

The Historical Evolution, Developments and Accounting Implications of Cryptocurrency Operations

Prof. Owolabi, S.A* & Mr. Osanyinbi, Tunde. G**

Department of Accounting, Babcock University, Ilisan, Ogun State

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ABSTRACT: *The governments around the globe except Salvadoran government had issued several warnings such as outright ban against the investment in the cryptocurrency. This act was due to the associated risk of loss of investment and lack of accountability framework in the countries. This paper, therefore, appraises the historical evolution and accounting implications of cryptocurrency operations. The desk review methodology anchored on content analysis of relevant literatures and convenience sampling method was used for the study. The paper identified that the evolution of cryptocurrency was based on the desire to jettison government intervention in financial control vis-a-vis the experience of the global meltdown of year 2007-2008. Also, the study revealed that lack of local and global accounting standard affects accountability in terms of cryptocurrency. The study, therefore, concludes that cryptocurrencies and central bank digital currencies (CBDCs) are new trends in the evolution of monetary economics. It, therefore, recommends that International Federation of Accountants (IFAC) should, in the interest of global citizenry, put in place an emergency machinery and framework for the setting and release of global accounting standard that is specific to cryptocurrency.*

KEYWORDS: cryptocurrency; IFAC; CBDC; miners; cryptography, global citizenry
Jel Codes: E51, E58, F38, K22,

INTRODUCTION

According to Alo and Ishola (2019), nowadays credit cards, online banking services and cryptocurrency were form of money. Dumas (2015) states that the origin of money was a mystery. Although, the evolution of the coin as well as the paper money had been traced to 17th Century,

B.C. According to Liu, Ren, Liu and Jiang (2021), a cryptocurrency economy is a complex but transparent socio-economic system in which the participants use cryptocurrency for money, merchandising, equity financing and game activities. In an economy, cryptocurrency could be obtained via mining of the coin and through cryptocurrency exchanges. The rapid development of information and communication technologies (ICT) and the outburst in the number of online users accounted for the creation as well as upsurge in users and uses of cryptocurrencies. Historically, Ogunode et al., (2022) stated that bitcoin, created by Satoshi Nakamoto in 2008, is the reputed pioneer cryptocurrency. Also, they espouse that cryptocurrency is one of the fundamental disruptions in the financial asset exchange mechanism. According to Onyeke (2020), cryptocurrency is a digital finance innovation empowered by blockchain technology. Also, he noted that the use of cryptocurrency changes the modes of receipt and payment systems. However, governments around the globe through its central bank had issued several warnings such as outright ban against the investment in the cryptocurrency due to the risk of loss of investment. This is in an attempt to protect the citizens from financial loss and to save the economy from loss of investment fund. The acquisition of cryptocurrency by some entities calls for concern. This is because to ensure accountability there is need to be a formal acceptance mode of accounting by all users. This paper, therefore, attempts to examine the concept of cryptocurrency, its evolution, historical background and accounting implications.

Following this introduction is the section on evolution and historical development of cryptocurrency in selected countries around the world. Section three deals with theoretical review and theoretical framework while section four deals with the empirical review. Moreover, section five focuses on methodology while the final section deals with the discussion of finding, conclusion and recommendation.

Evolution of cryptocurrency

In the beginning, cryptocurrency was used as a payment instrument (Farell, 2015) but as it gained more recognition in the economic and financial sectors, it began to be used as a speculative investment asset. Currently, its being traded as a financial instrument in the cryptocurrency exchanges (Shirakawa & Korwatanasakul,2019). According to Hanza (2018) the major cryptocurrency exchanges are located in countries such as the US, the Republic of Korea, and Samoa. He stated that the idea of the cryptocurrency was first mentioned by David Chaum in the year 1989 and later in the year 1990. David Chaum, was an American Cryptographer who invented the digital currency. Specifically, a pseudonym of a group of programmers referred to as Satoshi Nakamoto released a paper titled “Bitcoin: a peer-to-peer electronic cash system.” He stressed that the release of the paper in October 2008 revolutionized the cryptocurrency economy effectively. Hansen states further that cryptocurrencies were born in the wake of the 2007 – 2009 financial crisis. The financial crisis devastated the economy of the world and shook people’s faith in the operations of the financial system. Historically, the first transaction in cryptocurrency specifically, the bitcoin occurred on the 12th of January, 2009 between the Nakamoto and the Hal Finney. In February, 2010 one person paid 10,000 Bitcoins for two pizzas delivered by Papa John’s. Since

then, cryptocurrency popularity has been skyrocketed due to advent of cryptocurrency exchanges such as Coinbase which makes the trading in cryptocurrencies easier for people with limited technical know-how and experience. Bush (2022) reveals that the evolution of cryptocurrency market over the past years results in a design of various types of digital currencies such as:

