# CRYPTOCURRENCIES AND THEIR IMPACT ON THE FUTURE

**Rania Elbashir**
nanarania7@gmail.com

**Dania Elbashir**
khalildana42@gmail.com

**Saad Bashir**
lolosaad14@gmail.com
*University MB, Faculty of Bussines and Law, Teodora Drajzera 27, Belgrade, Serbia*

***Abstract:*** *The subject article deals with the impact of cryptocurrencies on the future of financial and banking stability, the SWIFT system and the economy, as well as the attitudes of countries and some international institutions towards them. In today's world, we are witnessing the rapid development and digital technological revolution in all economic, financial and banking streams. This has led to the emergence of new monetary instruments that are compatible with the development of society and the spread of the Internet. Many financial, commercial and economic crises, epidemics and other factors contributed to the introduction of cryptocurrencies. The introduction of cryptocurrencies brought a series of challenges and risks associated with their use, such as money laundering, terrorist financing and trade in illegal goods, as well as challenges related to legal and regulatory issues that harm the economy, financial and banking stability in many countries.*

*There are two research questions addressed in this paper: 1) Do virtual currencies have the same standards as money in its current form? 2) What are the implications of using virtual currencies? The scientific objective of this research is to describe and scientifically explain the main components of virtual currencies as a form of monetary policy and identify the challenges they face. The social goal of the research is to present future prospects for their use to the scientific and social public based on the views of countries, international organizations and central banks on the issuance of virtual currencies and to point out possible obstacles in their proper application.*

*Almost all basic methods of knowledge and research were used in the preparation of the article. Of the general scientific methods, the statistical and comparative method was applied, and of the data collection methods exclusively the method of content analysis of the documents listed in the list of used literature.*

***Keywords:*** *Virtual currencies, electronic money, mining, financial stability, Bitcoin.*

## 1. INTRODUCTION

Today, the world is witnessing a rapid development of a technological digital revolution on all economic, financial and banking trends, resulting in the emergence of new monetary tools commensurate with the development of society and the spread of the Internet, and virtual cryptocurrencies trying to take a place for them in today's world, and it has also helped to go to many financial, commercial, economic, epidemics, etc., but there is a set of challenges and risks that result from dealing with it, such as the crime of money laundering and operational financing Terrorist and trafficking in non -legal goods, in addition to legal and regulatory problems, which will harm the economy and banking financial stability in countries.

Add to this the dependence of virtual currencies on the technology of accuracy is the technology of the series of blocks or what is known as (block chain[1]), and it is a relatively immature technique and can create many problems as much as the solutions it provides. What has been presented so far is a series of main ideas about emerging technologies and how we can deal with them in a rapidly changed world.

Through this study, researchers try to find out the concept of virtual currencies, their characteristics and challenges to use them in transactions now. And its impact on financial, banking and economical stability, with an indication of the opinion of some countries and international organizations in dealing with them. And the future horizons for it.

## 2. WHAT ARE VIRTUAL CURRENCIES, THEIR ORIGINS, TYPES, AND CHARACTERISTICS:

The global monetary system is witnessing multiple developments, the most prominent of which relates to the emergence of cryptocurrencies. Despite the global concerns they have raised, they have gradually begun to gain the trust of some online users. However, the use of virtual currencies remains limited in many regions of the world. This may be due to the lack of support for these currencies from monetary authorities and the difficulty most individuals have access to their production and use[2].

This section explains the concept of virtual currencies, their origins, and the extent of their similarity to cash, their types, and their characteristics. This is explained as follows:

The concept of financial intermediation, accepted by individuals and even countries in modern transactions, has changed. Some people believe there is no longer a need for a third party in business transactions, such as banks and others. This has led to the recent emergence of block chain technology (distributed ledger technology), which has many applications. Among the most important of these applications are virtual currencies, the most famous of which is Bitcoin, which does not require a third party in transactions[3].

---

[1] United Nations, (Block chain) Technology and Sustainable Growth United Nations, 9 November 2021.
[2] Central Bank of Jordan/National Payments System Supervision and Control Department, Study entitled "Cryptocurrencies," March 2020, p. 5.
[3] Ashry Muhammad Ali, "Central Bank Digital Currency and Its Inevitable Impact on Monetary Policy," Scientific Journal of Economics and Commerce, Ain Shams University, 2020, p. 405.

These virtual currencies have come in a completely different format from what exists in cash transactions[4]. Through this requirement, the first hypothesis can be tested, which is the existence of a direct relationship and similarity between virtual currencies and traditional or electronic money. This requirement is studied through the Concept of Virtual and Digital Currencies.

2.1. The Concept of Virtual and Digital Currencies

Before explaining the concepts of virtual and digital currencies, it is important to clarify that currency is considered by the state as money, but it has the force of law in its capacity as a means of acquitting debts. In other words, money is more comprehensive than currencies, as it includes paper money, banknotes, and commodity money, unlike currencies, which have no value unless supported by the force of law and recognized by states. We explain below the concept of money and digital and virtual currencies to determine the validity of the first hypothesis, as follows:

- *The Concept of Money:* Money is an important and fundamental means of our contemporary economic life, as no contemporary society can do without it. It is a useful economic commodity that meets needs and settles obligations arising from transactions[5]. Money is a commodity of exchange, not a commodity of production or consumption. Therefore, it facilitates the circulation of trade, and without it, all transactions and exchanges become complex. Money has a long history, having been invented by groups, and its emergence is linked to the emergence of the barter economy. Barter was the first means of exchange between people. It then evolved into digital or electronic money, which is a cash value stored on a prepaid electronic medium. It is widely accepted by those other than those who issued it[6]. This necessitates clarifying the concept of digital currencies through the following:

- *The Concept of Digital Currencies:* Digital currencies are considered by some to be the primary umbrella term that encompasses all other forms of currency, whether electronic, virtual, or encrypted. Regardless of the other names they may be called, the primary characteristic of these currencies is that they are available digitally and do not have a tangible physical presence, although they have some characteristics similar to physical legal tender.

