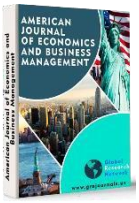

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Article

The Informational Content of Financial Statements Under Crypto Currencies and Their Impact on Investor decisions

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Abstract: The research aims to show the reflection of dealing in digital currencies on the informational content of the financial statements (statement of financial position, income statement, statement of other comprehensive income, and statement of cash flows) and according to the options offered for the classification of digital currencies (cash, intangible asset, financial instrument, inventory) and then measure the impact of disclosure of digital currencies on investors' decisions through statistical analysis of the opinions of a sample of investors and academics specialized in accounting The sample size was (100) respondents distributed over (3) countries Arab included Iraq, Egypt, and Saudi Arabia, Abstract The research aims to show the reflection of dealing in digital currencies on the informational content of the financial statements (statement of financial position, income statement, statement of other comprehensive income, and statement of cash flows) and according to the options offered for the classification of digital currencies (cash, intangible asset, financial instrument, inventory) and then measure the impact of disclosure of digital currencies on investors' decisions through statistical analysis of the opinions of a sample of investors and academics specialized in accounting The sample size was (100) respondents distributed over (3) countries Arab included Iraq, Egypt, and Saudi Arabia.

Keywords: Cryptocurrency, Financial Statements, Accounting Disclosure, Investor Decisions, Digital Assets, Financial Reporting

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1. Introduction

Knowledge With the rapid technological development that the business sector is experiencing today, digital currencies have become a reality that must be faced, as they should not be seen as a phenomenon that will end anytime soon. On the contrary, many researchers consider crypto currencies to be the future of electronic monetary transactions in business practices, and countries that still do not recognize digital currencies should reconsider. Since there are many international companies that accept transactions in digital currencies, and with the number of traders in these currencies continuing to increase, it has become imperative for researchers to study and understand the impact of these transactions, especially the accounting profession.

Financial statements are an essential tool for providing accounting information that helps in economic decision-making. The emergence of crypto currencies as new financial assets presents unique challenges and opportunities, as digital currencies have a set of advantages that make them strategically important, such as speed in financial transfers, transparency, and decentralization. However, they face significant challenges, most

notably the absence of clear legislation, the high volatility in its value, and the complexities of its integration into traditional accounting practices. Many companies are now seeking to use digital currency as part of the broader financial management system Despite the rapid increase in the volume and frequency of digital currency transactions, there are no clear guidelines regarding how to treat them accountingly and disclose them, which requires the development of accounting standards to provide more accurate and transparent information, one of the main challenges facing accounting for digital currencies is the absence of global agreement on a unified accounting model. This absence creates a discrepancy in the methods of processing and recording digital currencies in accounting records. Accounting treatments may include considering these currencies as monetary or quasi-monetary assets, financial instruments, or as intangible assets, crypto currencies are considered monetary assets if they are used as a medium of exchange and have a specific monetary value, or they can be classified as intangible assets due to their physical absence and lack of legal support. These differences lead to a diversity of methods of measurement and disclosure in the financial statements, which complicates the work of.

This development directly affects the behavior and decisions of investors who rely on financial statements to assess the financial performance and risks associated with companies. Investment in light of the changing digital economic environment This research dealt with the impact of digital currencies on accounting as one of the most prominent modern technical and financial phenomena that are witnessing a wide spread in the world and its reflection on the decisions of investors as the broadest categories used for accounting information in making investment decisions, the research seeks to provide a comprehensive understanding of the challenges and opportunities posed by digital currencies, with reference to the importance of keeping pace with technical developments to ensure the efficiency and sustainability of accounting operations in light of these transformations. Assuming that there is an impact of the nature of the entity's activity and the economic essence of the use of crypto currencies on the accounting model used for accounting for them and the informational content of the financial statements of those entities, and thus there is an impact of measurement and accounting disclosure of crypto currencies on investors' decisions based on financial statements

Literature Review

The concept of digital currencies

Digital currencies are the main umbrella, as some believe, that includes all forms of other currencies, whether electronic, virtual or digital, and regardless of the other names that can be given to them, the main character of these currencies remains that they are available digitally and do not have a tangible physical presence, although they have some characteristics similar to physical legal currencies, and the views of international organizations and central banks towards the definition of digital currencies may differ, some of them go to restrict the definition and limit it in a form and activity Specific, including those who go towards expanding the concept and making it comprehensive for all forms of currencies that are traded and dealt with through the Internet, regardless of the means of modern technology that are relied upon to provide those currencies [1].

One of the most prominent definitions of what digital currencies are is the definition provided by the Bank for International Settlement (BIS) in 2018, where it described them as products used as value keepers, stored either on computers or on special programs in mobile phones. These coins are acquired through their purchase or through special mining operations [2].

Al-Najjar defined digital currencies as "intangible or tangible legal units, not linked to any local or international currency, issued via computers, stored and transferred electronically. is traded on private platforms without any government censorship or oversight." The International Monetary Fund defined it as a digital representation of a monetary value that is not issued by a central bank or a public authority and is not

necessarily linked to digital currency, but is accepted by natural or legal persons as a means of payment and can be transferred, stored or circulated electronicall [3].

Defined by the European Central Bank: as the value stored electronically and represents an obligation on its source, as it is issued upon receipt of funds for the purpose of conducting payment transactions and is accepted by a natural or legal person other than its source [4].

Digital currencies are described as virtual virtual virtual currencies consisting of digital codes that can be stored on hard disks or the Internet, and their value is subject to supply and demand, and it is difficult to track the buying and selling operations that are made with them or even knowing the owners of these currencies [5].

The U.S. Treasury Department defined it in 2013 as "a medium of exchange that acts as a currency in some environments, but does not have all the characteristics of a real currency," [6]. Based on these definitions, it can be noted that digital currencies are a global phenomenon that arose as a result of technological development. They do not possess a tangible physical presence and are not subject to any external influence or fixed material consideration, nor are they under the control or authority of States or international financial bodies. Crypto currencies are acquired either through software or through their purchase, to be used in buying and selling, money transfers, or sometimes even speculation via dedicated trading platforms.