- a. Decentralized cryptocurrencies: These represent currencies that were not linked to a particular government or her agencies. Also, it does not have a centralized structure. This implies that the network of cryptocurrency could not be influenced by any government establishment.
- b. Stablecoins: These represent digital currencies whose values were peg to an underlying asset, such as a fiat currency, commodity or another cryptocurrency.
- c. Central Bank Digital Currencies: This category of cryptocurrency represents digital currencies issued by a country's central bank. Examples include e-naira in October 2021 by the government of Nigeria and the digital Yuan launched in 2021 in China. On the other hand, the evolutionary trends brought to the fore some of the scams associated with the cryptocurrency operations as explained below:
 - i. Non-fungible token (NFT) wash trading: This class of fraud occurs where cryptocurrency transactions was carried out by the same person. That is, where the seller and the buyer is the same person handling the operations in order to create a false sense of demand and increase the value of a product.
 - ii. Man in the middle attack: This class of scam occurs where the cryptocurrency scam perpetrators access the user's private information through an unencrypted Wi-Fi connections and places himself amidst two parties conducting a cryptocurrency transaction. Therefore, stealing the private data of the users such as their cryptocurrency wallet keys in order to grant access to the victim's funds. This class of scam is usually perpetrated in public spaces such as airports and cafeterias.
 - iii. Pump-and-dump scams: The pump-and-dump scam occurs when fraudsters acquire a cheap coin and inflate its price artificially via releasing false information on social media. And at a certain point when the value of a coin is high enough, the fraudsters sell their holdings in the coin, causing the price to crash.
 - iv. Rug pulls scam: This class of scam is executed by groups of developers and programmers who create illegitimate or cosmetic cryptocurrency project. After enough funds have been invested, the developers abandon the project, withdraw the invested money and disappear.

One of the main reasons deduced for cryptocurrency scams is the absence of a strong regulatory framework. Indeed, this absence of global regulatory framework accounts for different regulations and its associated accounting implications around the world.

Luo and Yu (2022) argued that since public corporations and asset management companies were holding cryptocurrencies as an alternative option of investment and reporting same as a significant part of their non - assets and financials, it is therefore, of important for market participants to gain sound knowledge and understanding of the accounting implications of cryptocurrency.

Historical development of cryptocurrency

The historical development of cryptocurrency in selected countries are discussed below:

In the 2018 report of the Global Legal Research Center, countries such as Nepal, Pakistan and Viet Nam banned outrightly the operations of cryptocurrency while countries such as Italy, Australia and Japan require the registration as well as the licensing of operations of the cryptocurrency. However, Isle of Man and Mexico permits its operations for payment services. On the other hand, the Republic of Korea requires banks to report suspicious activities in order prevent money laundering. Ogunode et al., (2022) espoused that Canada has the second highest number of automated teller machines for bitcoins in the world. Furthermore, he stated that transactions in cryptocurrency for the settlement of goods and services in Canada were treated and also subject to either income tax, corporate tax or capital gain tax. As at March 31, 2023, the volume of transaction of cryptocurrencies was 30,339, 615,398 (Yahoofinance, 2023). According to Ngari (2023), the lack of clear cryptocurrency regulations as well as fraudsters and rug pulls scare potential investors and these have been hampering the crypto uptake in the UK. Although. Bitcoin automated teller machine availability of over 80 units in UK, plays a key role in easing the process of dealing in cryptocurrencies before the UK government banned the cryptocurrency operations. Also, he added that the financial and technology industry were being affected due to the lack of a regulatory framework to develop and market cryptocurrency assets derivative products.

The historical development of cryptocurrency in Africa was encapsulate as an alternative opportunity to advance the sustainable development goals in the continent. The issue relating to unbanked or undeserved by the traditional services poses great concern, most especially in the Sub-Saharan Africa. According to a year 2021 survey by Liu, Goni and Mitha (2022), 60% of the population that were above 15 years old belong to the category of financial exclusion populace. Also, women were 12% points higher than men based on the analysis of gender without a bank account. Moreover, typical barriers to traditional financial access include the cost of financial services, long distance to financial institutions, financial illiteracy, lack of relevant documentations and collateral requirements. They argued further that the high level of penetration of smart mobile phones and ever growing of mobile money accounts serves as a good platform for the emergence as well as adoption of cryptocurrencies in Africa. Sejpal (2022) revealed that apart from Bitcoin which is the most widely used cryptocurrency around the globe, other cryptocurrencies such as Dash and Lisk are being traded in Kenya and other African countries including Botswana, Ghana, Nigeria, South Africa and Zimbabwe. Furthermore, he cited the Absa Financial Market Index 2021 data indicating that several African countries were adopting the digital currencies known as Central Bank Digital Currency to serve as a legal tender. In October 2021, Nigeria launched a digital