International organizations and central banks may differ on the definition of digital currencies. Some restrict the definition to a specific form and activity, while others expand the concept and make it inclusive of all forms of currency traded and dealt with

---

[4] Muhammad Jamal Zain, Abdul Basat Jassam, "Bitcoin Virtual Currency: Its Legal Status and the Ruling on Dealing with It," Journal of Legal Sciences, College of Law, University of Baghdad, Volume 35, Issue 2, 2020, p. 144.

[5] Ahmed Gamal El-Din, Musa, Monetary and Banking Theories and Systems and Financial Markets, Dar Al-Nahda Al-Arabiya, Cairo, 8th edition, 2021, p. 10.

[6] Sayed Taha, Money, Banking, and National Income, Faculty of Law, Cairo University, 2021, p. 3.

over the internet, regardless of the modern technological means used to provide these currencies[7].

Some also argue that the ruling on electronic money is the same as the ruling on legal tender money, as it merely converts the usual form of money into electronic units using technological means.

- *The Concept of Virtual (Encrypted) Currencies:*

Encrypted virtual currencies are defined as currencies that have no physical existence and can be exchanged for currently used official currencies, such as the dollar and the euro. They are traded over the internet without a central authority or central bank behind their issuance[8]. Some define them as monetary value stored on an electronic means, prepaid and not linked to a bank account. They are widely accepted by those other than their issuer and are used as a means of payment for various purposes. The Dutch Central Bank defines it as a currency that operates outside the official monetary system. It is a representation of monetary value not issued by the central bank or credit institutions. Its value is derived from the trust in its voluntary acceptance. It can be described as a private virtual currency that is traded over the Internet through a specific network. It can be collected, transferred via email, or even stored as electronic files on a computer's hard drive. It is also a decentralized electronic currency that uses a peer-to-peer network, electronic signatures, and encryption to prove and enable users to carry out currency transfers and trading operations over the Internet without relying on an intermediary or trusted third party such as banks[9]. It is also used in buying and selling operations or converting it into other currencies, and is voluntarily accepted by those who deal with it.

Researchers believe that these multiple definitions suggest that some people tend to consider virtual currencies a type of digital currency. However, as the majority believe, virtual currencies are intangible currencies, meaning they have no physical existence. They are created via internet connection and rely on advanced, encrypted technology. They are not issued by a local or international monetary authority, meaning they are not recognized. They rely on voluntary acceptance by both parties and are not linked to a bank account. Therefore, it is necessary to clarify the distinction between virtual currencies and digital currencies as follows:

## 2.2. Virtual Currencies Compared to Digital Currencies:

Some consider virtual currencies a product of the digital revolution, representing a form of digital or electronic money available in the virtual world. They are produced by

---

[7] Habiba Abdelli, Nour El-Din, Money Laundering in the Electronic Environment, International Virtual Scientific Conference, Combating Corruption in the Electronic Environment, Arab Democratic Center for Strategic, Political and Economic Studies, Germany/Berlin, April 2021, p. 63.

[8] Abdul Fattah Muhammad Salah, "Bitcoin: A Cryptocurrency That Could Cause a New Global Economic Crisis," International Journal of Islamic Economics, Center for Islamic Transactions Research, Syria, Issue 33, p. 34, 2021.

[9] Baraa Munther Kamal, Enas Baha, "The Position of Arab Legislation on Virtual Currencies," Tikrit University Journal of Law, College of Law, Iraq, Volume 5, Issue 1, Part 2, p. 5.

computer programs and stored in electronic wallets. Therefore, all virtual currencies are digital, while not all digital currencies are considered virtual[10]. In 1998, the European Commission defined electronic money as monetary value stored electronically on an electronic medium, such as a card or computer memory, accepted as a means of payment by providers other than the issuing institution, and made available to users for use as an alternative to paper money, with the aim of effecting electronic transfers of payments of a specific value[11].

Linking the definition of digital money to its issuer excludes cryptocurrencies from being considered money simply because they are not issued by the issuer of the digital money, even if they constitute monetary value stored electronically for the purpose of conducting payment transactions accepted by a person or legal entity other than the issuer of the digital money. Researchers believe from the above that digital currencies or electronic payment instruments, regardless of their form or usage, are neither money in the conventional sense nor virtual currency. Their value lies in the balance, i.e., the cash amounts contained therein, and the privileges granted by the legal monetary authority or the entity authorized to issue them, whether a bank or other entity. Even if issued without a bank account, the important thing is that the issuing entity guarantees the payment method. Virtual currencies, on the other hand, are not guaranteed by any official entity and are not subject to regulation by official bodies, meaning they are not legally regulated. They can be defined as follows, It is the process by which individuals or entities can communicate over the internet using a technology to issue a new encrypted means or currency for a specific purpose, whether buying or selling goods or services personally, subject to the rule of consent and acceptance, using internationally recognized currencies to complete this process without resorting to official banking authorities. The different points between digital and virtual encrypted currencies can be clarified in the table 1:

Table 1: The different points between digital and virtual encrypted currencies

| **Comparison Point** | **Cryptocurrencies** | **Virtual (crypto) currencies** |
|---|---|---|
| It has a specific value | It has a specific monetary value. | It has no specific monetary value. It is a virtual currency whose value depends on other legal currencies. |
| Legal cash cover | Money is stored and transferred electronically. | It has no legal cash cover. |
| Centralized production | Produced centrally and owned after production or as a result of owning legal tender. | There is no centralized production. |
| Storing funds in it | Funds are stored electronically, where the cash value is charged to an electronic device such as a card (such as a debit card, MasterCard, Visa, or other forms of | The methods of storing funds in it depend on the mining method, algorithms, or any of the mechanisms through which the encrypted virtual |

[10] Farida Haddad, Abd Alhak Qrimes, "Virtual Currency in Algerian Law," Algerian Journal of Legal and Political Sciences, Volume 58, Issue 3, 2021.
[11] Nahy Khaled Issa, Israa Khadir Mazloum, "The Legal System of Electronic Money," Journal of the University of Babylon, Humanities, Volume 22, Issue 2, 2022.

