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The Position of Virtual Currency Bitcoin According to Islamic Perspective

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Abstract
Bitcoin represents a new currency because of innovation to the current payment system. Its emergence as a decentralized virtual currency with its high value is the main attraction of its ownership. Nonetheless, with various innovations provided, bitcoin encounters legitimacy issues, regulatory ambiguity and being a platform for illegal activities. Thus, the main objective of this chapter is to identify bitcoin status as property according to the Islamic scholar's views. It also aims to investigate and analyze bitcoin status as *al-nuqūd* (money) according to the Islamic scholar's views and its position as virtual currency according to shariah perspective. This chapter framework applies qualitative methodology with content analysis methods. Data collection relies on document analysis descriptively from printed materials such as books, related academic writing and reliable internet sources. It reveals that bitcoin did not qualify as a property as determined by the jurists based on the risk of bitcoin's speculation and the risk of security breaches that resulted in the loss of bitcoin owned thus categorizing bitcoin as a speculative investment and high-risk asset. The absence of *thamaniyyah* on bitcoin and the complexity of using bitcoin as unit of value as well as the occurrence of hacking series and malware attacks show that bitcoin does not function as *al-nuqūd* (money) even bitcoin is just a high-risk alternative payment method and insecure asset. This chapter also found that bitcoin is only a method of payment that is not generally accepted as a currency according to shariah based on the absence of public acceptance and the existence of *ḍarar* (harm) as well as the risk of using bitcoin as a means of payment. This chapter proposes shariah regulations on the use of bitcoin to ensure the legitimacy of the use of currency in fulfilling the provisions of *ḥifẓ al-māl* (preservation of wealth).
Keywords: Bitcoin, Victual Currency, Money, Risk, Islamic Perspective

Introduction

E-commerce is a complex term referring to the process of buying and selling goods and services via the internet or other electronic channels. Electronic trading has revolutionized the form of daily trade into contemporary forms by bringing trading markets to homes or offices which saves time and energy. The development of e-commerce has introduced new terms such as fund transfers, online transaction processes, electronic data exchange, internet marketing, automatic data collection systems, and others. All these processes are designed to align with the concept of e-commerce with Islam, as Islam accepts every form of lawful trade except those prohibited by Islam. Thus, the concept of online trading is included in Sharia compliance.

E-commerce transactions conducted over the internet rely on financial institutions as trusted third parties to process electronic payments. The presence of third parties ensures the security of e-commerce processes. However, with the existence of third parties, all customer personal information and transaction data are recorded by them as transaction security records. Yet, several internet merchants disagree with the presence of financial institutions as third parties since they are unable to trade freely. With the presence of third parties, merchants are required to disclose personal information and transaction details, restricting their freedom to conduct trade independently. To resolve the issue of freedom in conducting transactions, Bitcoin emerges as a new transactional method. Bitcoin is an electronic currency system that allows transactions to be conducted freely without the need for the presence of financial institutions as third parties; instead, each Bitcoin transaction is controlled by cryptography. This paper will discuss the operational mechanism of Bitcoin and its ability to function as a medium of exchange, a tool for value measurement and a store of value from the Sharia perspective. Furthermore, this paper will analyze the operation of the Bitcoin financial system from a Sharia perspective and Bitcoin as a new potential of payment instrument according to *fiqh al-Mu^{c}āmalāt* (Islamic Jurisprudence).

Bitcoin and its Operational Mechanism

Bitcoin is a version cash of in the form of digital and known as virtual currency because it exists in the virtual realm. Bitcoin is one of the virtual currencies that is not issued and regulated by any country. The movement and circulation of Bitcoin are controlled by cryptography, a technology that is honest and transparent cryptography. The peer-to-peer system enables Bitcoin users to transact freely and directly with companies or individuals, without the need for intermediary banks. Through the peer-to-peer system, users do not need to pay service fees as imposed by banks. Every Bitcoin transaction is recorded in the blockchain, but personal information and the goods involved are not disclosed because Bitcoin practices the concept of anonymity. Bitcoin users can transact at liberty without revealing their identities and information about the goods, as both remain anonymous.