currency by introducing eNaira. This places Nigeria as the first African country to launch a digital currency in Africa. Gomachas (2019) in Ozili (2022) noted that some of the cryptocurrency-based intermediaries in Africa include BTCGhana, BitPesa and Belfrics. Oluwole (2021) noted that the mode of ban issued by African countries differ. This is because countries like Tunisia, Morocco, Algeria and Egypt imposed ban, whereas other countries such as Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Cote d’Ivoire, Ethiopia, Democratic Republic of Congo, Gabon, Lesotho, Libya, Mali, Namibia, Niger, Nigeria, Senegal, Tanzania, Togo, Uganda, Zambia and Zimbabwe imposed implicit ban. The implicit ban implies that Banks or Other Financial Institutions are prohibited from the dealing in cryptocurrencies or offering services as cryptocurrency dealer either individual or business. Ethiopia is the latest African country to place implicit ban on the use of cryptocurrencies while the Bitclub networks are operating without any restriction (Gobena, 2021). The most popular bitcoin exchange in Ethiopia is Binance. On the Binance platform, over 90,000,000 users processes more than \$1billion on a daily basis. As at March 29, 2023, the current price of Bitcoin was ETB 1,473,981.13 per bitcoin with 19,331,018 bitcoins in circulation. This indicates that bitcoin has a total market capitalization of ETB 28,519,795,994,406. The conversion of bitcoin to Ethiopian currency is shown below:

Table 1: Bitcoin to Ethiopian Currency

Amount	Today as at 3:50am	1 month ago	1M Change
0.5 BTC	ETB 736,990.56	ETB 630,559.06	+16.88%
1 BTC	ETB 1,473,981.13	ETB 1,261,118.12	+16.88%
5 BTC	ETB 7,369,905.64	ETB 6,305,590.59	+16.88%
10 BTC	ETB 14,739,811.27	ETB 12,611,181.18	+16.88%
50BTC	ETB 73,699,056.37	ETB 63,055,905.92	+16.88%
100BTC	ETB 147,398,112.74	ETB 126,111,811.83	+16.88%
500BTC	ETB 736,990,563.69	ETB 630,559,059.17	+16.88%
1000 BTC	ETB 1,473,981,127.39	ETB 1,261,118,118.33	+16.88%

Source: Coinbase (2023)

In Nigeria as at March 29, 2023, the current price of bitcoin was ₦12,610,558.60 per bitcoin and the bitcoin in circulation was 19,331,018 BTC with the total market capitalization of ₦243,777,916,371,006.20.

Table 2: Bitcoin to Naira

Amount	Today at 4:30am	1 months ago	1M Change
0.5 BTC	NGN 6,305,279.30	NGN 5,395,942.65	+16.85%
1 BTC	NGN 12,610,558.60	NGN 10,791,885.30	+16.85%
5 BTC	NGN 63,052,792.98	NGN 53,959,426.49	+16.85%
10 BTC	NGN 126,105,585.95	NGN 107,918,852.98	+16.85%
50 BTC	NGN 630,527,929.76	NGN 539,594,264.91	+16.85%
100 BTC	NGN1,261,055,859.52	NGN1,079,188,529.82	+16.85%
500 BTC	NGN 6,305,279,297.62	NGN 5,395,942,649.11	+16.85%
1000 BTC	NGN 12,610,558,595.25	NGN 10,791,885,298.21	+16.85%

Source: Coinbase (2023)

However, Ghana continues its partnership with the German firm called Giesecke-Devrient (G+D) in order to introduce e-Cedi. Furthermore, countries such as Kenya, Morocco, Rwanda and South Africa were considering the possibility of using digital currencies for retail business purposes while Eswatini and Mauritius were exploring the feasibility of using the digital currency for both retail and wholesale business purposes.

A focus on North America by Oluwole (2022) shows that the United States (U.S) Department of Treasury's Financial Crimes Enforcement Network (FinCEN) issued guidance on bitcoin in year 2013. The guideline defined cryptocurrency as a convertible currency with an equivalent value in real currency or substitute. Furthermore, it classifies entities that administers or exchanges bitcoin, such as cryptocurrency exchanges and payment processors as Money Services Business (MSB). According to Donovan and Bluemenfeld (2022), the US has not made a decision on introducing a Central Bank Digital Currency (CBDC), although in January 2022, the Federal Reserve Bank (FRB) released a discussion paper on the pros and cons of a US CBDC and noted that noted it would seek Congressional authorization if it is adjudged to be in the national interest. In November 2022, FRB announced a 12-week period as a proof-of-concept project. This is to serve as a platform to explore the possibility of a wholesale CBDC. Moreover, the March 2022 Executive Order prompts the immediate CBDC research and subject the US to a wait-and-see approach before making any decisions on the management of cryptocurrency.

