

Cryptocurrency Position in Islamic Financial System: A Case Study of Bitcoin

Nur Rizqi Febriandika, and Raditya Sukmana

Department of Islamic Economic Science, Postgraduate School Airlangga University, Surabaya, Indonesia

Keywords: Bitcoin, Islamic Finance, Cryptocurrency, Virtual Money, Commodity, Financial Asset

Abstract: The development of cryptocurrency is quite impressive. In 2017 at least there are 1148 types of cryptocurrency emerging spread in 5632 market sector. Bitcoin became the starting point for the development of new applied cryptocurrency science that is distributed ledger technology (DLT). It can be said that the world of cryptocurrency entered a new era since the appearance of Bitcoin. This research is purposed to find out how cryptocurrency position in islamic financial system, especially Bitcoin. This study uses library research methods; its resources are taken from secondary sources in the form of books, journals and fiqh rules related to cryptocurrency. This paper uses descriptive analysis and content analysis method. The results of this study indicate that usefulness of Bitcoin is: 1) online shopping (for outlets, web, and merchants that accept Bitcoin as a medium of exchange), 2) payments (for countries that legalize Bitcoin), 3) asset investment, and 4) trading. Bitcoin does not qualify either as money, commodity, or financial assets. In Islam, it should not intentionally seek profit from the margin of buying and selling currency, because it is included in the category of *riba*. One of the functions of Bitcoin is as a trading tool, it is clearly not allowed in Islam because it contains the elements of *maisir* (gambling). If Bitcoin is regarded as commodity then it causes a *gharar* because there is no intrinsic use / function contained in Bitcoin. Bitcoin also cannot be said to be a financial asset because it has no underlying assets. Its value is based solely on market schemes (supply-demand) and trust. Based on *fiqh*, Bitcoin contains a lot of *syubhat* and is not recommended for use.

1 INTRODUCTION

The development of cryptocurrency is quite impressive, by the year 2017 there are at least 1148 cryptocurrency species sprung up in 5632 market sectors (Marjan, 2017). The amount is expected to continue to grow considering the public demand for cryptocurrency continues to increase. It was a historic day for the world of cryptocurrency in January 2009 where on that date Genesis Block of the new-born system, Bitcoin, was created by Satoshi Nakamoto (Wijaya and Darmawan, 2017). Bitcoin became the starting point for the development of new applied cryptocurrency science that is distributed ledger technology (DLT).

Bitcoin's existing block-chain technology allows many parties to exchange information without having to rely on trusted central parties. Token ownership verification can be performed using cryptographic techniques with consensus method mechanisms or collective agreements. Starting from a simple transaction in Bitcoin, cryptocurrency

evolved with new concepts was put forwarded by the community, which welcomed the emergence of an open payment system that utilized the internet as a transaction medium.

With the emergence of cryptocurrency itself raises a lot of debate, many of which support or deny its existence. Some countries have issued an official circular banning cryptocurrency (Bitcoin) but not a few also allow it. Many countries also have not taken a stand regarding the existence of this cryptocurrency itself.

Then how is this cyptocurrency viewed in an Islamic perspective? What is the position of cyptocurrency in the Islamic financial system? This paper will discuss the characteristics of cryptocurrency and how its position in the Islamic economic system, especially Bitcoin. This study uses library research methods; its resources are taken from secondary sources in the form of books, journals and *fiqh* rules related to cryptocurrency. This paper uses descriptive analysis and content analysis method.

2 DISCUSSION

2.1 Cryptocurrency and Bitcoin

Cryptocurrency is a set of cryptographic and logarithmic technologies, which will mathematically compile codes and passwords to print virtual currency (Nubika, 2018). Cryptography itself is a programming language that serves to bind a virtual program with certain security standards. Cryptography technology is a major component in cryptocurrency technology. In the early days, cryptography was used to conceal information during World War II, where German Nazi forces developed one of the hardware devices called Enigma used to randomize (encrypt) command messages from control centers to all German troops scattered throughout the world (Wijaya and Darmawan, 2017).

Since then cryptography technology continues to be developed in many ways, one of which is in the making of a virtual currency that is currently on the market. One of the first products that emerged and had the largest market share was Bitcoin. Bitcoin has a cryptocurrency market of 49% of the total and the current market value is recorded at USD 4,348.99 (Marjan, 2017)

Actually, before the existence of Bitcoin, there was an E-Gold, a digital currency established in 1996, by Gold & Silver Reserve Inc. which is based in Nevis, the Lesser Antilles archipelago (Sondakh: 2016). E-Gold still purely uses the internet network and does not use cryptographic and block-chain technologies like Bitcoin today. Currently there are still cryptocurrency types that offer gold as the underlying gold-based cryptocurrency, such as: Golden Currency, GoldVein, GoldMineCoin, AgAu, and many more (<http://www.goldscape.net>). Based on that cryptocurrency can be categorized into two types; 1) that has underlying assets (gold), 2) has no underlying.

