International Journal of Scientific Research and Engineering Development-– Volume 7 Issue 1, Jan-Feb 2024

Available at www.ijsred.com

RESEARCH ARTICLE OPEN ACCESS

Crypto-currency from an Islamic Perspective(Critical Analysis of Literature)

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Abstract: - People have been exchanging goods since the beginning of time. At first, goods and services were exchanged through barter, then the system evolved and went through several phases until it finally reached the phase of digitalization of currency. Many discussions revolve around this. This study traces the development of exchange methods and examines the revolutionary concept of cryptocurrency, which is characterized by cryptography and block chain technology. The study aims to improve understanding, assess compatibility with Sharia law and clarify the acceptance of digital currencies in Islam: Through thorough library research, the study examines the legality of cryptocurrencies from an Islamic perspective, identifies trading requirements and outlines legal requirements. The findings highlight the transparency and efficiency of cryptocurrencies, coupled with concerns over potential illegal activities. Sharia compliance is deemed feasible under certain conditions, requiring the removal of ambiguity and speculation. Cryptocurrencies, which are stored and created electronically using block chain technology, use cryptographic processes to create monetary units and verify money transfers. Pending further development in line with Shariah transparency requirements, the study advocates a cautious perception and conditional acceptance of cryptocurrencies. Recommendations include further investigation and vigilance to ensure continued compliance with Shariah principles. The study makes a valuable contribution to the discourse on the legal and economic dimensions of cryptocurrencies for policy makers, academics and practitioners.

A. ***Keywords*** —Crypto-Currency, Issuing Money, Sharia's View., *Fiat Currency,E-Money*

I. INTRODUCTION

Crypto currencies are reality that we neither can ignore nor avoid [7], the emergence of innovations related to cryptocurrencies and their significance for the future of money and finance should not wait until the vision becomes clear. These innovations, including digital assets, cryptocurrencies, stable coins and central bank digital currencies, are rapidly gaining momentum [8].Some of these innovations carry risks that need to be understood and addressed; however, they also offer potential benefits that should be exploited. Central banks and regulators around the world are working to create frameworks to balance risks and opportunities. These frameworks need to constantly evolve to reflect changes in technology, business models and market practices and should be aligned with a legal and proactive Islamic finance perspective.

The foundation of this financial system is money, which is considered one of its most important elements. Money is used to carry out business transactions, make payments, hold summits, and take measurements. These functions cannot be fulfilled without money.

In this context, the evolution of money has gone through several stages until we have arrived at the present day, where our currencies are based on the concept of paper money. The central bank issues money and regulates its circulation in the economy through the so-called monetary policy. The continuous evolution of human life and technological leaps have led to a change in concepts; thus, in the last decade, a new type of medium of exchange has emerged that has distinct characteristics of money and is known as cryptocurrency. And it is a fact that more and more people around the world are conducting financial transactions with cryptocurrencies.

E-commerce, the process of buying and selling services and products via the internet or other electronic systems, is triggering a revolution in commerce as a routine activity for people by saving them time and effort. This development of e-commerce has led to the emergence of new things such as electronic money transfer, online transactions, online marketing, automated data collection systems and other trading systems and e-business concepts such as e-commerce.Since cryptocurrencies are digital entities, they use encryption on which the mechanism of electronic payments depends, allowing two willing parties to transact directly with each other without the need for a trusted third party [6]. The Islamic financial system, on the other hand, adheres to the ethical principles enshrined in Sharia law, which promote fairness, transparency and risk-sharing and avoid speculative and exploitative practices. This divergence in principles becomes particularly relevant in the context of the evolving monetary landscape, including the emergence of cryptocurrencies, as it raises questions about their compatibility with the principles of Islamic finance. The sharia as a system of living has been primarily to protect human wellbeing (maslaha) and this being one of the general objectives that it plans to realize, the sharia therefor aims to facilitate the realization of maslaha and the removal of hard ship the sharia designed at ensuring equal fair business transactions and protects parties against exploitation,fraud,misrepresentation, explicit or implicit harm and injustice to any one of the contract [15].