Rahming and Sealy (2022) disclosed that the Digital Assets and Registered Exchange Act, 2020 (DARE) was enacted in the Bahamas in December 2020 as a legal framework for the regulation of the issuance, sale and transfer of digital assets. Also, he submits that in April 2022, the Bahamas Government issued a policy white paper on the Future Digital Assets. The white paper policy clarifies and expands the scope of the legislative framework. Also, it cited the key objectives of the policy as follows:

Publication of the European Centre for Research Training and Development-UK

- i. To explore new opportunities in digital asset business environment such as stable coins and asset-referenced tokens.
- ii. To improve the attractiveness of the Bahamas as a country with a well-regulated jurisdiction suitable for efficient operation, growth and prosperity of digital asset business.
- iii. To encourage competition and innovation in the FinTech environment.
- iv. To explore international linkages with Bahamas' existing financial services toolkit. This will engender sound and continued innovation in the international financial services sector.

Moreso, in the year 2020, the Central Bank of The Bahamas issued a digital Bahamian Dollar Currency, known as the Sand Dollar. The Sand Dollar is one of the first live CBDCs in the world.

A study by Artiga and Lopez (2021) reveals that El -Salvador – a South American country legalized bitcoin, a version of cryptocurrency as a fiat money in the year 2021. According to Alvarez, Argente and Patten (2022), the Salvadorean government launched an App termed “Chivo Wallet,”. They submitted that the App provides incentive to users who trade in bitcoin and dollars. Moreover, Artiga and Lopez (2021) discloses that the government of El-Salvador announced a bonus in Bitcoin equivalent to US \$30.00 for the users to use at their own discretion.

LITERATURE REVIEW

Conceptual review

Cryptocurrency is enabled by blockchain technology (Ozili, 2020) and the agents dealing in the trading of cryptocurrencies uses digital wallets (Kang, 2019). According to Interswitch (2011), cryptocurrency is a digital payment system that doesn't rely on banks to verify transactions but exists purely as digital entries to an online database enabled by blockchain. According to Harwick (2016), cryptocurrency is a method that is used for constituting virtual coins and for providing a secure means of transaction and ownership via cryptographic model. Furthermore, Jani (2018) in Malik and Rana (2020) described cryptocurrency as a digital currency that is created by controlling its creation, protecting its transactions and hiding the identities of the users. An insight by Malik and Rana (2020) shows that cryptocurrency is made of two words: crypto and currency. They described crypto as a short form of cryptography and currency as money. Furthermore, they explained that cryptography is a computer technology used for securing and hiding information as well as identity of users whereas currency is a digital form of cash that was designed to work faster, more reliable and cheaper than the fiat money. Furthermore, they stated that the basic principle of cryptocurrency is that it is a currency that no individual nor organization can control its production. They expatiated that instead of trusting the government with respect to the creation of money and banks for safe keeping and other banking services, cryptocurrency users transact directly amongst each other with the aid of a ledger without any intermediary such as government agencies and banks. The use of ledger for cryptocurrency operations enables the user to see the money being transferred, received, verified and recorded by various user from different location. According to

Prabha, Priya, Varsha & Preethi (2020) cryptocurrency is an important asset in financial and business applications that relies on a secure fundamental technology called Blockchain Technology. Moreso, they described blockchain technology as a computing technology that enables the storing of all transactions via a secure distributed ledger using a data structure via the mining process. According to Benavides and Hernadez (2018), blockchain is an incorruptible digital book of economic transactions that can be programmed to record not only financial transactions, but virtually everything that has value Tapscott (2016), whose value and quantity is not regulated by any monetary authority of any country (Gil, 2018) but regulated by an encryption process. The power of blockchain comes from the conjunction of its three great qualities: irrefutable, irrevocable and well distributed. Cryptocurrency as a peer-to-peer system is widely decentralized and lacks a central authority of control. Holtmeier and Sandner (2019), said that the underlying technology of most cryptocurrency is blockchain technology. They described blockchain as a decentralized database that is distributed in the network via computers. According to Thackeray (2018) in Malik and Rana (2020), the characteristics of cryptocurrency technology platform includes irreversible of transactions, after the inability to identify the identities of the users since every step is digitalized, global speed of processing, confirmation and validation of transactions. Also, the security of information which was made possible by cryptography algorithms in order to prevent breaking this scheme. Above all, cryptocurrency requires no gatekeeper because the software is available freely for download and installation.