Types of digital currencies

Many researchers pointed out that there are multiple types of digital currencies that have achieved wide fame and contributed significantly to the spread of the use of these currencies. Among the most prominent of these types are bdou, et.al.,2021 [7].

Bitcoin: Bitcoin is the first and most popular cryptocurrency, and it was released in 2009. It was founded by an unidentified person or group known as Satoshi Nakamoto. Bitcoin is the first digital currency that laid the foundation for digital trading and transformed the global financial system.

1. Litecoin: Litecoin is one of the first digital currencies to appear after Bitcoin, as it was established in 2011 and is known as the "silver coin" due to being the most economical and easy alternative to mining compared to Bitcoin. Litecoin is characterized by its speed in exchange and its high efficiency in digital transactions.
2. Ripple: Ripple emerged in 2012 as a digital currency and global settlement system. Ripple is closely linked to global banking systems, enabling easy and efficient transfer of funds between currencies. Ripple has become one of the most traded crypto currencies globally thanks to its flexibility and versatility.
3. Ethereum Ethereum is the second largest crypto currency in the world by market capitalization after Bitcoin, and was developed by Vitalik Buterin in 2015. Ethereum is not just a digital currency, it is a blockchain platform that supports Smart Contracts and DApps.
4. Algorand (ALGO): An innovative blockchain project that has emerged in China that aims to provide high-performance and scalable solutions in the world of crypto currencies and fintech. It was founded by Professor Silvio Michelli, a Turing Prize-winning computer scientist known for his contributions to security and cryptography. Algorand network launched in 2019.

These types are among the most prominent digital currencies that have contributed to shaping the concept of digital currencies and expanding their use in the global financial system.

Characteristics of digital currencies

These currencies are characterized by a very wide range of characteristics, as we mention a number of these characteristics, which are as follows [8]:

Virtual currency: It does not have a tangible physical presence, represented by a virtual payment tool using smart electronic devices and is not supported by any official body.

1. Unstable in price: It is characterized by a large fluctuation in its prices, meaning that the prices fluctuate from time to time.
2. Electronically encrypted: Anyone who is proficient in the use of algorithms and programming can export it.
3. Decentralization: This feature is one of the most important characteristics of digital currencies, as they are issued in a decentralized manner, independent of any government or international entity. This means that the control of supply or price is not subject to any central authority [9].
4. Peer-to-peer: It is exchanged online quickly and easily between a group of parties in the same network (peers) without the presence of intermediaries.
5. Transparency: As the buying and selling operations are all announced and known and can be viewed by all users without knowing the identity of the dealers, but with full knowledge of the volume of transactions and the time of their occurrence [10].
6. Conversion speed: There is a high speed in the occurrence of operations from transferring, selling or buying digital currencies, as the duration of the operations does not exceed 10 minutes in most digital currencies [11].
7. Fragmentability: This feature contributes to the spread of digital currencies, as it allows the currency to be divided into smaller units, enabling users to make transactions easily and flexibly without major restrictions.
8. Difficult to track: It is difficult to identify the user or location of the digital currency.
9. Crypto currencies eliminate the need for physical storage and secure preservation that are characteristic of cash-intensive systems. You don't need to invest in a wallet or bank safes to keep money from being stolen.

Advantages and disadvantages of using crypto currencies

Crypto currencies have many advantages, including [12]:

1. Storage and transportation is very simple.
2. Not affected by inflation, crypto currencies are not affected by the economic state of the country.
3. The percentage of transfer commissions is reduced to the lowest possible level, unlike the commission rate imposed by traditional financial systems
4. There are no expenses or expenses of printing money as they are in traditional money
5. The rebound of trade movement due to the ease of trading is completely unlimited
6. Operations can be made with very low amounts of payments, there are no items
7. Transaction fees are very low and will provide a significant advantage especially in international money transfers.

It is worth noting that the diversity of digital currencies contributes to the diversity of their characteristics, which makes it difficult to list all their features, but what was mentioned represents the most prominent features that most digital currencies share.

Despite the many advantages associated with the use of crypto currencies, they have several disadvantages, including [13].

1. Crypto currencies are somewhat like the speculative market as fluctuations in the price of currencies cause very serious concern to many people.
2. Lack of refund One of the most prominent negatives of digital currencies is the lack of a refund policy for being a decentralized (digital) currency

3. Due to the confidentiality of transactions, they may be exploited in suspicious activities or illegal activities, as crypto currencies are the best means of suspicious trades such as drugs and arms trade, as there is no personal data for users.
4. The state can easily tax business operations conducted through crypto currencies, so it is possible that crypto currencies can harm the country's economy.

The impact of crypto currencies on accounting

Accounting in digital currencies is affected by several aspects, including accounting policies, principles and assumptions, as well as the impact of digital currencies on the process of recognition, measurement and accounting disclosure.

The impact of digital currencies on accounting policies:

The impact of digital currencies on accounting policies is one of the most prominent topics of concern to professionals in the field of accounting. Given the unique nature of crypto currencies, they require the development of new accounting policies or the modification of existing policies to suit the challenges that arise as a result of their use. How crypto currencies affect accounting policies emerges from several key aspects:

1. Classifying crypto currencies as assets One of the most prominent challenges raised by crypto currencies is their classification in accounting records. Due to the intangible nature of these currencies, accountants have difficulty determining their appropriate classification within assets. Crypto currencies may treat Intangible Assets or Financial Instruments, but these classifications may vary according to the accounting system adopted in each country or according to (IFRS) or US (GAAP). Based on these classifications, accounting policies for recognition of value and depreciation may be affected [14].
2. Determining the value of digital currencies Crypto currencies are recorded with high price fluctuations that make it difficult to determine their value at the present moment. Traditional accounting policies typically rely on using market prices to determine the value of assets, but due to the volatility of the crypto currency market, it may be difficult to estimate fair value. This issue requires accountants to develop flexible accounting policies that allow dealing with these fluctuations and preparing accurate financial reports that reflect the actual value of assets at any given moment [15].
3. Financial reporting and reporting At the accounting level, accounting policies require clear policies for reporting transactions made using crypto currencies. While some countries specify how crypto currency profits and losses are reported in financial reports, others do not have clear accounting policies in this area. Companies may be required to provide detailed reports on their crypto currency holdings, as well as identify their gains or losses resulting from price fluctuations, which requires accountants to adjust financial reporting methods according to these currencies [16].
4. Transactions with crypto currencies Transactions made using crypto currencies require the application of accurate accounting policies to ensure proper authentication. Accountants may have to develop new policies to reflect the impact of these transactions on financial statements, such as adding special protocols for converting digital currencies to the local currency or handling fees associated with transactions. Accounting rules related to crypto currencies are expected to tighten further in the coming years [17].
5. Taxes and tax reporting Tax-related accounting policies are greatly influenced by the use of digital currencies. Since crypto currencies can create unexpected profits or losses due to price fluctuations, accounting policies may require accountants to accurately record these changes in tax reports. Many accountants rely on providing specific tax advice to their companies or clients to help them comply with crypto currency-related tax regulations [18].