The function of virtual wallet as a storage place for Bitcoin. Bitcoin owners are required to download a virtual wallet and place it either on a smartphone or computer. The virtual wallet that stores Bitcoin can only be accessed using the internet. Every Bitcoin owner is provided with two asymmetric security keys: a public key and a private key. The public key is used to connect with other individuals existing in the blockchain during transactions, while the private key serves as the security key to the virtual wallet.

Bitcoin According To Economics: The Function Of Islamic Currency

Islam does not eradicate the currency system in human daily transactions; in fact, the Prophet Muhammad himself engaged in transactions using gold and silver, even though the currency system was inherited from the Roman and Persian civilizations. Generally, Islam does not specify a particular form of currency to be used in daily transactions, considering that the currency used during the time of the Prophet Muhammad was generally accepted as a payment instrument.

Currency is defined as an object concurred and recognized by society as a medium for conducting exchange and trade activities. Any object used as currency, whether in the form of shells, stones, gold, or paper, still functions as a medium of exchange, value measurement and a store of value. Besides that, the currency used in daily transactions must be widely accepted, have a stable value, and serve as a deferred payment instrument, i.e., debt. Bitcoin, introduced as a new currency existing in the digital realm, must fulfill the functions of currency for Bitcoin to be categorized as a good currency in the economic and financial system.

Medium of Exchange

According to *Sloman* (2006), any object used as a medium of exchange must be widely accepted as a payment tool to obtain goods and services. Physical currency must be lightweight, easily portable, exchangeable into small units, and difficult to counterfeit. Bitcoin is a very lightweight currency and easily portable because it is stored in a virtual wallet installed on a smartphone. Bitcoin is difficult to counterfeit because it is equipped with software that prevents double spending.

However, Bitcoin is not widely accepted as currency because it is not issued by any entity. Any currency issued by a specific country is widely accepted as a medium of exchange. Bitcoin is not a legal tender compared to fiat currency which is widely accepted in exchange. Individuals or business companies do not accept Bitcoin as a payment for goods and services. Bitcoin does not have additional features compared to fiat currency in modern economics. Bitcoin cannot be deposited in banks, and obtaining Bitcoin requires high costs through a digital wallet system, both of which have been proven to be costly. According to Williams (2014), Bitcoin is not a currency nonetheless only a speculative investment.

Jurists believe that currency existing in the economic cycle must be widely accepted. Al-Kāsāni (2003), cited Muḥammad Ibn al-Ḥasan's view on *al-Fulūs* (currency) that if *al-Fulūs* (currency) are widely accepted by society as currency, then every currency law applies to *al-Fulūs* (currency). Ibn ᶜĀbidīn (2003) explained that the currency recognized in Islam is currency widely accepted as a payment tool in transactions.

Bitcoin differs from fiat currency in the form of coins and paper as legal tenders regulated by central banks and accepted as a medium of exchange in a country. Bitcoin is a type of digital currency not regulated by any central bank. Bitcoin is issued and controlled by its developers and used and accepted as a payment tool by a specific online community.

However, the task of issuing and printing currency is not the responsibility of individuals but rather the responsibility of government. Printing currency by other than the government is prohibited. Al-Nawawi (2005), stated that printing currency is prohibited for individuals because it can cause damage and devaluation of the currency, which can pose problems in the financial system.

Ibn Taymiyyah (2004), emphasized that issuing and producing currency is the responsibility of government. The government is also responsible for controlling the value of the currency to be fair to protect the interests of society when the currency issued by the government is widely accepted in transactions.

A Tool of Value Measurement

In order to function as a measure of value like other currencies, Bitcoin needs to possess the ability to measure the value of goods and services in the economy. Users must use Bitcoin as a value measurement to compare prices of goods and services. However, the value of Bitcoin shows extreme price volatility, which can hinder Bitcoin from being a good value measurement. Extreme price volatility will cause additional costs directly or indirectly to businesses and users. This is because the value of Bitcoin, when compared to other currencies, changes rapidly, forcing retailers to recalculate prices of goods daily. This is an unhealthy practice that increases costs for suppliers and complicates matters for consumers. Bitcoin's value instability, solely dependent on Bitcoin supply and demand, can hinder Bitcoin from being a good of value measurement.