According to Holtmeier and Sabdner (2019), cryptocurrency could be of significant benefit as it serves as a means of overcoming lack of social trust and increase access to financial services (Nakamoto, 2008) thus, serving as a platform to supporting the growth process in developing country via financial inclusion and a better traceability of funds (Ammous, 2015). These objectives could be achieved on the basis of sound accounting standard.

Theoretical review

Stewardship theory

Stewardship theory was propounded by Donaldson and Davis (1991) as an important corporate governance theory. It assumes that corporate executive manager should perform their task as a steward. The fundamental basis of stewardship theory focuses on understanding how corporate executives could be motivated in order to contribute to the realization of organizational goals and objectives. According to Kharuddin and Basioudis (2022), the stewardship theory assumes that the management team of an organization comprises trustworthy people whose interests are aligned properly with the organization as well as her owners. Further, they denoted running an organization based on stewardship theory would eliminate monitoring cost as well as opportunistic performance such as creative accounting. According to Ali, Alim, Ahmed and Nsar (2022), stewardship concept relates to the behavior of corporate executives. Also, the stewardship theory posits that corporate managers are good steward whose actions are in the best interest of an organization. They also stated that stewardship theory is based on the assumption that the position of Chief Executive

Officer and Chairman of an organization are similar. This indicates that such organization does not need non-executive directors because all the individuals will be working in the favor of the organization as assumed by the theory. Nevertheless, Albrecht et al., 2004 in Kharuddin and Basioudis (2022) criticized the assumption of stewardship theory that management team comprises trustworthy person. They were of the belief that this assumption could open doors of opportunities for management to perpetrate fraudulent acts or other misrepresentations.

Stakeholder theory

According to Ohnishi (2022), Freeman (1984) exhibited a management theory which the academics termed the stakeholder concept. It is also denoted as stakeholder theory. The stakeholder theory contends that it is necessary for the corporate management to satisfy her numerous stakeholders but not only shareholders in a bid to achieve organizational success. Furthermore, he cited Elkington (1997) contentions that the success of an organization depends on her ability to satisfy the triple bottom line which comprises the profitability, environmental quality and social justice. According to Key (1999) in Bruijl (2022) stakeholder theory inaccurately considers the environment as static, fixated against the organization and intended only for stakeholder groups. According to Valentinov (2022), stakeholder theory implies that the ability of executives to harness knowledge in a turbulent environment depends on their access to the knowledge held by other stakeholders. Furthermore, Ohnishi (2022) denotes that in stakeholder theory, corporate philosophy implies responsibility, corporate ends indicate meeting the various interests of numerous stakeholders, while long-term corporate objective means value creation for all stakeholders. He expatiated further that societal obligation of an organization extends beyond increasing the shareholders' value and posited that in this stakeholder theory, effective governance should support corporate policies that engenders employment in a stable and safe measure, offer a tolerable standard of living to human resources, lessen debt's risk for debt holders, and advance the community and its environment. He, therefore cited Pedrini and Ferri (2019) and Donaldson and Preston (1995) position on stakeholder theory that profit maximization wasn't the sole objective of the business activity. However, equilibrium amongst the expectations of stakeholders was held as viable factor necessary for the long - term survival and success of a corporate firm. According to Menezes, Vieira and Oliveira (2020), some of the issues associated with the evolution of stakeholder theory was the identification, prioritization and engagement of stakeholders (Mitchell & Lee, 2019) as well as the challenge of accounting for the identification and generation of value for all stakeholders including shareholders (Freeman, 2017; Hatherly, Mitchell, Mitchell & Lee, 2020). According to Fasin (2008), the stakeholder's theory was criticized on the basis that the impact of the stakeholders differs in terms of their stake and the manner of measure of their risk level. Furthermore, he stated that the corporate stakeholders vary in relation to their influence indicating that while the presence of some corporate stakeholders represent a tangible real asset others could constitute a constraint.

