الآراء المحاسبية حول العملات الرقمية المشفرة "دراسة أدبيات"

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Study Title: Accounting opinions on cryptocurrency: A Review of Literature

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الملخص:

في بداية القرن الحادي والعشرين، دخل العالم المرحلة الثالثة من التاريخ النقدي وهي فترة من الاقتصاد الافتراضي والتي تتميز بالتغيرات السريعة في طبيعة واستخدام المال، وقد أدى تطور أحدث أشكال النقود الإلكترونية إلى حقيقة أن المال بدأ يفقد شكله الحسي وأصبح حقيقة افتراضية تم إنشاؤها بواسطة الوسائل التكنولوجية. من المنظور المحاسبي تم اقترح العديد من الآراء لتعامل مع هذه العملة وذلك في ظل غياب معيار محاسبي دولي بالخصوص. الرأي الأول أشار إلى التعامل مع العملات الرقمية المشفرة على أنها نقدية أو ما في حكمها، الرأي الفني الثاني عرض المعالجة للعملة المشفرة كأصل غير ملموس بعمر إنتاجي غير محدد. أما الراي الثالث مجموعة أوصي بضرورة تصنيف العملة المشفرة على أنها أصول استثمارية. ومع ذلك بعض الشركات الأخرى التي تستخدم العملة المشفرة حاليًا تصنيفها بشكل مختلف. تستعرض هذه الورقة بشكل نقدي الأدبيات حول الآراء المختلفة المتعلقة بالمعالجة المحاسبية للعملات المشفرة.

الكلمات الأساسية: العملات الإلكترونية، العملات الرقمية المشفرة، المعالجة المحاسبية)

Abstract:

At the beginning of the 21 century, the world entered the third stage of monetary history a period of virtual economy characterized by revolutionary changes in the nature and use of money. The development of the most modern form of electronic money, led to the fact that money began to lose the object-sensory form, became a virtual reality, created by means of technological means. From the accounting perspective, the first opinion suggested that an accounting classification would make cryptocurrency cash equivalents; the second opinion mentioned an accounting ranking that would display crypto

currency an intangible asset with an indefinite useful life. The third opinions group recommend that crypto currency should classified as an intangible asset with an indefinite useful life. However, other companies currently using cryptocurrency through the general operations of the business have decided to classify it differently. This paper critically reviews the literature on various opinions regarding the accounting treatment of crypto currencies.

Keywords: (electronic currencies, cryptocurrencies, accounting treatment)

1. Introduction:

The global monetary system has witnessed rapid developments in recent years, most notably the emergence of cryptocurrency in the year (2009); it decentralized, streamlined in issuance and circulation. The possibility of benefiting from the financial services associated with it easily through trading platforms spread across the Internet, which prompted many institutions around the world to accept it as a way of payment(Liudmyla,et al,. 2019).

Block chain technology constitutes the cornerstone of the work of cryptocurrency, which allowed the exchange and storage of information with very high privacy and confidence, and allowed the possibility of commercial and financial exchanges without the need for intermediary financial institutions. Cryptography that would be impossible to crack given the technologies available today (Kuzuno& Karam, 2017).

Although there are many advantages achieved by dealing with cryptocurrency, it is the face of many challenges and rejection by governments, both in terms of dealing with currency or trading (as result of the possibility of using in money laundering, terrorist financing and illegal operations) due to the absence of government oversight and regulation of their issuance. Some considered them as fake currencies that have no value and that they are one of the bubbles of the era. Some governments also issued a legal fatwa prohibiting dealing with those currencies (Tan, 2018).

At the regional level, the using of cryptocurrency in the North African region is still very limited, due to the absence of support by central banks and monetary authorities. However many researchers and professionals believe in the possibility of their growth in the near future, which requires central banks and monetary authorities to strive towards Study and monitor

developments in these currencies to know their potential effects on payments policy, monetary policy and financial stability (Central Bank of Jordan, 2020).

As for the position of the Central Bank of Libya, it prohibits dealing with cryptocurrency and considers them illegal, and there is no protection for its dealers, and warned citizens, institutions and companies of the security and economic risks related to them and their exploitation in illegal activities such as money laundering and terrorist financing. Unfortunately, no studies conducted or published by the Libyan Central Bank regarding cryptocurrencies (Hawafi, 2022).