The use of several decimal points in value measurement systems can confuse users and become problematic for users in comparing prices of goods and services compared to fiat currencies, which only use two decimal points to price quotation. Sellers require Bitcoin to quote prices as most goods in four decimal points or more. Although mathematics is simple, this could be confusing for users. For example, a visit to an online food retailer offers a salsa item for 0.01694 BTC, a chocolate bar for 0.00529 BTC, and a assorted tea pack for 0.05255 BTC. Furthermore, these prices can be expressed in scientific notation like 1.694×10^{-2} BTC, 5.29×10^{-3} BTC, and 5.255×10^{-2} BTC. It is difficult to find any currency in the world where prices are expressed in such units, and many widely used accounting software can only accommodate two decimal points in prices effectively.

Ibn Qayyim al-Jawziyyah stated that every currency must have a stable and accurate value to serve as a value measurement for goods and services and a measure of wealth. Rapid currency volatility will have a detrimental effect on the currency and the value of goods and services. However, with the extremely volatile nature of Bitcoin, it cannot be a good value measurement for goods and services in the economic cycle.

The volatility of Bitcoin's value and Bitcoin trading affect Bitcoin's demand as an asset to be owned. However, with events like the loss of Bitcoin at Mt. Gox resulting in a halved value within a week, Bitcoin's volatile nature makes it an unsafe asset to own. Bitcoin, existing in a gray area, can be considered both a currency and a commodity.

Bitcoin cannot be used as a value measurement for financial credit usage, vehicle loan financing, or collateral. Services like credit or debit cards do not exist in the Bitcoin system. Additionally, financial derivative practices such as forward contracts and swaps, which have become routine in fiat currencies, do not exist in the Bitcoin system.

Given that the price instability leading to extreme changes in commodity prices and the highly complex calculation difficulties, it can be concluded that the use of Bitcoin as a value measurement should be avoided. Although extreme price changes can make Bitcoin an asset to be owned, price instability can lead to unhealthy developments in commodity prices that may affect economic stability. Calculating commodity prices using Bitcoin as a value measurement with term of four decimal points or more is very inconvenient, as not everyone has high mathematical skills compared to calculating commodity prices using fiat currencies, which are easily to understand. The absence of loan services in the Bitcoin system as provided by banks also has a negative impact on Bitcoin users who need a large amount of currency in loans to fulfill their needs.

Store of Value

As a store of value, money allows affluent owners to easily use stored wealth to obtain goods and services because money is easily liquidated. Money also easily to be converted into other forms of assets such as houses, vehicles, real estate, or jewelry. The value of currency needs to remain stable to ensure its use as a medium of exchange across different time periods. Fiat currencies commonly experience inflation, which can reduce their use as a store of value. Meanwhile, the advantage of Bitcoin is its anti-inflation feature. Bitcoin production will stop at 21 million units to prevent inflation (Negurita 2014; Kancs, Ciaian & Rajcianova 2015). As an asset, the value of Bitcoin has skyrocketed by 5000% in two years, as reported by the Bank of England.

Utilizing money as a store of value essentially means protecting money from theft, either by physically hiding it or depositing it in a bank. Strategies for hiding Bitcoin under a mattress or elsewhere cannot be implemented because this currency does not have physical manifestations compared to fiat money. Bitcoin possessions must be stored in a computer account known as a virtual wallet. The virtual wallet that stores Bitcoin is stored on a computer or smartphone that has downloaded the wallet. The internet and asymmetric key pairings, public key, and private key are required to access Bitcoin before transactions take place. Asymmetric key pairs are required as security keys to protect Bitcoin from crimes such as theft.