6. Regulatory Compliance Crypto currencies also affect accounting policies in relation to compliance with financial laws and regulations. In many countries, regulations for crypto currencies are rapidly evolving to include new regulatory requirements such as anti-money laundering (AML) and anti-terrorist financing (CFT) laws. These regulations require accountants to include compliance policies in their accounting work to ensure compliance with legal requirements.
7. Hedging and risk Hedging against price fluctuations is an important factor that accounting policies should take into account when dealing with crypto currencies. Companies may put in place certain hedging policies to mitigate the risks associated with extreme price fluctuations for crypto currencies. Accountants need to update their policies to effectively account for these risks, which requires the addition of new methods and methods in assessing and recording potential losses. The impact of crypto currencies on accounting policies requires accountants to be aware of new developments in this field, and they must develop their skills to keep pace with these organizational and technical changes.
8. Valuation and Revaluation Policies with significant fluctuations in cryptocurrency prices, the revaluation process becomes vital. Companies may have to adopt more dynamic valuation policies that include periodic revaluation to avoid inaccurate financial reporting [19].

2. Materials and Methods

The methodology of this study employs a descriptive and analytical approach to examine the impact of cryptocurrency disclosure on the informational content of financial statements and its influence on investor decision-making. A structured survey was designed and distributed to a sample of 100 respondents, including accounting professionals, investors, and academics specializing in financial reporting from Iraq, Egypt, and Saudi Arabia. The selection of respondents was based on their expertise in accounting and familiarity with cryptocurrency-related financial practices. The survey included two primary variables: cryptocurrency disclosure as the independent variable and investor decision-making as the dependent variable. A five-point Likert scale was used to capture the respondents' perceptions, with statistical analysis conducted through SPSS version 27. Reliability and validity tests were performed, ensuring that the Cronbach's alpha coefficients for both variables exceeded the acceptable threshold of 0.7. The study also applied factor analysis to identify key determinants influencing investor perceptions, alongside multiple regression analysis to examine the strength and significance of the relationship between cryptocurrency disclosure and investor confidence. The findings were further supported by normality tests, mean ranking analysis, and variance explanation techniques to ensure robustness. The results of the statistical analysis confirmed a strong correlation between transparency in cryptocurrency financial reporting and investor decision-making, emphasizing the need for enhanced regulatory standards. This methodological framework provides a comprehensive basis for understanding the accounting implications of digital assets while ensuring the reliability of financial information for stakeholders and policymakers.

3. Results and Discussion

The impact of digital currencies on accounting principles and assumptions

The impact of crypto currencies on accounting principles is one of the important issues faced by accounting practitioners in light of the ongoing transformations in the world of the digital economy. Digital currencies require a comprehensive review of traditional accounting principles that have always relied on tangible assets and traditional economics as follows:

1. **Full Disclosure Principle:** Crypto currencies, due to their high volatility and value instability, may require additional disclosure more than traditional assets. Companies

may find themselves obliged to disclose ongoing changes in the value of crypto currencies in their financial reports, and explain how to address accelerating price fluctuations. Disclosure may also be required for changes in the accounting policies of digital assets [19].

2. **Measurement Principle:** Crypto currencies require companies to use flexible measurement methods that are commensurate with high price fluctuations, which may lead to the need to continuously update asset and liability values in accounting records. Accountants may have to adopt the principle of fair value more, especially in cases where the degree of volatility of the digital currency increases [20].
3. **Expense Recognition Principle:** In the context of crypto currencies, there may be a difference between the moment of payment using a digital currency (such as Bitcoin) and the moment when the expense is recognized. Fluctuations in cryptocurrency values may require periodic review of expense recognition when changing the value of cryptocurrency-linked assets [21].
4. **Revenue Recognition Principle:** Transactions using digital currencies may involve complex valuations of revenues due to price volatility and the difficulty of determining fair market value, which requires updating revenue recognition rules to include criteria that take into account the nature of crypto currencies and their fluctuation.
5. **Accrual Principle:** states that revenues and expenses must be recorded when they occur, not when money is paid or received. With crypto currencies, the application of this principle becomes more complex, especially when transactions relate to high price fluctuations or when they involve trades across multiple platforms with different prices. Accountants need to be more precise in determining the moment of recognition of cryptocurrency-related revenues or expenses, as timings may be significantly affected by market conditions [22].
6. **Consistency Principle:** refers to the need to apply accounting policies consistently and regularly from time to period. Crypto currencies are raising new challenges in this area, as the constant fluctuations in their prices may require companies to periodically reassess their accounting policies. It can be difficult to maintain consistency in the application of accounting standards when cryptocurrency values are consistently unstable. For example, accountants may have to adjust their policies on calculating gains and losses when the values of digital assets change significantly [23].
7. **Economic Entity Assumption**: The imposition of economic unity indicates that each accounting entity (company or organization) must have financial independence from other entities. Crypto currencies, due to their decentralized nature, may make it difficult to define clear boundaries between an economic unit and other networks. Crypto currencies such as Bitcoin and Ethereum are not subject to any government or central entity, making dealing with them in the context of economic unity a major challenge. For example, if a company uses crypto currency in its activities, it can be difficult to determine whether the digital assets belong to the company or part of an informal financial network [24].
8. **Monetary Unit Assumption:** Imposing a monetary unit means that all financial transactions must be measured in fixed monetary units, such as the dollar or the euro. Crypto currencies, on the other hand, show extreme fluctuations in their value, which creates challenges in applying this hypothesis. The volatility of the price of a digital currency may make it difficult to measure assets and liabilities in accounting records. For example, if a company owns assets with crypto currency, it will be difficult to estimate its value consistently over time, which contradicts the imposition of monetary unit, which requires the currency to be constan [25].