System theory

According to Sysomphanh and Promphakping (2022), the system theory was propounded by Von Bertalanffy in 1968 and published in his book titled “General System Theory: Foundations, Development, Application in which he defined the system as “a set of elements standing in interaction.” Also, they cited Sauter (2017) view that the intention of a system is to receive inputs, process such inputs to produce outputs. The system theory focuses on the three levels of observations which comprises business environments, the social unit of an organization and the human resources. According to Pérez (2020c) in de Jesús Pérez Durán (2021), the six characteristics of a system are as follows:

- i. **Component:** A system comprises a number of components that are interrelated and perform consistent and determined actions.
- ii. **Structure:** A system has a structure that are interconnected between the components. The structures pave way for the exchange of resources such as energy or information.
- iii. **Organization.** A system is created by an organization. The organization sets the process for each component to follow.
- iv. **Process.** The process establishes how the actions of components were combined together to get the expected result by an organization. Process is the stage of transformation of inputs into required output.
- v. **Product:** The product represents the final goal or result of a process.
- vi. **Energy:** The energy is exerted by a system to generate interrelated actions among its components. The source of the energy could be internal or external business environment.

Kantabutra (2022) denotes that the boundary distinguishes a system from others as well as the business environment. Also, a boundary defines a system. Moreover, Sysomphanh and Promphakping (2022) posit that system theory supports policymakers and other corporate practitioners in public and private organizations in organization development planning as well as efficient and effective operations management.

Theoretical framework

This study is grounded in stakeholder theory. This is because the growing turbulence with respect to the management of cryptocurrency in the business environment poses a great challenge to the ability of public and corporate executives to organise local knowledge in order to create an acceptable standard for banking viz - a - viz cryptocurrency operations. According to Valentinov (2022), stakeholder theory implies that the ability of executives to harness knowledge in a turbulent environment depends on their access to the knowledge held by other stakeholders. The operation of currency in an economy affects all citizens because it serves as a medium of exchange and store of value. According to Furu and von Schenck (2022), the academics and practitioners considered the engagement of corporate stakeholder as a viable concept of corporate sustainability and argued that in order to address the numerous future social and environmental challenges, companies

should cooperate with their stakeholders. This study, therefore, suggests that the building of strong and positive relationship among the stakeholders is a crucial institutional solution to the effective management of currency in the economy.

Empirical review

Alo and Ishola (2019) examine the perception of cryptocurrency in terms of risk and opportunities in Nigeria. They consider the demographic characteristics of cryptocurrencies users and adopted mixed research methods. The study revealed that opportunities were in the areas of data management and insurance while risks were in the areas of transaction data loss and cybercrime or online fraudulent transaction. They, therefore, recommend that the Nigerian government should adopt the cryptocurrency as additional means of currency exchange. This, they believe could prompt the development of necessary banking and financial regulations that would curb crime and related matters. Onyeke (2020) examined the problems and prospects associated with cryptocurrency and Nigerian economy based on grounded theory. He revealed that cryptocurrencies have the potential of becoming tax haven and could aid tax evasion because its operations were not subject to banking regulations and accounting standards. Terrorism financing and money laundering were challenges posed by the cryptocurrency operators. A report by Europol revealed that bitcoin accounted for over 40% of all observed criminal – to – criminal payments in cybercrime investigations. His findings revealed that despite regulatory and financial risks posed by the cryptocurrency operations, it still has the potentials of boosting financial inclusion, cross-border trades as well as cheap and faster international settlements. They, therefore, recommended that the Federal Government of Nigeria should enact laws with a focus on taxation, license operations and supervision of cryptocurrency exchanges in Nigeria.

Ogunode et al., (2022) examined cryptocurrency and its global practices using content analysis. The paper found out that absence of trust amidst the political actors and systems, high inflation rates and weak domestic currency were key drivers of cryptocurrency usage in Nigeria. The study concluded that cryptocurrencies and digital currencies (CBDCs) issued by the central bank are now additional mediums of exchange. And recommended that the federal government should develop regulatory framework in accordance with global standards for the applications of cryptocurrencies in Nigeria. Okeke, Bans-Akutey and Sassah-Ayensu (2022) analyses the use of blockchain and cryptocurrency as a payment system in Ghana using three selected cryptocurrency companies in Ghana and adopting a narrative qualitative research approach. The study revealed that the acceptance of blockchain and cryptocurrency as medium of exchange in Ghana would project the alternative finance option for the country. They, therefore, recommends that the Ghanaian Government should embark on an inclusive approach to the exploration of cryptocurrency in order to stem the tide of criminality and provide ample opportunity for public input and policy review. Martinčević, Sesar, Buntak and Miloloža (2022) investigates the development of cryptocurrencies in the finance and business environment focusing on the treatment of cryptocurrency based on tax and accounting perspectives. Their findings shows that insufficient regulations and inconsistencies associated with the implementation, monitoring, and evaluation of cryptocurrencies at the local

and global accounting phases is affecting the development of cryptocurrency both locally and around the globe. Luo (2022) studied the impact of China's macro regulatory policies on the volatility of the cryptocurrency market based on ARMA-GRACH model. The study found that China's macro regulatory policies had a significant impact on the price fluctuation of cryptocurrency in the short term. However, the significant impact would disappear in the long term. He, therefore, recommended that government should formulate relevant policies in order to curb systemic financial risks while investors need to adjust to the fluctuation of cryptocurrency.