II. MONEY THROUGHOUT HISTORY

This section provides a concise historical overview of the diverse forms of currency utilized by humans across millennia. These encompass valuable materials like precious metals and stones, stone disks, clay tablets, food grains, animal skins, paper, and culminate in the most recent innovation, cryptocurrency, among various others. Throughout the course of human existence, bartering emerged as the primary method for exchanging goods and services. However, this method presented challenges due to the complexities of exchange and the need to find individuals willing to accept the goods or services offered in return.To address these challenges, a new system known as commodity money was established. In this system, people utilized standardized commodities as intermediaries for diverse exchanges, including salt, tea, cattle, seeds, and more. The prices of goods and services were intricately tied to the quantities of these typical commodities. Subsequently, as an alternative to bartering, coins were introduced during this historical period, leveraging the availability and ease of handling metals.As the evolution of currency continued, the introduction of banknotes and representative funds marked a transition from commodity funds to representative money. This shift in the monetary landscape reflected a move towards more abstract representations of value, facilitating a more efficient and standardized medium of exchange.

Representative money, when it emerged, gave rise to a new idea at the time: money itself has no value; the value of money is seen as what it represents. As the money was backed by governments, they promised to replace it with a certain amount of silver or gold if necessary [1]. This means that the value of the currency is balanced by gold or silver stored by the government. Then came the replacement of representative money with fiat money. This major change was triggered by the Nixon Shock of 1971, when Nixon removed the ability to exchange the US dollar directly for gold and determined the value of the currency based on market supply and demand. But governments stepped in to preserve the value of the currency through their monetary policies - technically, most national currencies are fiat currencies, including the euro and the US dollar.

III. CHARACTERISTICS OF MONEY

The concept of currency is considered one of the most important concepts in economic activity due to the development it has known since ancient times, and through the importance that has been given to it by individuals and societies. But until now there is no complete and definite theory on currency that makes it definitively clear.

The characteristics of money comprise several essential elements: Acceptability is of paramount importance because it means that society is willing to accept the currency as a means of settling debts and facilitating commodity transactions. Durability and permanence are imperative for money to effectively fulfill its role as a store of value and a means of debt repayment, making it a secure and indispensable element. In addition, money is fungible, meaning it is exchangeable and can be divided into smaller units, which increases flexibility in transactions. Durability is another important attribute, as money is designed to withstand wear and tear and can therefore be used repeatedly. In addition, portability is a key feature as money can be easily transported and transferred in different transactions. Recognize ability is a crucial feature as money is easily identifiable and verifiable, which promotes trust in its use. Finally, stability is essential as money retains its value over time, is impervious to the effects of inflation or deflation and consolidates its position as a reliable medium of exchange [5].This safe and required element that is money is a financial instrument that performs many functions, including: being an important medium for exchanges, in addition to being a common measure of value. In addition to secondary functions: it is represented in being used as a store of value; meaning that a person can store money for any wanted period of time, and spend it at an appropriate time for him, without being damaged or corrupted, unlike storing goods that are damaged over time. In addition to that, money can be used in operations related to future payments such as checks and bonds, and is also used in the warehousing process to grant loans through the bank. Money is used by all individuals, who participate in doing so in all different areas of their lives, they work towards obtaining money.

IV. ISSUING MONEY

The issue of money plays a central role in monetary systems, whereby central banks are only authorized to issue banknotes, which are supplemented by coins. Contrary to the prevailing notion of physical money, the majority exists in the form of electronic entries. This illustrates the shift towards electronic representations in the modern financial landscape.

B. *Fiat Currency*

The central bank of the European Union has defined it as a legal tender issued by a reliable central authority for people, in a way that makes them ready to accept and exchange it, in exchange for goods and services.In the monetary system, the right to issue bank notes is restricted to a central bank. It is distributed through commercial banks, while the government establishes the process of issuing coins as a supplement to the banknotes issued by the central bank. Therefore, both banknotes and coins are considered to be from the Central bank's money. People's perception of money is a physical form, but in reality the physical form is a small percentage of money while the largest part is actually in the form of accounts and electronic entries, not printed. Hence, the idea of electronic money, in addition to cash; the central bank issues another type of money, which is electronic money, issued to the financial institutions in the form of reserve balances or current account balances in the central bank. This is on top of the reserve balances and current accounts, in commercial banks that can be used as electronic funds for payments, using ATM cards, online banking services or debit cards [7].