9. **Periodicity Assumption:** It assumes that an organization's financial activities can be divided into specific time periods (such as a quarter or fiscal year), so that revenues and expenses are recorded according to these periods. Crypto currencies may lead to changes in the way financial measurement is due to constant fluctuations in their value throughout the day. While in traditional financial periods, assets and liabilities can be settled on an annual or quarterly basis, crypto currencies may require constant updates to calculate the value of assets and liabilities according to their rapid fluctuations. This change in the measurement method may require more frequent updates in accounting records [26].
10. **Going Concern Assumption:** A principle based on the idea that an entity will continue to operate in the long term may be affected by crypto currencies, especially if markets fluctuate. Given the volatility of crypto currencies, it can be difficult to ensure the viability of companies that rely mainly on these currencies. This puts additional pressure on accountants who may need to assess whether the company will be able to continue in the near future under these volatile conditions [27].

The impact of digital currency on accounting measurement

In the digital economy society, accounting measurement of the transaction process is an accounting tool of great importance. The prices of crypto currencies fluctuate greatly with the market, and the traditional method of measuring money, which relies on historical cost and traditional input values, no longer meets the requirements of the current information age regarding money measurement and accounting treatment method.

Both the Australian Accounting Standards Board and the Institute of Chartered Professional Accountants of Canada have suggested that the most appropriate method of measurement is to measure at fair value and include its changes in current profit and loss. The choice of measurement method for digital currency depends mainly on the accounting entity and the purpose of the transaction. Currently, digital currency is being measured, which expands the scope of accounting processing and adds new measurement targets.

Continuing to follow the traditional input value concept to measure digital currency, their final measurement will be deviant from the actual value due to its different characteristics from traditional currency, which is not useful in the development of the digital economy. It can be concluded that the introduction of digital currencies to the economic market will certainly contribute to the improvement of accounting standards and the development of values. On this basis, the disadvantages of the cost method and the revaluation method will be reasonably addressed, reducing the uncertainty of the risks resulting from the cryptocurrency measurement, and their cost value will be effectively reflected [25].

The impact of digital currency on accounting recognition

Many studies and professional publications have touched on the proposed accounting treatments for digital currencies, as the current accounting thought agreed to treat these currencies through several main approaches. Among the most prominent of these approaches: considering digital currencies as money or the equivalent of money, or classifying them as financial assets that fall within financial instruments and therefore apply to accounting treatments of financial assets. There is also a trend that treats crypto currencies as intangible assets, and finally they can be processed as part of inventory items. Below will be a detailed review of these different approaches [22].

Processing digital currencies as cash: IAS7 clarifies that cash includes cash in the fund and demand deposits, and includes banknotes and coins or the right to receive them. Although the term "crypto currency" suggests that it is a currency, it is not necessarily cash for accounting purposes, as reports have indicated that crypto currencies lack the characteristics of cash and currency, including that they are not legal and not supported by any government entity. Crypto currencies are also unable to directly determine the

prices of goods and services, and lack the most important aspect of cash for accounting purposes, which is support from authorities and central banks.

Accounting treatment of digital currencies as financial assets: (IAS 32) and (IFRS 9)dealt with the recognition of financial assets as part of financial instruments, as IAS 32 defined a financial instrument as "any contract that leads to a financial asset of a particular entity, and a financial obligation or equity instrument of another entity." The standard added that a financial asset is cash or the contractual right to receive cash or another financial asset from another entity. IFRS 9 defined financial assets as including: cash in the company's cash reserves and settlement accounts, cash equivalents or equivalents that are short-lived (up to three months from the date of acquisition), liquid investments in securities, with the exception of equity instruments and certain other financial assets that can be quickly converted into a known amount of cash with little significance for changes in their value. The definition of financial assets also includes the contractual right of the company to receive cash or other financial assets, Or the exchange of financial assets or liabilities, in addition to securities issued by other economic units, such as stocks, bonds and other securities purchased with the aim of achieving.

Accounting treatment of digital currencies as intangible assets : (IAS38)defined intangible assets as "a non-financial asset that can be identified and does not have a tangible physical presence". The standard sets out four conditions for the recognition of an intangible asset: - The asset must be identifiable separately and independently of other assets. It can be defined as an asset, so that the concept of assets applies to it. Be a non-cash asset. Be without a tangible physical presence.

When looking at these terms and applying them to crypto currencies such as Bitcoin, we find that they are sold as specific units in the exchange markets, making them identifiable and distinguishable from other assets. With regard to the concept of asset, an asset is defined as a resource that an entity controls as a result of past events and from which future economic benefits are expected to flow. Control here means the ability of the enterprise to obtain the economic benefits resulting from the asset and to restrict others from accessing those benefits. Based on this, crypto currencies are reported to meet the definition of an asset, where an entity

Can generate economic returns by selling or using it as a means of payment. However, there are criticisms of this view suggesting that crypto currencies may not bring specific future economic benefits and are only used as a medium of exchange or investment, making them incompatible with the definition of intangible assets. In terms of the requirement that assets be non-cash, the value of crypto currencies changes very quickly as a result of fluctuations in supply and demand, which means that they are not cash assets. Thus, they are classified as non-cash assets.

Accounting treatment of crypto currencies as inventory

(IAS 2 defines) inventory as an asset held for sale within the normal activity of an enterprise, at the production stage to become saleable, or in the form of raw materials or components used in the production or service delivery phases. Based on this concept, the recognition of crypto currencies as inventory requires that they be prepared for sale. IAS 38 excludes intangible assets held by an entity for sale in the ordinary course of business from being classified as intangible assets and can therefore be counted as inventory in accordance with (IAS 2.)