Although virtual wallets that store Bitcoin are equipped with security systems, they cannot guarantee the safety of these virtual wallets. The main threat faced by Bitcoin is cyber security threats. Bitcoin owners can lose their virtual currency through online theft. Fiat money enables owners to protect their owned currency physically, such as hiding money under a mattress or depositing money in a bank. Bitcoin transactions often become subjects of cyber-attacks, resulting in the loss of owned Bitcoin. A famed example is the Mt. Gox incident, involving a significant loss of Bitcoin in February 2014. Bitcoin may be lost or stolen during security breaches, user errors, or technology failures in virtual wallets or exchange processes. Lost Bitcoin cannot be recovered. The lack of government regulation in providing security protection for Bitcoin leads to the avoidance of owning Bitcoin as an asset and store of value.

The ownership of Bitcoin as an asset and store of value is still ambiguous as there is no global accord to recognize Bitcoin as currency and asset. Internal Revenue Service in the United States has designated Bitcoin only as a barter in transactions. Finland considers Bitcoin as a valuable commodity, while Germany categorizes Bitcoin only as personal currency. The misuse of Bitcoin for criminal activities affects the recognition of Bitcoin as the currency and asset to be owned. For example, in October 2013, the Federal Bureau of Investigation (FBI) shut down Silk Road, a popular online drug market website with Bitcoin value of $3.6 million. In December 2013 witnessed 96,000 Bitcoin was stolen from Sheep Marketplace, a China-based online drug website and as a result, China authorities blocked and banned any Bitcoin-related activities. In January 2014, the Chief Executive Officer of BitInstant was arrested for money laundering involving Bitcoin.

Analysis of Bitcoin According to Fiqh Al-Muᶜāmalāt (Islamic Jurisprudence)
Trade in Islam, known as *al-Bayᶜ* is never forbidden to humans, ensuring the fulfillment of human needs and desires in totality. The processes of trading in Islam must comply with Sharia principles such as the pillars and terms of *al-Bayᶜ* by ensuring that the trade processes conducted do not contain elements prohibited by Sharia and subsequent making the trades conducted with *halal* (permissible). The emerging of Bitcoin as a new currency and used as a payment instrument to obtain goods and services, must meet and comply with the pillars and terms of trade stipulated by Shariah so that transactions using Bitcoin as payment tools are considered lawful according to Sharia.

Pillars and Terms of al-Bayᶜ (Sales and Purchase)
As a currency used as a means of payment in transactions, Bitcoin must fulfill the pillars and terms of buying and selling as stipulated in the *fiqh al-Muᶜāmalāt* (Islamic Transaction) to ensure that Bitcoin transactions are free and untainted from elements of prohibited in Islam such as *riba* (usury) and *gharar* (uncertainty). The pillars of business transactions in Islam are divided into three, namely *al-ᶜĀqid* (Contract), *al-Maᶜqūd ᶜalayh* (object of contract) and *al-Ṣīghah* (mutual agreement). *al-ᶜĀqid* (Contracting Parties) refers to the individuals involved in the transaction, namely the seller and the buyer. *al-Maᶜqūd ᶜalayh* (object of contract) refers to the goods for sale, and *al-Ṣīghah* (mutual consent) refers to the expression of accepting goods from the buyer and the expression of accepting the price of the goods sold by the seller, also known as *al-Ījāb wa al-Qabūl* (offer and acceptance) (Al-Zuḥayli 1985).

Al-ᶜĀqid (Contracting Parties)
The involved party in a transaction (*al-ᶜĀqid*) must be someone with intellect, and Al-Ḥanafiyyah stated that reaching puberty (*Al-Bulūgh*) is not a condition for *al-ᶜĀqid* (Contracting Parties). The transactions conducted by *al-ᶜĀqid* (Contracting Parties) must be based on mutual consent and freedom from any element of coercion (Al-Zuḥayli 1985). In transactions involving the use of bitcoin, the condition of intellect is fulfilled because it is unlikely for someone lacking in mental capacity to use the highly complex bitcoin as a payment method. The condition of mutual consent in the use of bitcoin as a payment method can also be met because every transaction conducted is based on the concept of mutual consent.