C. *E-Money*

E-moneyis the electronic equivalent of the fiat currency systems, and it is of course trading in familiar units like the dollar and the Euro. It contains all the intrinsic properties such as the actual currency, it can be implemented smoothly to conduct electronic commerce operations when connected to the supported devices and networks, and allows instant transactions. Electronic money is regulated and controlled by the central bank and government financial institutions. Electronic transactions and payments are made directly between the practical parties without the need for a mediator or a third party, and these transactions are direct and low-cost, knowing that these operations are subject to financial control systems, so both parties are known and specific. In comparison with the traditional currencies, we find that electronic currencies provide new features; they keep records and provide transparency in transactions and other characteristics that traditional money does not provide. There are many forms of electronic money such as bank deposits, direct deposits and payment processors (electronically stored money) like magnetic cards, which in fact represent a claim on the issued device. In addition, they are currencies that can only be accessed by electronic devices and communication networks; they are present in electronic form only [16].

D. *Virtual Currency*:

The virtual money for many specialists is a later and expected form of the natural development in the systems of inter-transactions (this does not mean here the electronic equivalent of traditional money, which is originally attributed to values equal to the value of a sovereign currency subject to the control of a central bank, which is what we call electronic money in place). This financial innovation that does not exceed a few years old and represents a new type of money, represents possible radical change in the means of payment and settlement of obligations, known as encrypted virtual money. The virtual currency differs from the digital currency, as the virtual currency is disorganized and therefore it is subject to tremendous price movements, because its real strength is the trust of people in it. But the digital currency is simply a currency that the bank issues in a digital form. It has real rewards from the real currency [14].

E. *Central Bank Digital Currencies and Special Crypto-currencies:*

If a crypto-currency is issued by any central bank, it will immediately topple the crypto-currencies, which are unmeasurable, inexpensive or safe, and are already decentralized. Moreover, crypto-currencies such as bitcoin do not reveal actually the identity of their owners, since individuals and organizations use encrypted wallets, leaving a digital footprint. The authorities, seeking to legally pursue criminals and terrorists, will soon crack down on attempts to create fully private crypto-currencies. Moreover, any crypto-currency-based system issued by central banks will be a source of support for financial inclusion, because of the consequent transfer of payments from private banks to central banks. Millions of people who do not have access to banks will have access to an efficient payment system, almost free of charge, through their mobile phones. This may amount to a financial revolution - but it will be a great revolution. That may involve risks; no country has so far decided to move forward, perhaps because it requires a radical elimination of financial intermediation for the private banking sector. One alternative for central banks is to re-lend to private banks deposits that have been converted into central bank crypto-currencies. But if the government is the sole depositor and the sole provider of funds, the risk of state intervention in their lending decisions will be clear.

Crypto-currencies are a natural result of the world's digitalization, but their future depends on several factors including their stability, security, transparency and user's confidence. In addition, hacking attacks represent their most significant threat, which might ultimately lead to their full abandonment by wary consumers. As governments ponder over the topic, a central bank adviser in China recently stated, "Bitcoin [and other virtual currencies] can be an asset, but will never be a currency" (Crypto-currency is an online exchange method that uses cryptography to conduct financial transactions. It relies on block chain technology to create decentralized, stable and transparent transactions; in digital currency, a process that uses cryptography to secure transactions on a ledger that contains digital assets in order to ensure people's confidence in the validity of transactions, and also uses a cipher mechanism to produce new digital units.

It is worth mentioning that all crypto-currencies are digital currencies, but not all digital currencies are crypto-currencies. Digital currencies,are a type of crypto-currency, because it is used for confidentiality and counterfeiting purposes. It is often used especially to transfer a crypto-currency's ownership between individuals [14]. Furthermore, crypto-currencies are considered a departure from the regular economic system that links a currency to government systems. The prominent thing in this currency is that it removes the central bank's authority from the money and puts it in the hands of people. It is at the same time similar to the fiat currency, as it does not represent the real value in itself, but its value is derived from the demand of people. Since crypto-currency is not subject to the control of any central authority, it is considered theoretically impervious against the old ways of control and intervention by a government; this is helped by the block chain which has a decentralized nature.