| | | |
|---|---|---|
| | electronic payment) or any electronic wallet within mobile phone applications. | currency is produced and owned. |
| How to exchange it and what is the competent authority? | It is exchanged through an infrastructure subject to the oversight and supervision of an official central authority responsible for the settlement and exchange process between the two parties known to the authority. | It is exchanged without the oversight of a central authority and without the knowledge of the two parties involved. It relies on modern, advanced technology, with no trust between the two parties, and without mediation, meaning no intermediary. |
| The relationship between the source and the consumer | The relationship between the source of electronic money and the consumer is a contractual relationship. | It is based on anonymity, meaning the two parties are not known. It is based on confidentiality. |
| Fulfilling Obligations | Electronic money is a form of electronic payment and is valid for various purposes. | It is not suitable for fulfilling all obligations, but rather is used to purchase certain goods and services. It has not gained the trust of individuals or even countries. |
| Acceptance | Accepted by all individuals and institutions. | Not accepted by all individuals, institutions, or even countries. |

Table prepared by researchers

The table shows a clear difference between digital or electronic currencies and virtual currencies in many respects, whether in terms of issuance, acceptance, or legality. Therefore, the first assumption that there is a direct relationship and similarity between virtual currencies and cash in its traditional or electronic form is invalid. Therefore, it is necessary to examine their origin, formation, or issuance through the following requirement to clarify this difference.

## 3. THE ORIGIN AND FORMATION OF VIRTUAL CURRENCIES, THEIR TYPES, AND CHARACTERISTICS

Virtual currencies have begun to spread among most countries around the world, to the point that Amazon, the website specializing in selling books and publications, announced that it offered more than 2,000 publications on new virtual currencies in 2014 alone. This is a strong indicator of the growing global interest in these currencies, their dominance, and the interest of societies around the world[12]. Unlike online payment systems, they are based on decentralized peer-to-peer networks that allow for proof and transfer of virtual currency ownership without the need for an intermediary. Given that monetary systems change over time, the distinction between money and non-money becomes blurred, and depends largely on the purpose of the transaction. In this section, we will learn about the origin and formation of virtual currencies, their purpose, their types, and their various characteristics.

[12] Hassan Mohammed, Bitcoin and its Role in Financing Terrorist Movements, Comments, King Faisal Center for Research and Islamic Studies, August 2020, p. 2.

### 3.1. The Origin of Virtual Currencies

The idea of virtual currencies emerged from a computer programmer using the pseudonym Satoshi Nakamoto. He introduced it in a 2008 publication titled "Bitcoin: A Peer-to-Peer Electronic Cash System." This research outlined how Bitcoin works and how it protects against counterfeiting and double-spending[13]. Bitcoin provides a solution to eliminate third-party intermediaries, such as financial institutions and banks, especially during the global financial crisis. Some have stated that the identity of the creator of Bitcoin remains unknown. Whoever invented the virtual currency, Bitcoin was created based on the concept of the block chain, in a study titled "A Peer-to-Peer Electronic Cash System[14]." Over the internet, using free software, complex calculations are performed and extracted through the Bitcoin mining process. The resulting output is then transferred to the block chain, a digital ledger, to become a ready-made, protected digital currency and converted into an asset in a digital financial wallet. This currency is then traded over the internet[15]. Currency transactions between users are monitored and the process is documented with an electronic signature that cannot be forged, changed, or deleted, without recording any personal data.

### 3.2. Creating Virtual Currencies

Virtual currencies are created through mining, which is carried out by miners. The mining process is not limited to a central authority or specific individuals; it is available to everyone, anywhere in the world. However, it requires time and a fast, high-spec computer that consumes enormous amounts of energy, allowing the download of the free mining program, Bitcoin Miner. Using this program, a number of puzzles can be solved, called algorithms, which are a set of mathematical, logical, and sequential steps necessary to solve a problem. After these algorithms are solved, the program issues Bitcoin and adds it to the electronic wallet of the miner[16].

This mining process is called mining. It consists of a special application that the user installs on any computer. The application slowly produces new coins, through which the user can obtain virtual currencies. Mining isn't limited to a specific entity or individual; it's available to everyone, as previously mentioned. However, it requires time and a fast computer with specific specifications. The more mining operations are performed, the

---

[13] Asim Adel Muhammad, "Virtual Digital Currencies: A Path to Financing Terrorism," Al-Zaytoonah University Journal of Legal Studies, Jordan, Volume 1, Issue 1, 2020, p. 34.

[14] Abdullah Ahmed, "The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), Journal of the Faculty of Islamic Studies for Boys in Aswan, Al-Azhar University, Issue 3, November 2020, p. 2477.

[15] Anwar Othman, "The Economic Implications of Block chain Technology and Financial Stability in Arab Financial Markets," Arab Monetary Fund, November 2021, p. 6.

[16] Dr. Suwailihi Nour El-Din, The Impact of Bitcoin Mining and Virtual Currencies on the Stability of the Global Monetary System, Scientific Horizons Journal, Amin Al-Aqal Al-Hajj Musa University Center, Volume 10, Issue 2, Algeria 2021, p. 226.

more difficult the puzzles become[17]. Each transaction is recorded in a public ledger called block chain, which includes information about the accounts used in mining and the number of currency units exchanged. This information is stored in each user's wallet, and an electronic signature is added to the transaction. After a few minutes, the transaction is verified and stored in an anonymous, encrypted form. Mining occurs approximately every ten minutes, and mining requires high costs, represented by the cost of the equipment and the electrical energy used to issue a single unit of virtual currency. It's worth noting that most cryptocurrencies operate on three main pillars: encryption for authentication, a peer-to-peer exchange protocol (Black Chain), and a virtual currency value determined by the open market, just like the exchange rate between various global currencies. The volatility of virtual currency prices is a major factor in undermining user confidence and the growth of this production system. The system lacks a central administrative authority, so price fluctuations are due solely to changes in market demand. 14 million units have been produced so far, with 35 Bitcoins currently being produced around the world every 10 minutes[18].