The concept indicates that inventory does not necessarily have a physical form, but must be an asset held for sale in the ordinary course of the enterprise's normal activity. Accordingly, crypto currencies held for sale in the ordinary course of business can be accounted for as inventory[22].

The impact of digital currencies on accounting disclosure

Accounting disclosure is a vital element to ensure transparency and credibility in financial reports, and with the entry of digital currencies into the world of finance and business, it has become necessary to develop new standards to keep pace with this development, digital currencies have a significant impact on accounting disclosure, due to their unique nature, high volatility and regulatory challenges, and the disclosure requirements under digital currencies are as follows [21]:

1. Disclosure of how digital assets are valued and whether they are using fair market value or cost of acquisition
2. Clarifying the classification of crypto currencies as inventory or intangible assets in financial statements and justifying this classification
3. Companies are required to disclose potential regulatory and legal risks associated with their dealings with crypto currencies
4. Disclosure of security policies in place to protect digital assets and potential risks associated with them
5. How to recognize revenue from crypto transactions
6. Disclosure of types of risks associated with crypto currencies Such as: price volatility risks, liquidity risks, operational and technological risks
7. Disclosure of profits or losses resulting from cryptocurrency valuation differences
8. Disclosure of exchange rate changes in the event of cryptocurrency conversion into cash.
9. Impairment losses for digital assets
10. Some transactions made using crypto currencies may not involve direct cash flows, these cashless transactions must be disclosed and their impact on the company's financial position clarified.

The reflection of digital currencies on the informational content of financial statements

In light of the reliance on digital currencies in addition to traditional currencies in financial transactions, it has become necessary to understand how digital currencies affect the preparation and presentation of financial statements based on the effects that digital currencies have on accounting policies and principles as well as the disclosure requirements of those currencies. This analysis examines the main differences between financial statements that include crypto currencies and those that rely on traditional currencies only in table 1.

In this part of the analysis, the reflection of digital currencies on the informational content of the financial statements is shown, given that the Iraqi market does not deal with digital currencies, four proposals will be submitted to disclose digital currencies in the event that these currencies are allowed to be traded in the Iraqi market, and the choice of the most appropriate proposal is left for each company according to the nature of its activity and the purpose of its acquisition of digital currencies, and these proposals are adopted on the basis of the recognized classification methods for digital currencies (cash or equivalent, intangible asset, financial instrument, Inventory) Each proposal is indicated in the basic statements of companies (statement of financial position, income statement, statement of comprehensive income, and statement of cash flows).

Table 1. Comparison of financial statements that include crypto currencies and lists based on traditional currencies.

Statement	Crypto currencies	Traditional currencies
Statement of Financial Position	Classify crypto currencies as intangible assets or inventories depending on the purpose of holding them	Classification of cash and cash equivalents among current assets
	Due to large fluctuations in market capitalization, valuation and revaluation policies need to be disclosed.	Assets and liabilities clearly classified
Income Statement	Recording gains or losses resulting from changes in the market value of digital assets	Given the stability of currencies, revenue and expense recognition is straightforward.
	Crypto currency price fluctuations have a noticeable impact on net profit	Profit and loss of currency spreads usually appear when there are foreign currency transactions
Cash Flow Statement	Difficulties in classifying cryptocurrency flows, especially if using decentralized wallets	Clear cash flow ratings within operational, financing or investment activities
	Difficulties in monetizing digital currencies and converting them into cash, which is reflected in the company's liquidity	
Notes to Financial Statements	The need to provide detailed explanations on: the nature of the digital currencies used, the risks associated with them (price volatility, cybersecurity, regulatory compliance), and the accounting policies associated with them	Traditional explanations of exchange rates, accounting policies, and transactions of a special nature

Source: Researcher Preparation

From the tables above, it is clear that the ways in which crypto currencies can affect financial reporting are as follows:

1. Balance sheet: Crypto currencies are intangible assets and therefore must be reported on the balance sheet. Determining the fair value of crypto currencies can be difficult, due to the high volatility of prices. IFRS requires crypto currencies to be measured at fair value, which can lead to significant fluctuations in the reported value of those currencies on the balance sheet.
2. Income Statement: Crypto currencies can affect your income statement in many ways. Among them, gains or losses from the sale or exchange of digital currencies must be reported in the income statement. As well as reporting any income received in the form of digital currencies, such as mining income.
3. Cash Flow Statement: Crypto currencies affect the cash flow statement. Any cash inflows or outflows related to the purchase or sale of crypto currencies must be reported in the cash flow statement, as well as any inflows or outflows related to mining activities.

In table 2 show crypto currencies significantly influence investors' decisions by promoting high-return investment opportunities, but at the same time they increase the level of risk and uncertainty. The need for greater transparency in disclosure, the development of accounting standards, and the strengthening of regulatory frameworks have become essential to reduce risk and improve the efficiency of investment decisions.

Table 2. Reflection of digital currencies on the information content of financial statements.

Crypto currency Processing Methods		Statement of Financial Position	Income Statement	Other Comprehensive Income	Cash Flow Statement
Treated as cash	Item	Recognition of digital currencies within the Cash and cash equivalents	No effect	Recognition of crypto currencies within other comprehensive income	No effect
	Title	Intangible cash balances (crypto currencies)		Net change in crypto currencies	
Processed as an asset	Item	Recognition of crypto currencies as intangible assets	Recognition of crypto currencies as part of operating income	No effect	Recognition of crypto currencies as part of investment activities
	Title	Technology-based intangible assets (digital currencies) minus the provision for the impairment of digital currencies	Crypto currency impairment losses		Recognition of crypto currencies as non-current assets
Treated as a financial instrument	Item	Recognition of crypto currencies as non-current assets	No effect	Recognition of crypto currencies within other comprehensive income	Recognition of crypto currencies as part of investment activities
	Title	Investments listed at fair value in other comprehensive income (crypto currencies)		Net change related to investments in crypto currencies	Change in investments at fair value through comprehensive income (crypto currencies)
Processed as inventory	Item	Recognition of crypto currencies as a traded asset	Recognition of crypto currencies within the cost of revenue	No effect	Recognition of crypto currencies as operational activities
	Title	Crypto currency inventory	Crypto currency inventory		Changes in Operating Assets and Liabilities / Change in Crypto currency Inventory

Source: Researcher Preparation

The impact of cryptocurrency disclosure on investment decisions

The impact of cryptocurrency disclosure in financial statements is measured by following the descriptive and analytical approach of the opinions of a sample of Investors and academics in the field of accounting using the statistical program SPSS. The paper sample consists of (100) persons specialized in accounting matters, males (55) and females (45) with various scientific levels in figure 1 [PhD (27), master (32), diploma (12), bachelor (32), and other certificates (8)].