Luo and Yu (2022) compared and contrasted the accounting and financial reporting practices for cryptocurrencies by analyzing the financial statements of 40 public companies that had exposure to cryptocurrencies around the world. The study found that the diverse applications of the existing GAAP and the IFRS standards engenders inconsistencies or distortions in the statement of financial position, statement of financial performance and cash flow reporting statement. Furthermore, they found that the US firms recognized cryptocurrencies as intangible assets at cost less impairment whereas other firms that applied IFRS accounted for cryptocurrencies as intangibles or inventory at fair value. They, therefore, suggested a new asset category and a fair value approach to account for cryptocurrencies, with changes in fair value recognized in profit or loss.

METHODOLOGY

This study is based on content analysis of literatures using desk research method. Online journals are periodicals were examined critically.

Accounting implication

According to Sarkar (2022), the relevant accounting issues for the miners of cryptocurrency comprises mining activity, expenses incurred by the miner and miners' services.

The mining of cryptocurrency is not the same as the mining of natural resources such as crude oil. The mining of cryptocurrency is based on blockchain enabled by the use of computers. Therefore, IFRS 6, Exploration and Evaluation of Mineral Resources is not applicable standard for accounting for mining activities of cryptocurrency. Also, the application of IFRS 15 which deals with accounting for revenue from contracts with customers to crypto mining by accounting for block reward is possible. The fact that in block chain technology of cryptocurrency, block rewards are paid by the system algorithm for guessing correctly the code and validating the block, therefore, there is neither counterparty nor contract between the originators and miners of cryptocurrency. This indicates that IFRS 15 is not an applicable standard for crypto mining accounting.

Sarkar (2020) suggested that block rewards for cryptocurrency miners should be accounted for as follows:

- i. Credit the block rewards in the income statement.
- ii. Debit the block rewards as intangible assets or inventories based on the purpose of its holding.
- iii. For transaction fees paid by any originators of block, credit the income statement of the miner and debit the intangible assets or inventories whichever way the cryptocurrency is treated.
- iv. Any expenses incurred by the miners should be debited in the income statement. This is because miners only render services but do not develop any intangible asset. Therefore, such expenses are not research and development costs and should not be subjected to IAS 38, Accounting for Research and Development Costs. According to Ernst and Young (2021), the digital representation of money is an inherent characteristic of a cryptocurrency. This prompts the classification of cryptocurrency as intangible asset. In view of this classification, some accounting standards are not applicable to cryptocurrency. These accounting standards are IAS 16 - Property, Plant and Equipment, IAS 40 - Investment Property and IAS 41 – Agriculture (biological assets). Therefore, the relevant accounting standards for this study includes IAS 7 – Cash equivalent, IAS 32 - Financial Instruments: Presentation, IFRS 9 – Financial instruments, IAS 2 – Inventories, IAS 38 – Intangible Assets.

Actually, cryptocurrency differs from fiat money because fiat money. This is because fiat money is subject to government regulations in terms of policies such as fiscal and monetary policies. Moreso, the treatment of cryptocurrency as fiat money in terms of cash, asset and financial instrument requires compliance with the existing accounting standards.

The notable characteristics of cryptocurrency elicited from literatures are as follows:

- a) The cryptocurrency is a digital currency and its transactions are recorded on a distributed ledger.
- b) Cryptocurrency uses cryptography as its measure of security
- c) Cryptocurrency is not issued by government nor agencies of government
- d) Cryptocurrency does not give rise to a contract between the miner and another party
- e) Cryptocurrency production is not the function of any country's Central Bank.

The IAS 32 which relates to Financial Instruments: Presentation defines a financial asset as:

- a. Cash
- b. An equity instrument of another entity
- c. A contractual right to receive cash or another financial asset from another entity
- d. A contractual right to exchange financial assets or financial liabilities with another entity under particular conditions,

- e. A particular contract that will or may be settled in the entity's own equity instruments

A comparative analysis of the definition of cryptocurrency and financial instruments indicates that holding of cryptocurrency is not a financial asset as none of the points above are met. For example, cash is a fiat currency, monetary units in pricing goods and services and basis of measuring and recognizing transaction in the financial statement. Holding of cryptocurrency does not constitute equity instrument and does not give rise to contractual obligations among the parties. Specifically, it could not be treated as an equity instrument due to the fact that cryptocurrency does not represent an ownership interest in an organization. This implies that cryptocurrency could not be treated as a financial instrument for accounting purposes.