### 3.3. Ways to Obtain Virtual Currencies

- They are obtained by purchasing them from websites or online platforms specialized in selling these currencies online. This is an easy method available to anyone. Simply create an online account and an electronic wallet on your computer or even your phone using available applications, and pay for the unit to be purchased in any currency, such as the dollar. This method is considered easy, accessible, and available to everyone[19].

- They originated and existed through what is known as mining, a very difficult and complex method that not everyone can perform. Mining is called mining or mining, similar to the process of extracting gold from the ground, but using highly advanced computers[20].

- They can be obtained through automated teller machines (ATMs) specifically designed for virtual currencies. The first ATM was installed in the Canadian city of Nancouver. Bitcoin ATMs have spread to many countries, reaching 55, with the number of machines reaching approximately 953 by the end of 2016[21].

### 3.4. Types of Virtual Currencies

---

[17] Taher Al-Sadiq, "The Spread of Digital Currencies in Light of the Coronavirus Pandemic: Bitcoin as a Model," Dafater Bouadis Journal, Algeria, Volume 10, Issue 101, p. 433, 2021.
[18] Taher Al-Sadiq, "The Spread of Digital Currencies in Light of the Coronavirus Pandemic: Bitcoin as a Model," Dafater Bouadis Journal, Algeria, Volume 10, Issue 101, p. 433, 2021.
[19] Asim Adel Muhammad, "Virtual Digital Currencies: A Path to Financing Terrorism," Journal of Al-Zaytoonah University of Jordan for Legal Studies, Jordan, Volume 1, Issue 1, 2020, p. 37.
[20] Bassem Ahmed Amer, "Digital Currencies: Bitcoin as a Model" and Their Compatibility with Islamic Money Regulations," op. cit., p. 274.
[21] Ayman Ezz El-Din, "Digital Currencies and Their Relationship to E-Commerce (Case Study: The United Arab Emirates (Dubai))," Master's Thesis, Department of Accounting, College of Business Administration, Middle East University, June 2019, p. 2.

There are dozens of types of virtual currencies. The importance of each digital currency is determined by the number of users, the structure of each network, and the locations where it is exchanged. Based on the market value of coins, the virtual currency scene is crowded, especially since it is a rapidly evolving topic that interests many stakeholders. The number of virtual assets has increased, reaching 5,500 currencies in July 2021. Ultimately, it is impossible to accurately estimate the number of virtual currencies due to the lack of a law regulating their issuance or a specific authority responsible for their issuance. This also explains the varying degrees of usage[22].

We outline some types of encrypted virtual currencies to clarify the differences between them in terms of issuance, use, and spread among users. These types include:

- *Bitcoin:* This virtual currency was created in 2011 and is based on the Bitcoin protocol. However, it was designed to make mining relatively cheap, easy, and faster to use. Its popularity has increased in recent years[23].

-*Peer coin:* Launched in 2012, it is considered more environmentally sustainable than other cryptocurrencies. It is designed with an inflation rate of 1% and is the third-largest cryptocurrency that can be mined after Bitcoin and Lite coin. Its security and processing processes differ significantly from those of the previous two currencies[24].

-*Dash:* Launched in 2014, this cryptocurrency offers many advantages over Bitcoin, being more private. Dash offers greater anonymity because it operates on a decentralized MasterCard network and enables transactions to be untraceable. By 2018, its market cap reached $2019 billion, with a token value of $266.58[25].

-*Ethereum:* Developers use it to pay each other for helping build applications, rather than competing with Bitcoin. Ethereum complements Bitcoin and is used to create platforms dedicated to crowdfunding[26].

- *Libra:* Facebook's Libra project, which will be used for payments made via social media applications (Facebook, WhatsApp, Instagram), such as transferring money between users or for buying and selling transactions conducted through these applications[27].

Researchers see from the above that there is a significant positive relationship between the spread of virtual currencies and the presence of electronic infrastructure. This was

---

[22] Dr. Dalia Ibrahim, Cryptocurrencies: Between Opportunities and Risks, Cabinet, Decision Support and Support Center, Egypt, September 2, 2021.
[23] Khaled Mohamed Hamdy, Cryptocurrency Trading and its Threats to Community Security, Faculty of Islamic Propagation, Cairo, Al-Azhar University, Volume 2, Issue 33, 2021, p. 231.
[24] Abdullah Ahmed, The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), op. cit., p. 2488.
[25] Dr. Suwailihi Nour El-Din, The Impact of Bitcoin and Virtual Currencies on the Stability of the Global Monetary System, op. cit., p. 225.
[26] Tahri Al-Siddiq, The Spread of Digital Currencies in Light of the Coronavirus Pandemic: Bitcoin as a Model, Dafater Buadix Journal, Algeria, Volume 10, Issue 202, p. 429, 2021.
[27] Central Bank of Jordan? Department of Supervision and Control of the National Payments System, Study entitled Cryptocurrencies 2020, p. 15.

demonstrated by the previously explained requirement for their formation and mining to require an electronic infrastructure and advanced computers connected to the internet. Therefore, the second hypothesis is confirmed: there is a relationship between the spread and use of virtual currencies and the presence of electronic infrastructure.

### 3.5. Characteristics of Virtual Currencies

Virtual currencies share many characteristics with currencies and commodities. The availability of associated capabilities and technologies, both for investors and consumers, also presents a source of risk for both users, investors, and regulators. To explain the characteristics of virtual currencies, we will highlight their advantages and disadvantages, as well as their legal and official status and future. Accordingly, there are several advantages to virtual currencies, including:

#### 3.5.1. Advantages of Cryptocurrencies:

- *Global:* Virtual currencies are not tied to a specific location for trading, as they are not subject to the authority of the state or a central bank. Therefore, no country can prohibit trading in them because they are not subject to its authority or control. They can be traded as if they were your local currency[28].

