies, especially Bitcoin, and we will try to present these trends :

4.3.1 Bitcoin as a Currency

At first glance, Bitcoin seems to be money. It can be used to buy and sell goods and services, or as a unit of account. For instance, in March 2014, acceptance of Bitcoin has stepped up from small transactions for restaurant meals to a luxury villa in Bali worth 1,000 Bitcoin, or \$500,000.⁴⁴ It

can be converted to fiat currency, including US dollars. It is therefore “anything that is generally accepted in payment for goods or services or in the repayment of debts¹⁶.

As the description of a currency on bitcoin would make the provisions of currency exchange the rules regulating the relationship between the two parties, and from here it is right to ask about the existence or absence of banks dealing with the currency of bitcoin, and the answer to that is affirmative, as there are banks that deal with bitcoin as an exchangeable currency And Germany at the international level preceded in this aspect when it made obtaining Bitcoin possible through exchange within the sale transactions of the income tax law, despite the lack of banks that deal in this currency. The reports of the Federal Financial Supervisory Authority submitted to the Ministry of Finance revealed the existence of no less than six banks It participates in digital currency trading activity without disclosing these banks, and that the banks participating in digital currency trading have obtained the required licenses and have established mechanisms for exchanging digital currencies with fiat currencies and vice versa.

4.3.2 Bitcoin as a Commodity

Proponents of the classification of Bitcoin as a commodity share the same concern as proponents of its classification as an investment : all are concerned about the volatility of Bitcoin. Indeed, given the limited number of Bitcoin in circulation, “the speculative ride has been pretty wild,” undermining their classification as a currency. Despande, the Managing Director at Bain Venture Capital, expressed a similar opinion as follows : The proper way to think about Bitcoin for now is not as a currency, due to its lack of price-stability, but rather as a commodity . . . Subtracting the industrial value of gold from the current trading value of gold yields the diversification value of gold, and this is the value addressable by Bitcoin over the long term¹⁷.

And from it we deduce the description of Bitcoin by some on the basis that it is a commodity and not a currency, based on the fact that it was not issued by a bank or a government agency, as it lacks an issuing authority to recognize it as a currency, and its prices fluctuate similar to traditional currencies that are stable, as well as bought and sold, as they have no value For its own sake, they also considered it a commodity similar in description to gold because they are not issued by the bank or a central authority and there is no supervision of its issuance and circulation and also both of them need mining, in addition to its price is not fixed and this opinion was endorsed by the American Commodity Futures Trading Commission (CFTC) for the year 2015.

4.3.3 Bitcoin as an Investment Tool

In response to the criticisms surrounding the adoption of virtual currency as a commodity, it is argued that its inherent limitations hinder its practical use as a standalone form of currency. Notably, the significant volatility in its value acts as a barrier to fulfilling the economic concept of cash. Furthermore, the virtual currency often serves more as an investment vehicle for

speculative purposes rather than a medium for acquiring goods and services. It is predominantly purchased with the intention of selling it at a higher price. These observations emphasize the need for a critical assessment of the practical viability of virtual currencies within an economic framework. The idea of adapting them as an investment tool was put forward, but the opinion was not agreed on the type of this investment tool, as the perception went that it is considered as securities such as stocks and bonds.

However, this adaptation has been subjected to criticism. On the one hand, currencies cannot be treated as shares, given the clear difference between shares and virtual currencies. Conceived about virtual currencies, nor can they be considered debt securities that represent a debt owed by its issuer because virtual currency is not a debt¹⁸.

Through our discussion of the above, we find that it is very difficult to adapt virtual currencies in a traditional manner, as they have a modern concept and have their own characteristics and methods of issuance, which makes it difficult to characterize them as analogous to them and subject them to the same provisions. The approach between them is somewhat distant, so the legislator must intervene to impose certain controls. Restricting its issuance and circulation and demarcating its borders, in addition to intensifying and synergizing the efforts of the relevant bodies and entities

Conclusion

Virtual currencies started as just a research idea, but it became inevitable, which made it range from the inevitability of existence, prohibition, and lack of judicial recognition. The risks involved :

- The concept of Bitcoin is full of ambiguity and ambiguity, which made it difficult to find a unified definition for it.
- Cryptocurrency is a volatile asset whose prices fluctuate rapidly and are affected by several external factors, which makes investing in them risky.
- Traditional money relies on a cover of gold preserved in central banks so that each paper crosses a percentage of this gold. The value of decentralized digital currencies is represented in their encryption, which is based on blockchain technology.
- What is wrong with it is the absence of international support, whose reasons are often due to the belonging of these currencies to a decentralized system that falls outside the control of governments and central banks.
- Attitudes differ between those who reject and support the currency of Bitcoin. Many countries have adopted a position of rejection and have taken strict decisions prohibiting any activity for it at the official level. At the same time, the lack of international recognition of it should not amount to ignoring it, because this would complicate its problems.