Furthermore, it is also required *al-ᶜĀqid* (Contracting Parties) be present in the transaction to ensure that the seller and buyer receive the goods and the value of the goods. It is required that the contract of the transaction to be executed in *Ittiḥād al-Majlis* (present during contracting process), meaning direct transaction in a session. This is to ensure the process of *al-Qabḍ (taking possession)*, which is the direct exchange of currency and goods and the goods received are of equal value to the currency acquired in the contract session conducted. However, bitcoin transactions only occur through online applications, which prevent the contract session between the seller and buyer (*al-ᶜĀqid* (Contracting Parties)) from being conducted in person at the contract session. Therefore, the contract session using Bitcoin must be conducted by *al-ᶜĀqid* (Contracting Parties) through a *ḥukmi* (considered legal) contract session. According to al-Qarahdāghi (1990), there are several guidelines that must be adhered to for *ḥukmi* (considered legal) contract sessions conducted online:

a) To ensure the online contracting parties are real.
b) A contract done through a telephone conversation, the contract begins when the agreement is initiated and ends when the telephone conversation ends.
c) A contract made through email, fax, or telegram begins when the offer reaches the contracting party. The contract is considered terminated if the party offered rejects the offer or switches to another matter without confirming acceptance (*qabūl*).

However, obtaining real identity of the al-cĀqid (Contracting Parties) in Bitcoin transactions is challenging since the identity of Bitcoin users is concealed through the concept of anonymity. This is to ensure that Bitcoin users can transact freely without disclosing personal information. Although the public key of Bitcoin users is sent to the party providing goods and services, the real identity of the sender and receiver of Bitcoin cannot be verified as they are anonymous. The ambiguity of the *al-ᶜĀqid's* (Contracting Parties) identity will also raise doubts for parties conducting transactions, and the likelihood of canceling transactions is very high.

Furthermore, the ambiguity of the *al-ᶜĀqid's* (Contracting Parties) identity in Bitcoin transactions also affects the transactions if errors occur, such as discrepancies in value with the goods sold, which can lead to the presence of the element of *riba al-Faḍl* means the usury of surplus and it takes place in a homogeneous exchange with increase from one side in terms of weight or measurement. For example, one ounce of gold to be given now in return for two ounces of gold to be received now. Unlike transactions using fiat currency either directly in cash or through online applications, the *al-ᶜĀqid's* (Contracting Parties), either the seller or the buyer, can return the currency or goods in case of value discrepancies because the *al-ᶜĀqid's* (Contracting Parties) identity is disclosed. If errors occur, such as excess transferred bitcoin value, the excess bitcoin received cannot be returned.

The use of the concept of identity secrecy or anonymity has a significant impact on the *al-ᶜĀqid* (Contracting Parties) who use bitcoin as a payment tool. Bitcoin transactions are conducted without restrictions as the identity of the *al-ᶜĀqid* (Contracting Parties) remains anonymous, providing freedom of payments in transactions. With the provided concept of anonymity, the use of bitcoin is closely associated with activities that violate the law and involve crimes such as drug trafficking, human trafficking, and sexual trafficking. These activities can be easily carried out because of the identity of the *al-ᶜĀqid* (Contracting Parties) involved in such transactions remains anonymous and untraceable. For example, the Silk Road portal, a website that used Bitcoin as an anonymous payment tool for the distribution of narcotics and the sale of weapons, was shut down by the FBI in 2013. Although Silk Road was closed, unlawful transactions can still occur due to bitcoin serving as a payment tool that ensures the anonymity of the *al-ᶜĀqid's* (Contracting Parties) making it untraceable. Hence, the use of Bitcoin does not meet the requirements of *al-^{c}Āqid* (Contracting Parties) as established in the *fiqh al-Mu^{c}āmalāt* (Islamic transaction).

al-Ma^{c}qūd ^{c}alayh (Object of Contract)

al-Ma^{c}qūd ^{c}alayh (Object of Contract) refers to the merchandise in a transaction and the value of the merchandise is the currency. It is a requirement for the merchandise, *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) is exist during a transaction. Transactions involving *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) do not exist, such as the sale of animals still in the womb, the sale of milk in the udder, or the sale of fruits on trees that have not blossomed, are void because all the merchandise offered does not exist in the transaction. Besides that, *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) must be valuable meaning anything that benefits the buyer. The merchandise offered in the transaction must also belong to the seller. Sales of desert land, air, or sea and its contents are void because these items are not owned by the seller. The merchandise also must be easily delivered to the buyer after the sales contract is completed.