- *Privacy and Secrecy:* Virtual currencies enjoy privacy, as no person, regulatory body, or institution can access their electronic wallets. Every transfer made between two people is recorded publicly in what is called the block chain. This record does not require the name, identity, or any personal data of the individual. All personal information consists of numbers and symbols whose owner's name and identity are unknown[29].

- *Encryption:* Virtual currencies rely on changing the form of the currency's private information into another form using mathematical equations, or encryption algorithms. Data is transformed from readable data to unreadable, encrypted data to prevent unauthorized persons from reading or transacting with it[30].

- *Low fees:* Transactions with virtual currencies involve no or very few fees, unlike traditional currencies, which do have fees for their use[31].

---

[28] Herdo Center for Digital Expression Support, Alternative Transaction Platforms and Digital Currencies: Between Freedom of Transaction and Censorship Issues, Cairo 2020, p. 6.
[29] Khaled Mohamed Hamdy, Cryptocurrency Trading and its Threats to Community Security, Annual of the Faculty of Islamic Propagation in Cairo, Al-Azhar University, Volume 2, Issue 33, 2020/2021, p. 232.
[30] Lafi Mohamed Daradkeh, Challenges of Keeping Legal Regulations in Accompany with Technological Developments in Financial and Banking: Bitcoin (Digital Currency) as a Model for Safe Use with Technological Guarantees in the Absence of Legal Guarantees, Kuwait International Law School Journal, Proceedings of the Fifth International Conference, 2018, p. 341.
[31] Abdullah Ahmed, The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), op. cit., p. 2491.

- *High security:* The technology used for virtual currencies is the largest computing project with high-quality services. It offers a high degree of security against theft or counterfeiting, as its records are strongly encrypted and cannot be easily hacked[32].

- *Decentralization:* Virtual digital currencies are characterized by the absence of a central financial authority that issues or oversees their circulation. They are issued by an anonymous entity. They are encrypted virtual currencies whose purpose is to allow users to send money to each other over the internet via a peer-to-peer network without the need for a central authority to monitor payment and transfer transactions, while maintaining their anonymity[33].

- *Transparency:* Virtual currencies operate with complete transparency and freedom, with currency transfers taking place between different wallets, and all users acknowledging the existence of these funds and the transfer of ownership[34].

Researchers see the aforementioned advantages as potentially disadvantages, especially considering that these advantages belong to a currency intended to become circulating money and a means of payment, gaining legal recognition and the trust of individuals, even governments and organizations. How can this be achieved given encryption, the lack of guarantees from official bodies, and the decentralization of its issuance? As for transparency and the lack of knowledge of the owner's identity, this weakens the owner's position as the person to whom the virtual currency is transferred. He cannot resort to official bodies to claim his right to it or in the event of its loss. These are in addition to other disadvantages affecting the economy, which we explain below:

### 3.5.2. Disadvantages of Virtual Currencies

Virtual currencies have become a means of payment for some people. They can now be exchanged or purchased for dollars or euros between individuals, organizations, and companies. No one interferes in determining their price; rather, it is determined based on supply and demand. However, there are disadvantages to their use, such as forgetting the password for the program, which can result in losing your money forever. This is in addition to the many drawbacks associated with virtual currencies, which reduce their use and adoption as official currency, including:

- *Their threat to national security and the financing of terrorism:* Countries must be aware of the risks of using virtual currencies. According to the Financial Action Task Force (FATF) report of the G20 Finance Ministers and Central Bank Governors in July 2018, the increasing use of virtual currency activities has been driven by several factors,

---

[32] Khaled Mohamed Hamdy, Cryptocurrency Trading and its Danger to Community Security, Annals of the Faculty of Islamic Propagation in Cairo, Al-Azhar University, Volume 2, Issue 33, 2020/2021, p. 232.
[33] Dr. Suwailihi Nour El-Din, The Impact of Bitcoin Mining and Virtual Currencies on the Stability of the Global Monetary System, op. cit., p. 221.
[34] Mohamed Abdel Fattah, Mohamed Ahmed El-Saeed, The Impact of Bitcoin's Electronic Trust Factors on Hotel Transactions as a Mechanism for Digital Transformation in Egypt, Journal of the Union of Arab Universities for Tourism and Hospitality, Faculty of Tourism and Hotels, Suez Canal University, Volume 20, Issue 4, 2021, p. 513.

including money laundering, terrorist financing, drug trafficking, and fraud. Terrorist and extremist groups seek to provide stable financial resources that are difficult to track and confiscate by banks and financial institutions, or by public authorities in countries and governments. Therefore, they actively seek to exploit modern technologies and mechanisms to conceal their financial resources and encrypt their transfers, making it difficult to track these financial transactions and identify their parties and the entities transacting with them[35].

- *Tax Evasion:* Virtual currencies can be an innovative and hidden form of tax evasion, as they operate without a legal system and are held in cyberspace accounts known as online wallets. The size of the formal, informal economy increases due to the lack of registration of these financial activities, leading to an increase in the size of the informal market. The lack of oversight by any central or official authority over the exchange of goods and services, and the state's inability to impose taxes on these transactions, leads to increased tax evasion, which impacts the state's fiscal policy[36].

- *Currency Price:* The price of virtual currency is determined by supply and demand, which leads to significant fluctuations and problems for its users and the economy, such as speculation, inflation, capital flight, weak investment, and other economic and financial damage[37].

- *Mining:* One of the most significant drawbacks and shortcomings of virtual currency, and a stumbling block to its global spread, is the difficulty of mining to issue it. Mining involves solving puzzles and difficult mathematical equations, which not everyone can perform. It requires someone with computer skills. Therefore, mining is often carried out by companies specializing in the purchase of advanced mining equipment[38].