V. FIAT MONEY FROM AN ISLAMIC PERSPECTIVE:

fiat money has no intrinsic valueand it issued by central banks and thus become legal tender, however legal tender is not a sharia requirements on the basis that a currency is generally accepted by the public, fulfills the role of money irrespective of whether it is legal tender or not to acquire goods and services, however there is a debate among Muslim jurists about fiat funds. Among those some say that the current securities are not compatible with Islamic law, because they do not represent their values themselves, and are no longer a representative value covered in gold or silver. Others stated that the provisions of Islamic Sharia apply to paper money, as the central bank that issues this currency is obliged to preserve its value. However, this party, even if it sees paper currency as inappropriate, believes that it serves its goals .The OIC Fiqh Academy in resolution 9 D/3/07/86 decreed that fiat money is a legal tender that has the full specifications of money as medium of exchange, and has the same rules as gold and silver.

VI. REVIEW OF RELATED LITERATURE

Several studies have examined cryptocurrencies and their legality from a Sharia perspective. In this context, the author provides a comprehensive overview of the topic by summarizing and analysing the existing literature and current research to present a comprehensive perspective. This includes elements of comparative analysis, comparing different perspectives and findings from several studies on cryptocurrencies,

A. *Mirza Yuneline (2019)* [11]

Aimed to analyse the nature and characteristics of the crypto-currency by focusing on the characteristics of money from an economic, financial and legal point of view. The researcher found that: first, in terms of the nature of money, bitcoin is perfectly acceptable and shares the known properties of money. Second, regarding legal aspects, the researcher found that the crypto-currency does not meet the criteria as a currency and that it is still viewed as an illegal currency. Third, economically, the researcher found that the crypto-currency does not have the conditions of a currency's functions as a medium of exchange, unit of account, and store of value, due to the high price volatility. Fourth, From the perspective of Sharia the researcher found that the crypto-currency can be considered as mal, due to desirability and storability, but it cannot be considered valuable (monetary value), because it still needs a real currency value to determine its value.

B. *Y. Abu-Bakr and M.Abdallah Saidi (2018) [2]*

They conducted a study which aims to explore the view of Muslim scholars on the legitimacy of bitcoin and how it conforms to the Islamic legal rules. The researchers found that Muslim scholars are divided on this topic and have different opinions on it. While part of them totally reject the bitcoin currency and consider it a violation to the principles of Islamic Sharia, as it does not meet the rules of Islamic financial dealings, others believes that bitcoin does not contradict the Islamic financial principles and therefore, it can be used on certain conditions. In this instance, is highlighted the role of the researchers who tend to support the view of the second party, legitimizing dealing in this currency. From their point of view, most of the reasons of those who reject are temporary in nature and can be covered through policy regulations.

C. *I .Alzubaidi, A. Abdullah (2017)*[1]

They conducted a study which aims at exploring the possibilities and ability to create a digital currency that meets the requirements of Islamic law and the rules of Islamic financial dealings. The currency would provide a more stable currency than the current paper money. The researchers' findings indicate the possibility of introducing a digital currency that is compatible with the provisions of Islamic Sharia, if all issues related to validity are resolved. Also is required, removing the issue of ambiguity and converting the currency to a more reliable one, and revealing the ambiguity thereof and the existence of reliable guarantors.

D. *A.Brexendorff and K. Luzolo (2019) [6].*

They conducted a study to answer the question of whether the crypto-currency is halal or not. They found that the crypto-currency used for sale, purchase and custodian activities should be considered halal as opposed to investment activities with determinable or fixed interest.

E. *G. Ozievand M.Yandiev (2019)*[13].

In their research focused on the following: the researchers sought to determine the role of the crypto-currency and the extent of its effect on the financial system, by reviewing the relevant literature. Through it they seek to evaluate and understand the current situation, as well as find the basic requirements for money in general in Sharia, then make a comparison between crypto-currencies and paper money through a bitcoin case study. The authors believe in the permissibility of using the crypto-currencies, but with strict reservations. The purpose of their study was to evaluate the crypto-currency framework as whether it meets the Islamic finance rules.