To ensure that Bitcoin becomes a legitimate payment tool according to Sharia law, Bitcoin must meet the terms that has been stated in the *fiqh al-Mu^{c}āmalāt* (Islamic transaction) as *al-Ma^{c}qūd ^{c}alayh* (Object of Contract). The goods offered in the Bitcoin financial system must exist during the transaction and be valuable items that benefit the buyer. Furthermore, the goods offered in the Bitcoin financial system must be owned by the seller, and these goods must be transferable to the buyer after the completion of the contract. However, the use of Bitcoin as *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) is seen as not meeting the requirements of a good *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) according to the *fiqh al-Mu^{c}āmalāt* (Islamic transaction). This is because every transaction done using Bitcoin as *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) is concealed due to the Bitcoin financial system being based on the concept of anonymity, which conceals transaction information and the goods being traded. Although transactions involving Bitcoin are recorded in the blockchain, information about the identities of individuals and the goods involved remains anonymous.

The *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) that has been offered in the Bitcoin financial system must exist and the identity must be known to ensure that the transaction does not fall under the category of *bay^{c} al-Majhūl* (unknown transaction), which is prohibited in Islam. However, the terms for *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) to exist and disclose identity in Bitcoin transactions cannot be fulfilled as it contradicts the concept of anonymity, which heavily protects information from being exposed to apply the concept of freedom of payments embraced by the Bitcoin financial system. This leads to the presence of *gharar* (uncertainty) elements in the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) in Bitcoin transactions and such transactions should be avoided as they are prohibited in Islam.

Every *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) offered in the Bitcoin system must be completely owned by the seller, and the offered *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) in transactions must be beneficial. Transactions offering goods that are not beneficial, such as alcohol, pork, drugs, and others are not valid according to Sharia and are considered *fāsid* (invalid). The anonymity of the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) using Bitcoin as a tool of payment exposing the presence of *gharar* (uncertainty) elements in transactions. This is because the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) traded in the Bitcoin financial system is not clearly known for its identity, whether it is beneficial or not. Any *majhūl* (unknown) and unidentified object cannot be considered *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) as it leads to *gharar* (uncertainty), which is prohibited in Islam. With the concept of anonymity provided in the Bitcoin financial system, users easily acquire goods and services that are not beneficial and violate the law, such as transactions involving the sale of narcotics, weapons, or sexual trafficking. Any transaction that does not provide benefits and violates the law is considered void and should be avoided.

In every buying and selling transaction, the most crucial component is the process of delivering the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) subsequent to the completion of the sales contract or *qabḍ* (possession). Each *al-Ma^{c}qūd ^{c}alayh* (Object of Contract), namely the goods and the value of the goods, i.e., currency, must be easily handed over to the respective parties, namely the seller and the buyer. The seller receives the value of the goods, i.e., currency, and the buyer receives the goods that have been paid for. However, in transactions using Bitcoin, the actual delivery process (qabḍ ḥaqīqī) cannot be executed because of the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) does not exist in the transaction, and the transaction is conducted online. Thus, the *qabḍ* (possession) proses in Bitcoin transactions must be conducted *ḥukmi* (metaphorically). However, *qabḍ ḥukmi* (metaphorical possession) also cannot be performed because of the identity of the goods and the value of the goods, i.e., Bitcoin, are unclear, resulting in the presence of *gharar* (uncertainty), rendering the transaction void according to the *fiqh al-Mu^{c}amalāt* (Islamic transaction). Additionally, Bitcoin transactions that require the anonymity caused the *al-Ma^{c}qūd ^{c}alayh's* (Object of Contract) identity raise questions about whether the *al-Ma^{c}qūd ^{c}alayh* (Object of Contract) truly exists. The ambiguity of the *al-Ma^{c}qūd ^{c}alayh's* (Object of Contract) identity and the inability to *al-Qabḍ* (possession) in Bitcoin transactions lead to the presence of *gharar* (uncertainty), which is prohibited in Islam. Any transaction with ambiguity in the nature of the *al-Ma^{c}qūd ^{c}alayh's* (Object of Contract) and difficulty in delivery is known as *bay^c al-Gharar* (uncertainty transaction), which is prohibited in Islam.