- *Lack of legal protection:* When using virtual currencies and an error occurs in the execution of transactions resulting from these virtual currencies, such as paying another beneficiary, transferring an incorrect amount, or not completing the transaction in a timely manner due to an error in the currency wallet platform or other technical reasons, in most virtual currency systems, the erroneous transaction cannot be reversed, and the user has no recourse against the other parties[39].

- *Money laundering:* The crime of money laundering is defined as the process of recycling illicit funds and concealing, covering up, and disguising the true illicit source of

---

[35] Asim Adel Muhammad, Virtual Digital Currencies as a Way to Financing Terrorism, Al-Zaytoonah University Journal of Legal Studies, Al-Zaytoonah University, Jordan, Volume (1), Issue (1), 2020, pp.
[36] Maurício Portieri Pignatti, Carlos Manuel Baptista Lobo, The Digital Currency and The Challenges Beyond The New Global World 'S Blockchain Paradigm A Financial and Tax Overview on The Virtual Currency Efficiency, op,cit,p49.
[37] Dr. Abdel Halim Mahmoud, A Preliminary Economic Assessment of Bitcoin Risks (November 2021), p. 52.
[38] Abdullah Ahmed Muhammad, The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), op. cit., p. 2493.
[39] Abdullah Ahmed Muhammad, The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), op. cit., p. 2493.

these funds. Modern information and communication technology has facilitated banking to the point where it is now possible to transfer huge sums of money in a short period of time from one country to another. This facilitation provided by modern information and communication technology has had a negative impact, as it has created dangerous methods and means that have been exploited to commit money laundering crimes. International attention is focused on combating this crime, as it serves as a benchmark for ensuring that a state and its financial institutions comply with international requirements. This has prompted countries to enact laws, regulations, and specialized institutions to combat this crime. Combating this crime may result in placing them on a blacklist of countries with high risk for financial transactions. This could result in penalties and restrictions on financial transactions, such as remittances, if a country fails to comply with these laws[40].

- *Multiple technical risks:* The issuance of virtual currencies relies on advanced technology that may not keep pace with rapid developments in information technology. The system may be poorly designed or defective, or the poor performance of the communication networks or devices necessary for operation may hinder the completion of the exchange or extraction process[41].

- *Drug and illicit goods trafficking:* Virtual currencies are described as encrypted currencies with anonymity, through which neither the seller nor the buyer can be reached, making them a great medium for sellers of illicit goods such as drugs[42].

Given the above and these shortcomings, some are wondering whether, given these significant risks, virtual currencies could be the nucleus and pretext for creating a global administration to impose a unified virtual currency on the world's countries, similar to what happened at the Bretton Woods Conference. Or, are some countries willing to adopt this strategy as a means of disbursing debts they incurred from the rest of the world? That is, virtual currencies are exchanged for high dollar prices and then devalued.

## 4. THE IMPACT OF VIRTUAL CURRENCIES ON BANKING TRANSACTIONS AND THE ECONOMY

Maintaining the value of a currency is one of the most important functions and responsibilities of a central bank, protecting its rights and obligations and the effects of a currency's rise or fall[43].

---

[40] Tahiri Al-Siddiq, The Spread of Digital Currencies in Light of the Coronavirus Pandemic: Bitcoin as a Model, Dafatir Buadix Journal, Algeria, Volume 10, Issue 1, 2021, p. 438.
[41] Khaled Muhammad Hamdi, Cryptocurrency Trading and Its Danger to Community Security, op. cit., p. 247.
[42] Mohamed Abdel Fattah, Mohamed Ahmed El-Saeed, "The Impact of Bitcoin's Electronic Trust Factors on Hotel Transactions as a Mechanism for Digital Transformation in Egypt," Journal of the Association of Arab Universities for Tourism and Hospitality, Faculty of Tourism and Hotels, Suez Canal University, Volume 20, Issue 4, 2021, pp. 1-2.
[43] Dr. Zekry Abdel Razek, "The Legal System of Electronic Banks," Contemporary Egypt Journal, Egyptian Society of Political Economy, Statistics, and Legislation, Issue 499, July 2020, pp. 480-484.

The emergence of virtual currencies represents an expansion of the role of central banks by providing an alternative to the records held by central banks, which record transactions between different financial institutions. This ensures that funds are not transferred from one account to another twice, i.e., double-exchange transactions, bypassing the role of banks in issuing currency, and other matters.

### 4.1. The Impact of Virtual Currencies on the Swift Real-Time Financial Telecommunications System

The SWIFT financial system is a system used in the world of financial transactions, operating on financial communications between banks around the world. It is an organization founded in 1973 in Brussels to establish certain common processes and standards for financial transactions. Banks around the world needed a way to transfer money from one country to another, and the SWIFT financial system provides a network that allows more than 10,000 financial institutions in 212 different countries to send and receive information about financial transactions to each other[44]. Banks play a key role in cross-border payments using the SWIFT global interbank financial communications network. However, with the rise of modern financial technologies and the proliferation of electronic payment companies such as( Amazon, Alibaba, PayPal, and other emerging companies), banks have lost a significant share of the payment business in global financial markets. These companies have even outperformed banks in financial markets in terms of speed, cost, and transparency of cross-border payment services. To address these challenges, global and local banks are testing the potential application of block chain technology to regain their role in this field and address the shortcomings of the SWIFT system by increasing the speed of cross-border financial transactions compared to the current SWIFT system, which takes several days to process a cross-border payment, in addition to the SWIFT costs of approximately $50 per payment. It can be argued that, globally, policymakers should prioritize accelerating cross-border payments and making them less costly, more transparent, and more inclusive, based on the G20 Roadmap for Cross-Border Payments. Time is of the essence, and action must be decisive, swift, and well-coordinated globally so that benefits flow smoothly. However, the use of cryptocurrencies has led to the efficiency of global payments, reduced the speed and cost of transactions, and the elimination of financial intermediaries. These currencies are international in nature, unrestricted by geographical or temporal boundaries. They can be transferred at any time to and from anywhere in the world with complete privacy, without going through any regulatory body, and without incurring fees or exchange rate differences between different currencies[45].