2. Literature Review:

Based on a detailed analysis of scientific opinions regarding the essence of cryptography concluded that the definition of cryptocurrency as a "money surrogate" is incorrect. It can notice as a new form of electronic money, the legal status of which is still in the formation stage. According to analysis of the financial and legal essence of electronic money and cryptocurrencies (Drobyazko et al., 2019), Hilorme et al. (2019) expressed the view that cryptocurrencies are the new financial-economic category that has no analogues. Tsuchiya et al. (2021) stressed the importance of integrating cryptocurrency terms and Block chain technology, at the legislative level, which use in the same way by both State administrations and international companies. The study emphasized the need to take into account the current interpretations of the Interpretation Committee International financial reporting standards when forming accounting policies by international companies that carry out operations Using cryptocurrency.

Centobelli et al., (2021) aimed to design, build and evaluate a Block chain platform in the field of accounting. taking into account an ecosystem perspective by providing evidence of the development of its technology architecture Decentralization represented by block chain technology, extracting a framework based on the basic pillars of chain block functions and accounting, and identifying technical and non-technical problems that must be addressed to realize the full potential of these technology. The study concluded by presenting a conceptual framework for the accounting context based on Block chai.

Tawab study (2019) deals with the problems of accounting for cryptocurrencies in the light of the requirements of the International Financial Reporting Standards (IFRS) by presenting a theoretical and field study that relied on the questionnaire list to collect data through a sample of 82 individuals from academics in the Accounting Department and Accountants in the Accounting and Auditing offices. The study revealed a set of results represented in the absence of significant differences Statistics regarding, the shortcomings of the current framework for accounting for cryptocurrencies in light of the requirements of standards (IFRS).

3. The significance of study:

The significance of the study can be determined through the following points:

1. The growing interest in cryptocurrencies and the increasing volume of their circulation in the global business environment.
2. The trend of many global banking and commercial institutions to recognize and adopt the cryptocurrencies as a medium of exchange.
3. The accounting treatment differs from cryptocurrencies due to the absence of an international accounting standard for it.

4. The concept and forms of digital currencies:

The year (1990) witnessed the emergence of digital currencies; by the year (1996) was the rapid launch and global spread of it, after the establishment of what known as electronic gold. The World Bank defines digital currency as digital representations with a value in its own unit of account, used as a way of payment. The Bank for International Settlements defines them as digitally represented assets (Auer& Frost, 2020). The following figure shows the types of digital currencies:

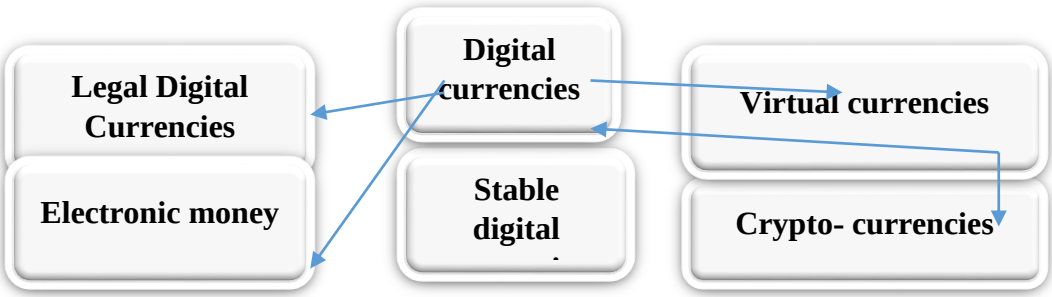

Figure (1) shows the forms of digital currencies, prepared by the researcher

1. Virtual currencies: it has defined by the European Central Bank as a type of unregulated digital currency was issued and controlled by their developer, and is used and accepted among members of a virtual community. The Bank for International Settlements defined it as a digital representation of value that can traded electronically and acts as a medium of exchange within the community of virtual currency users, and issued without guarantees and without legal cover. Through the previous definitions of virtual currencies can find that, there is a difference in views towards the functions of virtual currencies and the limits of their application (World Bank Group, 2017: Bank for International Settlements, 2015).

Most of views agreed that, there are not legal framework and a central regulatory authority that governs and regulates the process of issuing or exchanging this type of currency, as well as the absence of a real representation for it, against Legal currencies or backed by a cash cover.