The Need for Legal Adaptation of Bitcoin in Light of the Inevitability of Survival

- The Bitcoin currency is unique to two contradictory factors. The first factor is embodied in the attractive advantages achieved by this currency, which constitute an incentive for its acquisition, and the other factor is represented in the great risks involved in this transaction.
- Algeria was among the rejecting countries, and its position was clear and explicit by prohibiting it through its internal legislation, while monitoring penalties to be applied against violators. This was mentioned in Article 117 of Law No. 11-17, which includes the Finance Law for the year 2018. However, the implementation of this provision in reality may encounter difficulties. It would show its limitations and prevent its activation, perhaps the most important of which is the ambiguity of the content of the punitive measures established for violating the prevention measure, in addition to the confidentiality of dealing in virtual currency and its subjection to the encryption procedure, which stands as a practical obstacle to the possibility of tracking and revealing the transactions that take place through it.
- The legal and realistic challenges to the use of virtual currencies indicate the need to regulate them, in order to preserve economic stability and meet the requirements of individuals, because their reality has made them inevitable and cannot be denied, and attempts to adapt them were based on describing them as analogous to them and subjecting them to the same provisions.
- Most of the adaptations were not spared from criticism because these virtual currencies have a modern concept and have their own characteristics and methods of issuance, which makes it difficult to describe them as analogous to them and subject them to the same provisions.

Recommendations

- The necessity of intensifying and synergizing international efforts between the various relevant bodies and entities in order to develop the regulatory frameworks to regulate them and reduce their various risks.
- Calling on central banks to recognize virtual currencies and to find the appropriate mechanisms that enable them to recognize these currencies just like the official currencies and move them from decentralization to centralization, i.e. the bottom line is that decentralized finance and traditional finance must work together, and this is what is the missing link and is considered a solution to most of the problems of these currencies. In my humble opinion.

¹ - CFI team, **Electronic Money**, 9-12-2022, Article available at <https://corporatefinanceinstitute.com/>.

² - Nakamoto, S. **Bitcoin: A Peer-to-Peer Electronic Cash System.**, (2009), Retrieved 22,05,2023, from bitcoin.org: <https://bit.ly/3zo7IEj>.

³ - Björn Segendorf, **What is Bitcoin?**, sveriges riksbank economic review, 2014, P 71.

⁴ - Nassima BOURI, **Virtual cryptocurrencies: investments and potential investments of the new economy**, Scientific review of economic future, universit  m'hamed bougara de boumerd s, vol 07, n 01, 2019, p 291.

⁵ - Matthew sparkes, **What is bitcoin and how does it work?**, Retrieved 20,04,2023, from <https://www.newscientist.com/>.

⁶ - julie pinkerton, **The History of Bitcoin, the First Cryptocurrency**, Retrieved 22,05,2023, from <https://money.usnews.com/>.

⁷ - Usman W. Chohan, **A History of Bitcoin**, available at SSRN, 05 february 2022, pp 08 09.

⁸- Mohammed Najib Mahmood Imam, **The history of Bitcoin**, april 2019, article available at www.researchgate.net.

⁹ - julie pinkerton, op cit, Retrieved 22,05,2023, from <https://money.usnews.com/> .

¹⁰ - world bank group, **Distributed Ledger Technology (DLT) and Blockchain**, 2017, p IV.

¹¹ - Michael crosby, nachiapau, pradhan pattanayak, **BlockChain Technology**, Sutardja Center for Entrepreneurship & Technology Technical Report, 16 october 2015, p 03.

¹²- Benaichouche Mohamed, **The Bitcoin and the future of Cryptocurrencie**, Al-riyada for Business Economics Journal, Vol 08 – N° 02, June 2222, p 205.

¹³ - article available at <https://www.ledger.com/>, 23-05-2023, 15: 51.

¹⁴ - David R. Sterry, **Introduction to Bitcoin Mining**, recent version of coinDL .com, 2012, p p 10 11.

¹⁵ - Article 117 of Law No. 11-17 contained in the Official Gazette of the Republic of Algeria, No. 76, issued on December 28, 2017, p. 54

¹⁶ - Tara mandjee, **bitcoin its legal classification and its regulatory framework**, journal of business& securities law, vol 15, 2014, p 166.

¹⁷- Tara mandjee,ibid, p 178.

¹⁸ -reuben grinberg, **bitcoin: An innovative alternative digital currency**, HASTINGS SCIENCE & TECHNOLOGY LAW JOURNAL, vol 04, 11.11.2011, p 195.