Researchers believe that the emergence of cryptocurrencies directly impacts the money transfer system, or SWIFT, causing banks to lose a significant portion of their capabilities, resources, and role. Given this speed and the lack of fees, individuals and companies

[44] International Monetary Fund, "The Rise of Cryptoassets Imposes New Challenges to Financial Stability," October 2021.
[45] Dr. Dalia Ibrahim, "Cryptocurrencies: Between Opportunities and Risks," Cabinet Decision Support Center, Egypt, September 2, 2021.

prefer to resort to cryptocurrencies. Therefore, countries must act quickly to preserve the SWIFT system by regulating and studying the timing of money transfers, reducing transfer fees, or using block chain technology, upon which cryptocurrencies are based, to benefit from its advantages and avoid its drawbacks.

### 4.2. The Impact of Virtual Currencies on Financial and Economic Stability

Financial stability in any country is a prerequisite for ensuring its economic and political stability. There are many aspects to the impact of these virtual currencies on financial and economic stability in countries, including:

- *Capital flight:* Money launderers who possess vast amounts of illicit funds and establish economic projects with the intent of laundering them will not hesitate to liquidate these projects once they achieve their goal[46]. Therefore, we find that some link the issuance and supply of money to the strength of a country's economy and the increase in national income, as the strength of a country's economy is measured by its possession of money or items that represent money. We also find that banks that are reluctant to allow money laundering operations to take place through them resort to limiting banking secrecy to monitor and combat these operations, thus losing many of their customers. No one would accept dealing with a bank that does not adhere to banking secrecy or frequently violates it, which ultimately negatively impacts the bank's business[47].

- *Balance of Payments Deficit:* Virtual currencies cause tax evasion, increased public spending to combat the crimes they cause, and their impact on investment and increased demand for consumer goods, especially luxury goods. Imports increase at the expense of exports, thus creating a balance of payments deficit[48].

- *Monetary Policy*: Central banks are affected by the decline in seigniorage (the profits accruing from the right to issue currency), which in turn reduces one of the central banks' most important sources of income. Therefore, countries must establish appropriate regulatory rules to reflect the level of risk arising from the use of virtual currencies[49].

- *E-Commerce:* In the past, commercial transactions relied on face-to-face meetings for the purpose of buying and selling. This method continues to this day, but it has undergone fundamental and radical changes, making it possible to conduct buying and selling without face-to-face meetings. However, e-commerce has become associated with online shopping, through which large sums of money can be transferred from one account to another without any oversight. It is undeniable that e-commerce has many advantages that make it much easier for consumers than traditional shopping. However, with the use

---

[46] Bassam Ahmed Al-Zalmi, The Role of Electronic Money in Money Laundering, Damascus University Journal of Economic and Legal Sciences, Faculty of Law, Damascus University, Volume 26, Issue 1, 2020, p. 5.
[47] Central Bank of Jordan, Study entitled "Cryptocurrencies," op. cit., p. 15.
[48] Bassam Ahmed Al-Zalmi, The Role of Electronic Money in Money Laundering, op. cit., p. 555.
[49] World Bank Blogs, Can Cryptocurrencies and Blockchain Help Fight Corruption?, 11/11/2021.

of virtual currencies, we find that it may become very widely accepted for fraudulent operations[50].

Researchers believe, based on the above, that virtual currencies have numerous impacts and repercussions on the economy and financial stability of countries. These include their impact on capital flight due to perceived risk, or the occurrence of a deficit in the balance of payments due to increased imports, which impacts economic performance. They also result in a shortage of cash in banks as a result of exchanging it for highly risky and speculative virtual currencies. This is in addition to the loss of many of the powers and functions of banks in maintaining monetary stability and controlling the market from inflation, among other issues.

## 5. SUMMARY

The study examines cryptocurrencies and their impact on the future of transactions (present and future prospects). This is accomplished by defining cryptocurrencies, their similarity to traditional and digital currencies, and the challenges facing their use and future in the world.

The study concludes with several findings, the most important of which are:

- The level of acceptance of cryptocurrencies in payments among individuals is low, as they are limited to a specific group of computer users and professionals.

- They cannot be relied upon as a unit of measurement due to their price fluctuations.

- Virtual currencies lack the necessary infrastructure and regulations to support them as monetary currency in many countries and entities.

- Virtual currencies have no legal force but derive their power from the voluntary agreement of the parties. They are not subject to the control or regulation of a government or central bank.

- The issuance of virtual currencies depends on mining, which is a complex electronic process.

- Virtual currencies rely on complex technologies based on the peer-to-peer principle over the internet, relying on both encryption technology and the highly sophisticated technology of block chain.

- The numerous risks of its use have significantly impacted its spread.

- The failure to meet the criteria for its validity, as previously stated, as a monetary currency (a medium of exchange, a standard of value, a store of value, and a means of deferred payments), which has impacted its spread.

[50] Dr. Ehab Khalifa, "Is it possible to convert national currencies into cryptocurrencies?" (February 9, 2021) Al-Mustaqbal for Advanced Research and Studies.

- Its disorganized issuance environment and price fluctuations hinder its spread.

- The lack of security of cryptocurrencies and the digital platforms that rely on their integrity.

- Its impact on the banking system, the global SWIFT system, monetary policy, and capital flight, which impacts the global and national economy.

- Its impact on taxes, stock markets, and investment in all countries, causing significant economic damage.