Al-Ṣīghah (al-Ījāb wa al-Qabūl) (Mutual Consent (Acceptance and Agreement))

Al-Ṣīghah (mutual consent) is a expression of acceptance of the merchandise and its price between the buyer and the seller. *Al-Ṣīghah* (mutual consent) indicates the mutual consent between the seller and the buyer in the contract ceremony. Both the seller and the buyer must be present at the contract ceremony to express the acceptance and delivery of the goods, whether the expression is made explicitly *ṣarīḥ* (explictly) or *kināyah* (implicitly). In transactions involving Bitcoin, the contract ceremony and exchange *qabḍ* (possession) are conducted *ḥukmi* (metaphorically) as the parties execute Bitcoin transactions only through online applications. The expression of *al-Ījāb wa al-Qabūl* (acceptance and agreement) in Bitcoin transactions can also be either *ṣarīh* (explicitly) or *kināyah* (implicitly). However, due to the uncertainty and ambiguity of the identities of the *al-^{c}Āqid* (parties involved) and the *al-Ma^{c}qūd ^{c}alayh's* (Object of Contract), the expression of *al-Ījāb wa al-Qabūl (*acceptance and agreement) cannot be made due to the obscurity of information, indicating the presence of *gharar* (uncertainy) that prohibited in Islam. If the expression of *al-Ījāb wa al-Qabūl (*acceptance and agreement) in Bitcoin transactions is considered as *bay^c al-Mu^{c}āṭāh* (effectuated based on physical action rather than verbal offer and acceptance) it is still void as the *bay^c al-Mu^{c}āṭāh* (effectuated based on physical action rather than verbal offer and acceptance) require the existence of the merchandise and its price, along with the known identity of the *al-^{c}Āqid* (parties involved), to manifest mutual consent in the transaction.

Bitcoin in Bay^c al-Ṣarf (Currency Exchange)

As a currency that emerges as in electronic cash form, Bitcoin will certainly be used in exchange transactions involving *ribawi* (commodity) goods. According to al-Zuḥayli, in exchange processes involving *ribawi* (commodity) goods, there are four conditions that must be met:

a) The existence of a contract ceremony, also known as a contract.
b) The exchange of goods of the same type must be equal in value, weight, and measure.
c) The process of taking possession of currency (*al-Taqābuḍ*) must be done immediately (*al-Ḥulūl*) during the contract ceremony.
d) The exchange process cannot be postponed.

The four conditions are based on a hadith narrated by ^{c}Ubādah ibn al-Ṣāmit

The usage of Bitcoin as a payment tool for obtaining *ribawi* (commodity) items such as gold and silver must be done in a contract ceremony by *ḥulūl* (immediate) and *taqābuḍ* (taking possession). This is to ensure that the transaction is free from *riba* (usury) elements. However, purchasing gold and silver using Bitcoin as a payment method cannot be carried out directly because Bitcoin transactions can only be conducted online. The *ḥulūl* (immediate) and *taqābuḍ* (taking possession) processes cannot be implemented because the majlis akad (contract ceremony) and *qabḍ* (possession) are not conducted face-to-face. Although there is a permissible to conduct transactions through *akad ḥukmi* (Constructive Contract) and *qabḍ ḥukmi* (constructive possession) transactions involving *ribawi* (commodity) items such as gold and silver must be conducted through *akad ḥaqīqī* (contractual formalities) and *qabḍ ḥaqīqī* (Actual Possession)to avoid the presence of *riba* (usury) elements prohibited in Islam.