2. Electronic money: it has defined by the World Bank as a method of electronic payment denominated in legal currency. As for the Bank for International Settlements, it defined as a monetary value in the form of credit units that is stored on an electronic device owned by the consumer, where pays for the value, which decreases or increases whenever it used to make purchases or in the case of re-stocking a new value on it.

Through the previous definitions of electronic money, it can indicated that, it has the monetary quality transferred to it from legal paper money issued by central banks, as its issuance consists in converting, the form of money from the physical to the digital (World Bank Group, 2017: European Central Bank, 2019).

3. Stable digital currencies: It is a form of digital currency and characterized by the possibility of issuing it against assets, this currency usually linked with other legal currencies such as dollars, euros or gold.

One of the latest examples of globally stable digital currencies is the Libra coin project, which will be used in payments made through social media applications (Meta, What Sapp), to transfer funds between users or to carry out buying and selling operations that take place through these applications Financial Action Task Force, 2014).

4. Legal Digital Currencies: The trends of the world's central banks have recently begun to turn seriously towards studying the possibility of issuing a

legal digital currency. Despite the absence of legal legitimacy and the prohibition of dealing with encrypted virtual currencies, this has not prevent financial institutions from considering the possibility of benefiting from the technology on which were built. Those currencies (by working to apply this technology in instant payments and cross-border money transfers) and the possibility of issuing digital currencies by central banks or monetary authorities are legitimate and support users' trust (Central Bank Digital Currencies, 2018).

For example, the central banks in the United Kingdom, Canada, Russia, China and Sweden are conducting assessment studies on evaluating the risks and benefits of issuing their own digital currencies through the using of block chain technology and verifying their potential effects on the economy and financial stability.

5. Cryptocurrencies: The World Bank defines as a subset of digital currencies based on cryptographic technology. As for the European Central Bank, it is a digital representation of money that is not issue by central banks or electronic money issuers, and in some circumstances, it can used as a substitute for money. The Bank for International Settlements defined them as assets whose value determined by supply and demand, and their value transferred from one person to another electronically with the absence of trust between all parties and without the presence of financial intermediaries (Griffoli, et al., 2018).

5. The emergence and development of cryptocurrencies:

Bitcoin can considered the first station for the emergence of cryptocurrencies in (2008), when the anonymous programmer (Nakamoto) published a white paper containing an explanation of the Bitcoin currency system, and the process of issuing this currency began in (2009). It estimated that year nearly one million units of Bitcoin created (which later rose to twenty-one million units that cannot increase). The year (2010) was the first Bitcoin transaction launched by users of the Bitconitalk forum, by buying pizza for ten thousand one Bitcoin (worth $0.003 per unit).

By the year (2011) with the increasing popularity of Bitcoin infrastructure established within the Internet that enables users to trade and store this currency. Payment on websites, and (Word Press) was the first website to accept payment in this currency, followed by (Microsoft), this step has

considered the first towards accepting encrypted cryptocurrencies internationally as a legitimate payment method, and the German government officially recognized it as a currency, followed by Singaporean and Japanese government.

During the period (2013: 2016), the infrastructure of Bitcoin continued to improve continuously, and its first ATM opened in (2014). By (2017) the number of Bitcoin ATMs reached (1500) in all countries of the world. In the year (2015) the platform (Coin base) based in the United States of America became the first exchange for this currency.

The years (2017: 2020) represent boom years for cryptocurrencies as the value of Bitcoin rose to nearly (70,000 dollars). The total value of all cryptocurrencies reached (three trillion dollars), before it began to decline in the year (2022) and the value of Bitcoin reached nearly (20000 dollars), and the total value of cryptocurrencies fell to (948 billion dollars) in the same year (IMF, 2016: CPMI, 2015: World Bank Group, 2017: crypto compare, 2022).

In addition to Bitcoin, the society has to do with so many cryptocurrencies, which reached at the beginning of the year (2022) around (9,500 cryptocurrencies) according to the (Binance) digital platform, and the researcher will converse the most important of these currencies, which include Litecoin and Bitcoin Cash, Ruble, and Ethereum.