F. *Abu-Bakar, Rosbi, and Uzaki (2017)[4]:*

Their study aims to provide Islamic-minded investors with information on potential challenges related to investing in Bitcoin in the context of Islamic finance, the paper assesses the compatibility of the cryptocurrency system, particularly Bitcoin, with the principles of Islamic finance. It highlights concerns such as the anonymity of Bitcoin account holders, which contributes to the difficulty of tracking suspicious activity. In addition, the high volatility and differing perceptions of Bitcoin's value lead to instability and uncertainty, resulting in Bitcoin transactions being categorized as highly uncertain or "gharar" in Islamic finance.

G. **Previous Studies Conclusions' Analysis**

Characteristics of the Crypto-currency from Previous Studies' Perception: *G. Ozievand M.Yandiev (2019)[13]:* Well-needed, well-protected, fast-growing currency; completely independent of any central regulatory body. *Fait Muedini (2018)[8]:* For the positive aspects, the bitcoin cannot be counterfeited unlike paper and metal currencies; it has the advantage of being decentralized, and its core is based on giving authority to control over it to the people and not to banks and governments; ease in transferring this currency; the digital bitcoin currencies cannot be double-spent. *G. Ozievand M.Yandiev (2019)[13]:* The reason for the rapid growth of the bitcoin price is excessive demand.
Block chain technology: - *Abu-Bakar, Rosbi, and Uzaki (2017)[4]:* 1- Block chain has the potential to transform and develop the economy, specifically the banking and financial sector. Block chain features are a transparent, reliable and efficient environment for performing economic and financial activities.

2- Block chain is not just a bitcoin and crypto-currency platform; it is a decentralized digital ledger technology to record anything of value whether currency or assets.
3- Block chain can be considered a boon to Sharia’s requirements of transparency and disclosure.

- *A.Brexendorff and K. Luzolo (2019)[6]:* Ensuring the implementation of a solid block chain technology and underlying cryptography, which is usually more secure than a centralized system; will prevent any indication of deceptive uncertainty (Gharar)

Monitory

- *Mirza Yuneline (2019) [11]:* In principle, the electronic currency is money in terms of its nature and is acceptable as money, but it does not meet all the three functions of money. Money is a store of value and a means of exchange as well as a method of calculation. The crypto-currency does not fully meet these characteristics due to the constant fluctuations in prices.

- Y. Abu-Bakr and M.Abdallah Saidi (2018)[2].There is a set of conditions that must be met in crypto-currency in order to be accepted as a currency. It must be a measure of the value; it must have a real value; there must be a standard of weight on the paper notes; and it must be replaceable by a standard weight like gold. If not, it is just money.

Attitudes ranged between those who classified the crypto-currency as currency and others who rejected this description

Legal Perspective

- *Mirza Yuneline (2019) [11]:* The crypto-currency lacks a set of criteria that are not met, as the value of the currency and its credibility depend on the state's ability to protect and support its currency. This support is not achieved in the crypto-currency that is not issued or dominated by governments or its monetary authorities.

- *Y. Abu-Bakr and M.Abdallah Saidi (2018) [2]:*No one bears responsibility in the event of abuse or misuse, because no one is responsible for regulating and issuing crypto-currencies.

Condition of Acceptance

- *Mirza Yuneline (2019) [11]:* There are seven requirements related to the nature of money, which are intrinsic value, divisibility, homogeneity, durability, mobility, rarity and stable value; crypto-currency has the same characteristics as fiat currency that fulfills six of the seven requirements. Both of them do not have intrinsic value.

- *A.Brexendorff and K. Luzolo (2019)[6]:*The virtual currency should be backed up by a physical asset such as gold stored in vault; a feature that aims to address speculation and price volatility (Maysir).