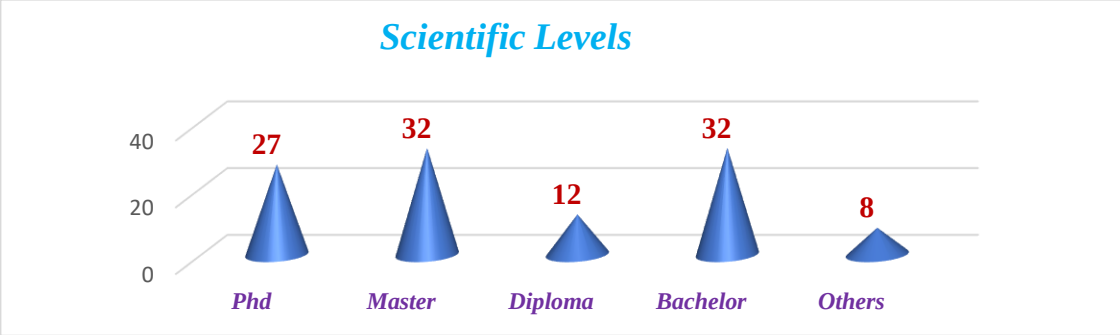

Figure 1. Scientific Levels.

In Figure 2, age levels (less than 30 twenty, (30 – 40) nineteen, (41 – 50) twenty – seven, older than (50), forty-three researchers.

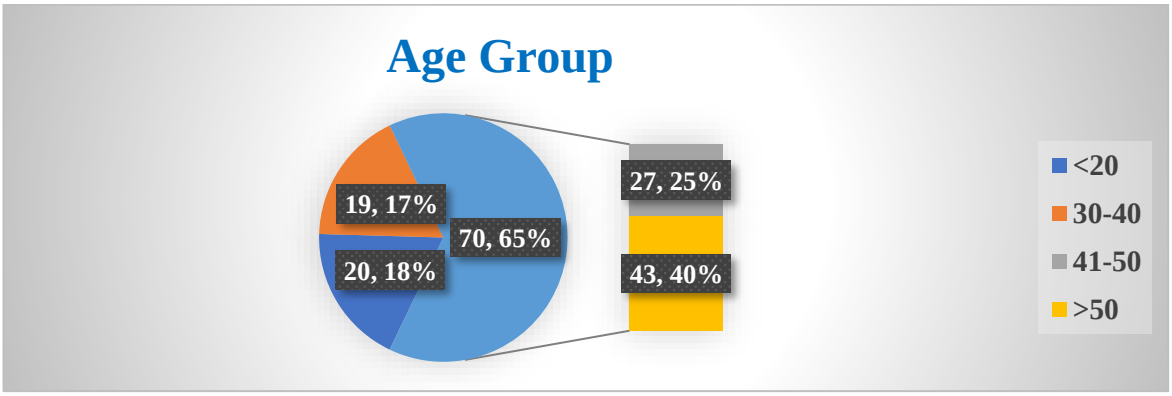

Figure 2. Age Group.

In figure 3, academic experience (less than five years of experience (14), (5-10) fifty-six, (11-15) nine, more than (15) years of experience amounted to twenty-one researchers).

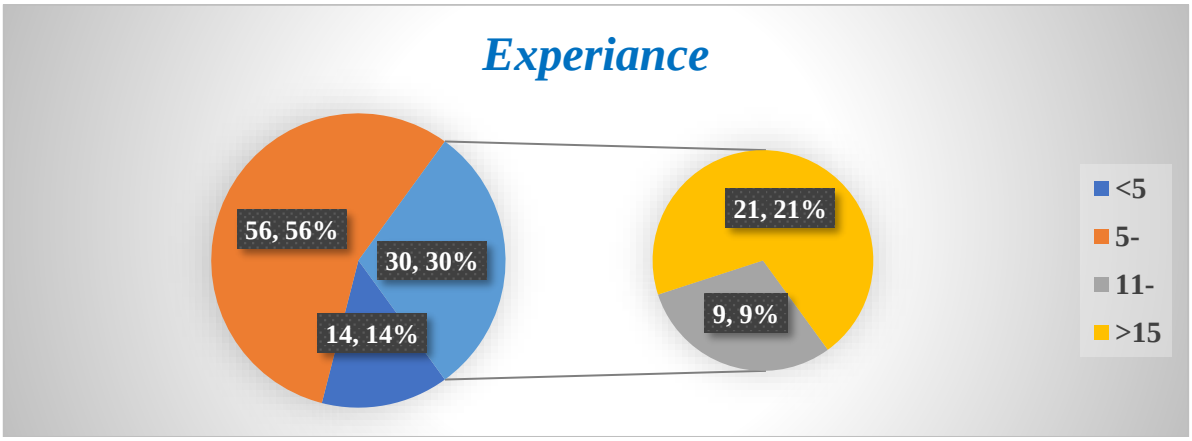

Figure 3. Experience.

The sample was from three countries Iraq (38), Egypt (35), and Saudi Arabia (27). A questionnaire was designed consisting of two main variables, the first (disclosure of crypto currencies), and the second is (the variable dependent on investor decisions), the responses of individuals were analysed using the statistical program (SPSS - 27) to analyse the data contained in the respondents ' answer by applying the five-way Likert scale consisting of options (strongly agree, agree, neutral, disagree, and strongly disagree), with the extraction of some important statistical measures [24].

1. Stability of questionnaire and sample adequacy

To find out the stability of the resolution paragraphs, the values of the Cronbach's Alpha coefficient were (0.896) for the first variable, (0.887) for the second, as their values were greater than the standard value (0.7). The sufficiency of the sample using the KMO test, whose value was (0.773) for the first, and (0.765), for the second, which is greater than the standard value (0.5).