- **Litecoin:** It is the second cryptocurrencies that appeared in (2011), by its developer (Charlie Lee), a former employee of (Google). This currency mainly derived from Bitcoin. It differs from it in terms of the speed of transactions, as it takes Block generation in this coin is about one minute versus ten minutes in Bitcoin, and the maximum supply of the issued coin is (84 million units) of Bitcoin (21 million units) of Bitcoin.
- **Bitcoin Cash:** This currency introduced as a cryptocurrency that has scalability and low fees. In addition to taking a shorter time to process transactions. Has launched in the year (2017), by programmers working for Bitcoin, the reason for the emergence of this currency is because Bitcoin is characterized Decentralized, where proposed changes to the existing protocol would require unanimous consent, particularly in terms of regulatory procedures, Litecoin was completely independent of Bitcoin.

- **Ruble currency:** The name has given to the payment settlement platform launched by the American company (Ripple) in (2012), although this currency not initially designed by individuals in order to pay for services, but rather targeted banks and financial institutions that can use this platform. To settle payments and to replace the global Soviet network as a provider of secure financial messaging services (100 billion units) were created when it was first launched and (55 billion) of them were placed in a trust account, so that the units are issued in an orderly manner.
- **Ethereum currency:** It is a virtual currency with a decentralized platform so that platform manages the currency works without stopping or the possibility of conducting any control over it or the intervention of a third intermediary in the transaction. It launched in (2015) and its software has later developed by the Swiss company (Ethereum).

6. Advantages and disadvantages of cryptocurrency:

The most important advantages of cryptocurrencies can identified in the following points (Flamur, 2017: Bailis & Song, 2017):

1. Low fees: due to direct dealing without the intervention of financial intermediaries.

2. Speed, privacy and confidentiality: where purchases and sales cannot monitored or interfered with.

3. Transparency: The cryptocurrency software stores any transaction that takes place, so if someone owns a wallet of cryptocurrencies, another person can know how many coins the wallet owner owns and the number of their transactions.

4. Security: The encryption technology used in cryptocurrencies is one of the strongest global technologies, as it is difficult to counterfeit or clone and provides users with high levels of security against robbery.

As for its disadvantages can summarized as follows (Flamur, 2017: Bailis & Song, 2017):

1. The need to accompany technology in dealing as it is not possible to carry out financial operations without an electronic device (noting that electronic services, the Internet and technology requirements are not available to more than half of the world's population).

2. The large number of cryptocurrencies and the different degree of their acceptance reduces their efficiency as cash that performs exchange functions at the global level.

3. Imposing new requirements for economic coexistence, most notably raising the level of technical and program education at the expense of other sciences.

7. Problems arising from dealing with cryptocurrency:

Many economic researchers, accountants, legal and technical researchers believe that, dealing with crypto currency will entail many economic, accounting, legal and technical problems (South African Reserve Bank, 2020: European Parliament, 2017).

On the economic level, the significant problems are the transmission of the future money supply. The inability to control the money supply except with a collective consensus by the community of dealers, as well as the instability arising from the difference of individuals and governments in their direction according to different expectations and market news, which will ultimately lead to a decline in their prices and tampering. In addition, to anticipate an economic downturn, as the rise in the unit price and the increase in demand for it will push its owner to keep it instead of investing.

As for the accounting level, dealing with cryptocurrency raises many accounting problems, the reason for this is due to the nature and qualitative characteristics of these currencies and the diversity of purposes for their acquisition by companies, as well as the absence of an international accounting standard that defines the accounting treatment of these currencies in various cases.

Technically, technicians confirm that, the most important problems arising from crypto currency are consume huge amounts of electricity for a specific number of operations. The rate of electricity consumed to operate one network of Bitcoin, (32 terawatts, which is the amount consumed by a country the size of Denmark), is to achieve About (400,000 transactions per day), in addition to the possibility of losing huge amounts of money when the transfer is wrong or the password for the electronic wallet is lost.

As for the legal aspect, the problems mendacity in the absence of a central body organizing its work, the absence of a body to appeal to in cases of conflict in the event of an imbalance in the balance of justice between the

parties under any future circumstance. In addition, to the lack of recognition as legal money by many countries of the world, and the lack of Legislation regulating its work in the financial markets.