- *G. Oziev and M.Yandiev (2019)[13]:* Acquisition of bitcoins for saving purposes, is not permissible, because the high volatility that exchange rates entail, excessive risk (Garar) and partaking in speculation (Maysir). But the acquisition of bitcoins for immediate settlement of payments, is permissible; in addition they argue that the permissibility of using bitcoins should be limited until the emergence of a new crypto-currency free from shortcomings.

Other Arguments:

- *A.Brexendorff and K. Luzolo (2019)[13]:* Argue that if crypto-currency can be used for illegal purposes that does not make the medium of exchange itself unlawful (Haram). Otherwise any fiat money backed by the government and used for money laundering activities should be questioned based on the same grounds.

- *Y. Abu-Bakr and M.Abdallah Saidi (2018)[2]:* Believe that the fluctuating value of the crypto-currency is not sufficient to make it impermissible from the point of view of Sharia, as fiat money encounters the same problem internationally.

- *Abu-Bakar, Rosbi, and Uzaki, (2017)[4]:* Most of the arguments of the opponents of the Muslim scholars are based on temporary problems, which can be easily overcome with proper regulation by governments of crypto-currencies, particularly bitcoin.

VII. FINDINGS

Critical analysis of several studies examining cryptocurrencies from an Islamic perspective reveals a complex and nuanced landscape. Scholars and researchers differ in their views on the legitimacy, functionality and compatibility of cryptocurrencies, with Shariah principles. The main findings and limitations of these studies can be summarized as follows:

- Different views: Scholars hold different views on whether cryptocurrencies, are compatible with Shariah principles. Views range from acceptance with conditions to outright rejection based on legal, economic and Sharia criteria.
- Legal complexity: Legal considerations play an important role in the analysis, with scholars pointing to the lack of regulatory bodies and differing legal opinions. The lack of government support for cryptocurrencies is cited as a potential drawback.
- Monetary concerns: It is debatable whether cryptocurrencies fulfill the essential functions of money, such as being a store of value, medium of exchange and unit of account. The volatility of cryptocurrency prices is a common concern that affects their role as a stable store of value.
- Block chain technology: Block chain technology is recognized for its transformative potential to bring transparency and efficiency to financial activities. However, the studies do not address in depth the compatibility of block chain with Shariah principles beyond its application to cryptocurrencies.
- Lack of consensus: There is no consensus among scholars on whether cryptocurrencies, can be considered Shariah-compliant. The ongoing debate and differing viewpoints contribute to a lack of clarity in the literature.
- Regulatory uncertainty: Recommendations often emphasize the need for regulatory action, but specific steps and frameworks are not clearly outlined. Regulatory uncertainty is highlighted as a factor affecting the adoption of cryptocurrencies.
- Incomplete technological assessment: While the analysis of block chain technology is acknowledged for its potential benefits, there is a lack of comprehensive examination of its compliance with Shariah principles beyond the use of cryptocurrencies.

VIII. CONCLUSION

- Crypto-currency is an exchange method created and stored electronically by the block chain technology, using cryptographic techniques to control the creation of monetary units and verify money transfer.
- Block chain and the crypto-currency platform are a decentralized digital ledger technology to record anything of value, whether currency or assets. Block chain can be considered a boon to Sharia's requirements of transparency and disclosure
- The crypto-currency is constantly evolving and increasing in circulation; and people's acceptance of it changes them as well as the governments' perception. In addition to the change in technology over time, it is expected that the vision of Sharia will become clearer and more comprehensive towards the crypto-currency.
- The current perception of the crypto-currency from the point of view of Sharia is that there is a reservation to deal in it. Even if Sharia allows crypto-currencies in principle, it is rather within a set of restrictions and conditions.

IX. RECOMMENDATIONS:

- Specialized Islamic cryptocurrencies: Some studies recommend the development of specialized Islamic cryptocurrencies, indicating potential growth areas in the Islamic finance industry.
- Regulatory measures: Scholars emphasize the importance of regulatory frameworks to address legal and Shariah concerns. Specific regulatory guidelines and bodies are not discussed in detail.
- Overall, the studies advocate for further research and vigilance to ensure compliance with Shariah principles.
- Future research should address the gaps in understanding and provide more clarity on the legal, economic and technological dimensions of cryptocurrencies.

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