IAS 7 defines cash equivalent as a short-term and highly liquid investment that is readily convertible to known amounts of cash and as well subject to an insignificant risk of changes in value'. This definition of cash equivalent shows that cryptocurrency is significantly difference from cash equivalents. Therefore, for accounting purposes, cryptocurrency could not be treated as cash equivalent because cryptocurrency is subject to significant price volatility. IAS 38 on intangible assets define an intangible asset as an identifiable non-monetary asset that has no physical substance. Further, it states that an asset is separable if it is capable of being divided from an entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract. Furthermore, IAS 21 on the effects of changes in foreign exchange rates indicate that an essential feature of a non-monetary asset is the absence of a right to receive a fixed or determinable number of units of currency. Thus, it appears that cryptocurrency meets the definition of an intangible asset in IAS 38 as it is capable of being separated from the holder and sold or transferred individually but in accordance with IAS 21, it does not give the holder a right to receive a fixed or determinable number of units of currency. Indeed, cryptocurrency is subject to major variations in value thus, implying it is non-monetary in nature. Anderson, Fang, Moon and Shipman (2022) noted the distinction between cryptocurrencies and other existing codified assets as follows:

- i. cryptocurrencies function as a medium of exchange as well as a store of value but does not have the legislative support of the government to be used as cash
- ii. cryptocurrencies do not have a stipulated maturity period and highly volatile to be treated as cash equivalents
- iii. cryptocurrencies enable its holders to obtain economic benefits but fails to attach neither ownership interests nor contractual rights for it to be treated as financial instruments (FASB 2022a).

It is hereby deduced from the above discussion that cryptocurrency is a form of digital money which has no physical substance but could be classified as an intangible asset for accounting purposes.

DISCUSSION OF FINDINGS

The increasing use of cryptocurrency for payments poses challenges for book keeping and accounting professionals. According to Martincevic, Sesar and Miloloza (2022) the non-harmonized accounting can jeopardize the ability of users to properly assess the financial position and performance of entities involved in cryptocurrency transactions. Also, they submit that the regulation of treatment of cryptocurrencies in the books of accounts should be based on the economic circumstances resulting from the psychology of users of cryptocurrency. The emergency of cryptocurrency could lead to currency competition and breaks the monopoly of the state on monetary policies. According to Peter and Akadiri (2020), currency competition could succeed in calming inflation and preventing the sort of manipulation of interest rates and prices to which government have historically been prone. This is in tune with Hayek (1976), that breaking the state monopoly on money is a way to assure the stability of an official currency.

On the other hand, Peter and Akadiri (2020) argued that there could be asymmetric relationship between fiscal policy and cryptocurrency. they explained that in an economy classified as one of the underdeveloped financial markets, the operations of cryptocurrency might be difficult to regulate. This could serve as a means for both corporate and individual investors to evade tax. The implication of evading tax could lead to poor government which would impact on the budgetary and other macroeconomic objectives of the government. For a developed financial market, the sound coordination of operations of cryptocurrency by central bank could boost the government tax revenue and impacts positively on government budget, fiscal objectives and stabilize the economy. Despite the fact that the cryptocurrency has been around for some years now, it appears not to be well-defined. Some Scholars have defined cryptocurrency as an investment and property, whereas some defined it as a commodity. This drew attention to how cryptocurrency holdings should be accounted for. Peter and Akadiri (2020) stated that it was in early 2009 that an anonymous programmer or a group of programmers under an alias Satoshi Nakamoto introduced Bitcoin, a form of cryptocurrency. They, however, described cryptocurrency as a digital record-keeping device that uses balances to keep track of the transactions which is known to all traders.

CONCLUSION

The upsurge in the cryptocurrency operations around the world was occasioned by the advent of financial technologies as well as availability of huge teeming population of youths versed in the art of using Information and communication technologies. Also, the experience of financial crisis that occurs from 2007 to 2009 made the search for alternative options for currency. A currency that will replace fiat money. According to Nadeem, Liu, Pitafi, Younis and Liu (2021), the increasing use of cryptocurrencies for financial operations as well as its theft via hacking draws attention of the insurance brokers. This study, therefore, calls for introduction of insurance policies and crypto -insurance brokers.

Recommendation

This study recommends that the International Federation of Accountants (IFAC) should, as a matter of urgency, develop and issue an accounting standard that focuses on cryptocurrency mining and operations. Also, it advises the government of each state of the federation to liaise with the local and global accounting professionals and standard setters to fast-track the development and the release of cryptocurrency accounting standard.

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