8. Opinions of researchers and professionals on the accounting treatment of crypto- currencies:

The opinions of researchers and professionals on the method of accounting treatment of cryptocurrencies differed, due to the absence of international accounting standards (IFRS) that can be used (until the date of preparing this study, the International Accounting Standards Board has not issued any mechanisms for treatment). Opinions divided specifically regarding the consideration of cryptocurrencies as an asset. Assuming it is an asset. Is it consider an intangible asset? Is it as cash, or the like, or as an investment, or as a stock for selling. The researcher will present a summary of these opinions according to the following:

1.8 Accounting for cryptocurrencies as an asset: Referring to the definition of the asset in accordance with International Accounting Standards, specifically Standard No. (36), asset is a current economic resource controlled by the company because of creating a precedent and has the ability to achieve economic benefits (IASB, 1998). The proponents of cryptocurrencies meets the definition of assets. the reason for this when the company buys These currencies as payments there is a previous event, and be able to control these currencies until they are sold or used as a medium of exchange, and are expected to bring economic benefits to the company. While opponents of this trend believe that, cryptocurrencies are not an asset due to the uncertainty about the flow of economic benefits In the future, since there is not origin (Flood, 2015).

2.8 Accounting for cryptocurrencies as an intangible asset: In International Accounting Standard No (38), an intangible asset defined as an identifiable non-monetary asset that does not have an actual existence (IASB, 1998). Based on this definition, views differed about dealing with cryptocurrencies, as an intangible asset. The first group headed about the possibility of applying Standard (38), to cryptocurrencies due to its intangibility. The opposing team have not agree with proposition and pointed to the objective. The primary purpose of intangible assets is to generate revenue from the primary activity of the company while cryptocurrencies

used as a means of payment, for the exchange of goods or for the purpose of investment, which makes the use of the intangible asset completely different from the use of crypto currencies (Kubat, 2015).

3.8 Accounting for cryptocurrencies as cash: Cash currencies defined in International Accounting Standard NO (32) as a financial asset that is an intermediary for exchange, it is the basis for measuring and recognizing all financial transactions in the financial statements. In light of this definition, most accounting opinions have tended to consider cryptocurrencies as not cash, as they have not gained general acceptance and have not been issued by central banks, that is not possess the characteristics of a true currency and do not constitute a legal basis in any jurisdiction (IASB, 1993).

4.8 Accounting for cryptocurrencies in terms of cash: Standard NO (7), Referred to the definition of cash equivalents as short-term, liquid investments that can easily converted into cash and have little risk of exposed to a change in their value (IASB, 1992). Accounting opinions agreed about the inability to consider cryptocurrencies as cash because they have large fluctuations in their market value and displayed through another currency (Zimmer, 2017: Kaustav, 2018).

5.8 Accounting for cryptocurrencies as a long-term investment: International Accounting Standard NO (45), defines a long-term investment as an asset acquired by a company for achieving economic benefits. From this definition, opinions differ (IASB, 2018). There are those who believe that cryptocurrencies can be accounted for as an investment and can be included in the company's investment portfolio because of its ability to generate profits, taking into account the risks surrounding it, while opponents of this trend believe that it is not possible for these currencies to be financial or non-financial investments. Financial, financial investments in stocks and bonds derived from contracts between two parallel parties, while cryptocurrencies could not considered a financial investment because there is one party, and they cannot considered non-financial investments due to the absence of a physical asset to them (Rosenberg,2018: Deioitte, 2018).

6.8 Accounting for cryptocurrencies as a stock for sale: International Accounting Standard NO (2), defines inventory as an asset held for selling within the normal activity of the company or in the production stage to become salable or in the form of raw materials used in the production stages

(IASB, 1993). Based on this definition, there have been divisions in the opinions of accountants and professionals about treating cryptocurrencies as a stock for selling. Cryptocurrencies are not essentially a commodity (FASB, 2018).

9. Conclusion:

Cryptocurrency is a digital asset has not have a physical substance that produced by software and has not controlled by a government or a central bank. The most common cryptocurrency is a Bitcoin coin that dates back to 2009. At the regional level, the using of cryptocurrency in the North African region is still very limited, due to the absence of support by central banks and monetary authorities. However, large number of researchers believe in the possibility of their growth in the near future, which requires central banks and monetary authorities to strive towards Study and monitor developments in these currencies to know their potential effects on payments policy, monetary policy and financial stability. In contrast a multitude of central banks in developed countries are deeply preoccupied with holding financial studies, research, and discussions on the effectiveness of cryptocurrencies in fulfilling and facilitating the financial transactions. The opinions of researchers on the method of accounting treatment of cryptocurrencies differed, due to the absence of international accounting standards (IFRS). Opinions divided specifically regarding the consideration of cryptocurrencies as a fixed assets, long-term investments, cash and cash equivalents, intangible assets and as a stock for selling.

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