For the exchange process of Bitcoin with the same type or with other fiat currencies, the contract ceremony will still take place through a constructive contract. The Bitcoin owner will send their public key to the interested party in exchanging currencies and the recipient of the public key will send their own public key back to the sender as confirmation of the transaction. The contract ceremony is considered void if the received public key is not sent back to the sender. However, the exchange process of Bitcoin with the same type or with fiat currencies still needs to be completed immediately after both public keys are received to avoid the presence of *riba* (usury). The exchange process of Bitcoin with fiat currency is now easier with organizations such as CoinBase, Luno, and Bitstamp providing Bitcoin exchange services with fiat currencies. This means that the exchange contract between the Bitcoin holder and the organization providing the Bitcoin exchange service occurs through a constructive contract, and the exchange process can be completed through *ḥulūl* (immediate) and *taqābuḍ* (taking possession) as the exchange process is conducted through online applications.

Although the exchange process of Bitcoin with the same type or with fiat currencies can be conducted directly because it is done online, the failure and errors of the internet system causing the denial of the Bitcoin transfer process remain unavoidable. The postponement and denial of the Bitcoin transfer process with fiat currency will result in the presence of *riba nasī'ah* (usury or interest that is charged or paid for the delay in payment of a debt) elements prohibited in Islam, and even the exchanged bitcoins can be disappeared in the blink of an eye. For example, one of the world's leading Bitcoin leaders went bankrupt while conducting Bitcoin exchange transactions. Hundreds of millions of dollars worth of bitcoins were lost due to the failure of the Mt. Gox network in February 2014. The exchange of Bitcoin with the same type or with fiat currency is also seen to contain elements of *gharar* (uncertainty). This is because of Bitcoin is not backed by physical assets, and the value of Bitcoin undergoes extreme fluctuations, leading to the presence of *gharar* (uncertainty) elements during the Bitcoin exchange process. The exchange process of Bitcoin with the same type or with fiat currency is seen not to meet the conditions of *bay^c al-Ṣarf* (currency exchange) because it contains elements of *gharar* (uncertainty) and *riba* (usury) prohibited in Islam.

Conclusion

Based on the research above, it is clear that Bitcoin cannot potentially become a good currency. As a good medium of exchange, Bitcoin needs to be widely accepted as a tool of payment. However, bitcoin is not widely accepted as a tool of payment and there are no international accord to make Bitcoin a legal tool eans of payment. Besides that, its extreme volatility makes it difficult to be accepted as a tool of payment. Moreover, the highly complex calculation method of Bitcoin makes it not an ideal currency. Bitcoin also cannot become a good store of value because its security is often challenged.

The usage of bitcoin as a tool of payment also does not meet the pillars and terms established in Islamic jurisprudence (*fiqh al-Mu^cāmalāt*) as a tool of payment. This is because Bitcoin transactions contain elements of usury (*riba*) and uncertainty (*gharar*) which are prohibited in Islam. Buying and selling using bitcoin also do not meet the pillars and terms of *al-Bay^c* (selling and purchase) as established because of they contain elements of unknown transactions (*bay^c al-Majhūl*) which are prohibited in Islam. Transactions of *bay^c al-Ṣarf* (currency exchange) using Bitcoin also need to be prohibited because they contain elements of uncertainty (*gharar*) and usury (*riba*), which categorize the transactions as prohibited under Islamic law. Therefore, the use of bitcoin as a tool of payment should be avoided to ensure the sanctity of the property of Muslims from being mixed with the elements of *gharar* and riba which are prohibited by the Sharia so that the objective of safeguarding the allocated property can be realized. In this respect, the authors welcome comments, feedback or suggestions from regulators, financial institutions and other Islamic finance practitioners on the proposed the position of bitcoin as a new currency according to the Sharia perspective which may benefit their respective institutions or the industry as a whole.

Conflict of Interest

"The authors declare no conflict of interest."

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