2. Weighted mean, standard deviation, normality test, and question level rank, for (Disclosure of Crypto currencies)

Table (3) shows that six questions whose weighted means were strongly agreed, the best answers were to the question (Crypto currencies provide a new challenge for accounting disclosure in financial statements), with mean (4.41), followed by the question (The volatility of the value of crypto currencies negatively affects the accuracy of accounting disclosure) with mean (4.4), then the question (Determining the accounting principles used to measure digital currencies and their disclosure policies contributes to achieving a fair presentation of the company's activities and improving understanding of the importance of these currencies) with mean (4.39), the question (Disclosure of digital currencies provides objective assurances to investors about the correctness and accuracy of the figures and data in financial reports, reducing cases of fraud and fraud, and profit management practices by management) with an mean (4.34), the question (Crypto currencies lead to legal and regulatory challenges affecting accounting disclosure) with mean (4.29), the question (Accounting for crypto currencies requires new accounting standards that are appropriate to their nature) with mean (4.27), the question (Companies lack sufficient experience in accounting disclosure of crypto currencies) with mean (4.22). One question agrees (The inclusion of crypto currencies in the financial statements is an influential factor in making investment decisions) with mean (4.18). One questions neutral (Disclosure of the risk management methodology for crypto currencies and the provisions of control over them contribute to enhancing the market value of the stock), with mean (2.8). Two questions disagree, the first (Accounting for crypto currencies requires new accounting standards that are appropriate to their nature) with mean (2.27), the second (The use of crypto currencies further complicates the process of preparing financial statements) with mean (2.18). all questionnaire were normally distributed, its standard deviation was weak and within the range. The general mean was (3.75) which was in agree level.

Table 3. Statistical Measurements.

Questions	Mean	S.D	Normality Test	Level Rank
The use of crypto currencies further complicates the process of preparing financial statements	2.18	0.83	0.27	Disagree
Crypto currencies provide a new challenge for accounting disclosure in financial statements	4.41	0.49	0.38	Strongly Agree
Companies lack sufficient experience in accounting disclosure of crypto currencies	4.22	0.41	0.48	Strongly Agree
The inclusion of crypto currencies in the financial statements is an influential factor in making investment decisions	4.18	0.38	0.49	Agree

Crypto currencies lead to legal and regulatory challenges affecting accounting disclosure	4.29	0.45	0.44	Strongly Agree
The volatility of the value of crypto currencies negatively affects the accuracy of accounting disclosure	4.40	0.55	0.33	Strongly Agree
Accounting for crypto currencies requires new accounting standards that are appropriate to their nature	2.27	0.81	0.27	Disagree
Disclosure of digital currencies provides objective assurances to investors about the correctness and accuracy of the figures and data in financial reports, reducing cases of fraud and fraud, and profit management practices by management	4.34	0.47	0.42	Strongly Agree
Disclosure of the risk management methodology for crypto currencies and the provisions of control over them contribute to enhancing the market value of the stock	2.80	0.72	0.41	Neutral
Determining the accounting principles used to measure digital currencies and their disclosure policies contributes to achieving a fair presentation of the company's activities and improving understanding of the importance of these currencies	4.39	0.49	0.39	Strongly Agree
General Mean	3.75	0.56	0.39	Agree

Source: SPSS outputs, elaborated by author

3. Weighted mean, standard deviation, normality test, and question level rank, for (Investor Decisions)

Table (4) shows that six questions whose weighted means were strongly agreed, the best answers were to the question (The accounting disclosure of crypto currencies helps in assessing the risks associated with investing in them), with mean (4.37), followed by the question (Disclosing fluctuations in crypto currency prices in financial statements helps in making better investment decisions) and (The availability of accounting information on crypto currencies affects the desire to invest in this type of asset) with mean (4.36), then the question (The transparent accounting disclosure of crypto currencies reflects the seriousness of companies in improving the level of trust with investors) with mean (4.24), the question (That the disclosure of crypto currencies can be a key criterion in evaluating companies in the financial market) with an mean (4.31), the question (Crypto currencies lead to legal and regulatory challenges affecting accounting disclosure) with mean (4.29). Three questions with agree rank (accounting information on crypto currencies contributes to improving investor confidence in companies investing in this area) with mean (4.17), the question (Investors decisions vary depending on whether crypto currencies are used as an investment tool or as a means of facilitating business operations) with mean (4.13), (The lack of clear regulation of crypto currencies increases uncertainty for investors) with mean (4.07). One question disagrees (Accounting disclosure of crypto currencies in financial statements is not an important factor in making investment decisions) with mean (2.13). all questionnaire were normally distributed, its standard deviation was weak and within the range. The general mean was (4.05) which was in agree level [23].

Table 4. Statistical Measurements.

Questions	Mean	S.D	Normality Test	Level Rank
That the disclosure of crypto currencies can be a key criterion in evaluating companies in the financial market	4.31	0.54	0.37	Strongly Agree
The transparent accounting disclosure of crypto currencies reflects the seriousness of companies in improving the level of trust with investors	4.24	0.62	0.31	Strongly Agree

Disclosing fluctuations in crypto currency prices in financial statements helps in making better investment decisions	4.36	0.59	0.31	Strongly Agree
The lack of clear regulation of crypto currencies increases uncertainty for investors	4.07	0.87	0.31	Agree
Investors ' decisions vary depending on whether crypto currencies are used as an investment tool or as a means of facilitating business operations	4.13	0.69	0.30	Agree
The availability of accounting information on crypto currencies affects the desire to invest in this type of asset	4.36	0.57	0.32	Strongly Agree
The disclosure of crypto currency-related transactions in financial statements is necessary for making informed investment decisions	4.32	0.52	0.37	Strongly Agree
accounting information on crypto currencies contributes to improving investor confidence in companies investing in this area	4.17	0.42	0.46	Agree
The accounting disclosure of crypto currencies helps in assessing the risks associated with investing in them	4.37	0.54	0.35	Strongly Agree
Accounting disclosure of crypto currencies in financial statements is not an important factor in making investment decisions	2.13	0.74	0.27	Disagree
General Mean	4.05	0.61	0.34	Agree

Source: SPSS outputs, elaborated by author

4. Multiple Response Set

In the multiple response set options of the variable (Disclosure of Crypto currencies), the option agreed received the highest percentage (49.4%), followed by strongly agree (22.6%), then neutral (2.7%), disagree (10.8%), strongly disagree (4.5%). For the variable (Investor Decisions) the option agreed received the highest percentage (53.9%), followed by strongly agree (30.5%), and then neutral (7.2%), disagree (6.5%), strongly disagree (1.9%)[25].