**LITERATURE:**


1. United Nations, (Block chain) Technology and Sustainable Growth United Nations, 9 November 2021.
2. Central Bank of Jordan/National Payments System Supervision and Control Department, Study entitled "Cryptocurrencies," March 2020, p. 5.
3. Ashry Muhammad Ali, "Central Bank Digital Currency and Its Inevitable Impact on Monetary Policy," Scientific Journal of Economics and Commerce, Ain Shams University, 2020, p. 405.
4. Muhammad Jamal Zain, Abdul Basat Jassam, "Bitcoin Virtual Currency: Its Legal Status and the Ruling on Dealing with It," Journal of Legal Sciences, College of Law, University of Baghdad, Volume 35, Issue 2, 2020, p. 144.
5. Ahmed Gamal El-Din, Musa, Monetary and Banking Theories and Systems and Financial Markets, Dar Al-Nahda Al-Arabiya, Cairo, 8th edition, 2021, p. 10.
6. Sayed Taha, Money, Banking, and National Income, Faculty of Law, Cairo University, 2021, p. 3.
7. Habiba Abdelli, Nour El-Din, Money Laundering in the Electronic Environment, International Virtual Scientific Conference, Combating Corruption in the Electronic Environment, Arab Democratic Center for Strategic, Political and Economic Studies, Germany/Berlin, April 2021, p. 63.
8. Abdul Fattah Muhammad Salah, "Bitcoin: A Cryptocurrency That Could Cause a New Global Economic Crisis," International Journal of Islamic Economics, Center for Islamic Transactions Research, Syria, Issue 33, p. 34, 2021.
9. Baraa Munther Kamal, Enas Baha, "The Position of Arab Legislation on Virtual Currencies," Tikrit University Journal of Law, College of Law, Iraq, Volume 5, Issue 1, Part 2, p. 5.
10. Farida Haddad, Abd Alhak Qrimes, "Virtual Currency in Algerian Law," Algerian Journal of Legal and Political Sciences, Volume 58, Issue 3, 2021.
11. Nahy Khaled Issa, Israa Khadir Mazloum, "The Legal System of Electronic Money," Journal of the University of Babylon, Humanities, Volume 22, Issue 2, 2022.
12. Hassan Mohammed, Bitcoin and its Role in Financing Terrorist Movements, Comments, King Faisal Center for Research and Islamic Studies, August 2020, p. 2.
13. Asim Adel Muhammad, "Virtual Digital Currencies: A Path to Financing Terrorism," Al-Zaytoonah University Journal of Legal Studies, Jordan, Volume 1, Issue 1, 2020, p. 34.
14. Abdullah Ahmed, "The Reality of Bitcoin and the Ruling on Dealing with It (A Comparative Jurisprudential Study), Journal of the Faculty of Islamic Studies for Boys in Aswan, Al-Azhar University, Issue 3, November 2020, p. 2477.

15. Anwar Othman, "The Economic Implications of Block chain Technology and Financial Stability in Arab Financial Markets," Arab Monetary Fund, November 2021, p. 6.
16. Dr. Suwailihi Nour El-Din, The Impact of Bitcoin Mining and Virtual Currencies on the Stability of the Global Monetary System, Scientific Horizons Journal, Amin Al-Aqal Al-Hajj Musa University Center, Volume 10, Issue 2, Algeria 2021, p. 226.
17. Taher Al-Sadiq, "The Spread of Digital Currencies in Light of the Coronavirus Pandemic: Bitcoin as a Model," Dafater Bouadis Journal, Algeria, Volume 10, Issue 101, p. 433, 2021.
18. Bassem Ahmed Amer, "Digital Currencies: Bitcoin as a Model" and Their Compatibility with Islamic Money Regulations," op. cit., p. 274.
19. Ayman Ezz El-Din, "Digital Currencies and Their Relationship to E-Commerce (Case Study: The United Arab Emirates (Dubai))," Master's Thesis, Department of Accounting, College of Business Administration, Middle East University, June 2019, p. 2.
20. Dr. Dalia Ibrahim, Cryptocurrencies: Between Opportunities and Risks, Cabinet, Decision Support and Support Center, Egypt, September 2, 2021.
21. Khaled Mohamed Hamdy, Cryptocurrency Trading and its Threats to Community Security, Faculty of Islamic Propagation, Cairo, Al-Azhar University, Volume 2, Issue 33, 2021, p. 231.
22. Herdo Center for Digital Expression Support, Alternative Transaction Platforms and Digital Currencies: Between Freedom of Transaction and Censorship Issues, Cairo 2020, p. 6.
23. Lafi Mohamed Daradkeh, Challenges of Keeping Legal Regulations in Accompany with Technological Developments in Financial and Banking: Bitcoin (Digital Currency) as a Model for Safe Use with Technological Guarantees in the Absence of Legal Guarantees, Kuwait International Law School Journal, Proceedings of the Fifth International Conference, 2018, p. 341.
24. Mohamed Abdel Fattah, Mohamed Ahmed El-Saeed, The Impact of Bitcoin's Electronic Trust Factors on Hotel Transactions as a Mechanism for Digital Transformation in Egypt, Journal of the Union of Arab Universities for Tourism and Hospitality, Faculty of Tourism and Hotels, Suez Canal University, Volume 20, Issue 4, 2021, p. 513.
25. Maurício Portieri Pignatti, Carlos Manuel Baptista Lobo, The Digital Currency and The Challenges Beyond The New Global World 'S Blockchain Paradigm A Financial and Tax Overview on The Virtual Currency Efficiency, op,cit,p49.
26. Dr. Abdel Halim Mahmoud, A Preliminary Economic Assessment of Bitcoin Risks (November 2021), p. 52.
27. Dr. Zekry Abdel Razek, "The Legal System of Electronic Banks," Contemporary Egypt Journal, Egyptian Society of Political Economy, Statistics, and Legislation, Issue 499, July 2020, pp. 480-484.
28. International Monetary Fund, "The Rise of Cryptoassets Imposes New Challenges to Financial Stability," October 2021.
29. Bassam Ahmed Al-Zalmi, The Role of Electronic Money in Money Laundering, Damascus University Journal of Economic and Legal Sciences, Faculty of Law, Damascus University, Volume 26, Issue 1, 2020, p. 5.
30. World Bank Blogs, Can Cryptocurrencies and Blockchain Help Fight Corruption?, 11/11/2021.
31. Dr. Ehab Khalifa, "Is it possible to convert national currencies into cryptocurrencies?" (February 9, 2021) Al-Mustaqbal for Advanced Research and Studies.