5. Factor Analysis

It is one of the statistical methods that aims to interpret correlation coefficients that have statistical significance between variables, meaning simplifying the correlations between the various variables involved in the analysis down to the common factors that describe the relationship between these variables and their interpretation[26]. For the variable (Disclosure of Crypto currencies), the cumulative total variance explained four questions was (60.46%), which are, (Crypto currencies provide a new challenge for accounting disclosure in financial statements), (The volatility of the value of crypto currencies negatively affects the accuracy of accounting disclosure), (Determining the accounting principles used to measure digital currencies and their disclosure policies contributes to achieving a fair presentation of the company's activities and improving understanding of the importance of these currencies), the first factor has strong relationships [27] with four questions, the second factor has strong relationships with three questions, the third factor has strong relationships with two questions, and the fourth factor has strong relationships with only one question. For the variable (Investor Decisions), the cumulative total variance explained four questions was (62.17%), which are, (The accounting disclosure of crypto currencies helps in assessing the risks associated with investing in them), (Disclosing fluctuations in crypto currency prices in financial statements helps in making better investment decisions), (The availability of accounting information on crypto currencies affects the desire to invest in this type of asset), and (The disclosure of cryptocurrency-related transactions in financial statements is necessary for making informed investment decisions), the first factor has strong relationships with three

questions, the second factor has strong relationships with three questions, the third factor has strong relationships with three questions, and the fourth factor has strong relationships with only one question [28].

6. Hypothesis testing and impact analysis

A simple linear regression model was used to measure the impact of the independent variable (Disclosure of Crypto currencies), on the dependent variable (Investor Decisions). The results of the analysis are shown in table (5), as the correlation coefficient value was strong (0.895) for the independent variable and (0.898) for the dependent variable[29]. The value of the determination coefficient (0.801) for the independent variable, that is, explanatory variables explain 80% and the remaining 20% are due to external factors. As for the dependent variable, the value of the determination coefficient was (0.806), which explains (81%), and the remaining (19%) is due to external factors. The statistic (F) was significant (< 0.001) for the variables (38.431) and (42.314), with no problems of self-correlation and multilinearity of the variables[30]. The marginal slope of the model was positive, as an increase of (Disclosure of Crypto currencies) by one unit will improve the performance in (Investor Decisions) by 100%.

$$\hat{Y} = 3.115 + 0.768\ X \quad (1)$$

Table 5. Statistical Indicators

Model	R	R Square	F - Statistics	Durbin Watson	VIF
1	0.895	0.801	38.431 (< 0.001)	1.724	1.12
2	0.898	0.806	42.314 (< 0.001)	1.901	1.14

Source: SPSS outputs, elaborated by author

These results indicate that we can reject the null hypothesis, and accept the alternative hypothesis which is, (There is a statistically significant influence relationship between cryptocurrency disclosure and investor decisions) [31].

4. Conclusion

a. Crypto currencies have a range of advantages that make them strategically important, such as speed in remittances, transparency, and decentralization. However, they face significant challenges, most notably the absence of clear legislation, the high volatility in its value, and the complexities of its integration into traditional accounting practices.
b. The role that digital currencies play in reshaping the global monetary system is complex and multifaceted. While crypto currencies offer unprecedented opportunities for innovation in money and payment systems, they also pose significant regulatory challenges. The emergence of sovereign digital currencies underscores the possibility of a new era of monetary policy, with central banks playing a pivotal role in the digital economy.
c. Crypto currency classification is an important issue, and the lack of guidance by standard-setters affects the accounting treatment of crypto currencies and disclosures in financial statements.
d. Crypto currencies are a transformative force in the financial landscape, but successfully integrating them into accounting systems requires collaboration between regulators, accounting professionals, and technology developers. By adopting innovative frameworks and leveraging technological advancements, the accounting profession can overcome current challenges and exploit the full potential of crypto currencies to improve financial reporting and support investor decisions.
e. The absence of clear guidance makes it difficult to standardize accounting practices related to these assets. Therefore, it is essential that international accounting bodies, such as the International Accounting Standards Board (IFRS), develop specific

standards that regulate how crypto currencies are recognized, classified, and processed in financial statements.

f. Crypto currencies pose a challenge and an opportunity for the accounting profession. While increasing the complexity of some accounting aspects, it also opens up new avenues for professional development and the development of financial services. Accountants seeking to learn this technology and develop their skills will be in a prime position to take advantage of this digital revolution.
g. Crypto currencies have a profound impact on accounting principles and policies, which calls for continuous reviews of those policies and standards to ensure the accuracy and transparency of financial reports.
h. Crypto currencies require enhanced accounting disclosure to ensure transparency and credibility in financial reporting, forcing companies to develop comprehensive disclosure policies that address the new challenges associated with these evolving digital assets.
i. Crypto currencies significantly influence investors' decisions by promoting high-return investment opportunities, but at the same time they increase the level of risk and uncertainty. The need for greater transparency in disclosure, the development of accounting standards, and the strengthening of regulatory frameworks have become essential to reduce risk and improve the efficiency of investment decisions.

Recommendations

a. Develop accounting standards for digital assets to ensure uniformity of disclosure and valuation methods.
b. Training accountants on how to deal with the challenges of digital currencies.
c. Enhance the disclosure of risks associated with crypto currencies to ensure greater transparency for investors and stakeholders.
d. We recommend that researchers, in future studies, focus on the personal characteristics of investors and distinguish between conservative and enterprising traders as, future research should take into account market characteristics that contribute to the behavior of investors in the crypto currency market.

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