Bitcoin is a pioneer in cryptocurrency as well as implementation of the first block-chain technology. This system was created by an anonymous who claimed to be named Satoshi Nakamoto, although until now no one knows the identity of the figure. Satoshi laid down the basic principles of cryptocurrency through a whitepaper titled bitcoin: a peer-to-peer Electronic Cash System (Wijaya and Damarwan, 2017). In 2009 was the first year of Bitcoin's emergence in the global business world.

Peer to peer mechanism is a network between computers that connect each other with the mechanism of a single umbrella network, allowing

between computers can share. The technology that governs the use of Bitcoin is called cryptocurrency (Nubika: 2018).

Some things that can be used using Bitcoin: 1) Shop online (for outlets, web and merchants that accept Bitcoin as a medium of exchange), 2) payments (for countries that legalize Bitcoin), 3) asset investment, 4) trading (Nubika: 2018).

Table 1: Differences in Bitcoin, physical currency, and e-money.

Bitcoin	Physical Currency (Fiat Money)	E-Money
Has no physical form	Has physical form	Derived from physical money converted to digital form
Using cryptocurrency technology and produced by "miner"	Issued by Bank Central	Issued by a Bank (or by a licensed private entity)
Mining or production is limited to a maximum of 21 million	Issues and printers are not limited as long as there is sufficient warranty	Limited in debit balances and maximum transactions per day or month
Requires a computer desk or smart phone connected to the Internet.	Does not require any device	Requires an internet-based device or it may not be if the device is card-based
There is no official regulation	There is official regulation	Regulated and controlled by each issuer, with the supervision
Can use personal device software, mobile phone, or on internet network.	Physical form, can be placed anywhere that has an empty space	Stored on a chip or server connected to an internet-connected device
The value of a currency depends on: demand, supply, and trust level	Depending on various aspects of the country's economy	The value follows the physical currency

There is no owner data (anonymous),	No ownership data of any currency in circulation.	Ownership data and each transaction is recorded by each issuer
Its current use is still limited to a particular business.	Can be used freely while still in the territory	Its use is limited to business owners who have cooperation with publishers

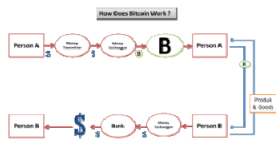


Figure 1: How Bitcoin works

2.2 Electronic Money and Virtual Money

In Conventional economics, money functions as: 1) medium of exchange; 2) standard of value or unit of account; 3) store of value or store of wealth; 4) standard of deferred payment. However, this is different from the Islamic economic system that only recognizes the function of money as a medium of exchange and unit of account. As for the store of value and standard of deferred payment is still a debate among Islamic economists (Hasan, 2005).

Islam does not set in detail how the terms of a currency because when Islam emerged already contained the currency first. Based on the agreement the terms of the currency are: 1) acceptability (the money is widely accepted by the public and its users), 5) divisibility (can be divided into smaller fractions), 6) legal tender (no government guarantee), 7) portability (easy to carry anywhere), and 8) durability (last long and not easily damaged when stored) (Nubika, 2018).

In 2012 the European Central Bank defines as a form of non-regulated currency created and supervised by the developer for use by its specialized members of the virtual community (Sondakh, 2016).

While the US Department of Treasury in 2013 states explicitly that virtual money as a medium of exchange that operates like a currency in certain environments, but does not have any attribute as a real currency. So virtual money has no definition as legal tender. In the case of regulation itself, circulation cannot be controlled by the local Bank

Central. What distinguishes the virtual money with electronic money (digital) is related to its existence that still has the original money underlying. As often used in debit card transactions, e-cash, e-tol, go-pay, and the like, the numbers shown in the digital nominal are representations of the ownership of a certain amount of fiat nominal value. In this case the ministry of finance and Bank Central have regulation related to this matter and its circulation can still be supervised.

2.3 Bitcoin Position In Fiqh Perspective and Islamic Finance

In *fiqh* perspective, currency terms are known as *nuqud* (Hasan: 2005). As a currency, money cannot be a commodity at the same time, because *fiqh* law has different rules between commodities and currencies. Money will not be used as an investment object because money is a medium of payment. Currency exchange (*sharf*) may only be carried out with special conditions formulated in *Fatwa Dewan Syariah Nasional-Majelis Ulama Indonesia* (DSN-MUI) or the Accounting and Audit Organization for Islamic Financial Institutions (AAOIFI). The main problem that arises in Bitcoin is not only a character that is not stable and does not have legal tender, but its own function which is used as an investment medium (commodity/financial assets) makes its form increasingly unclear (containing *syubhat*). The terms of *riba* will apply to money that contains profits from sales, in contrast to goods that are indeed allowed to profit from buying and selling activities. Based on *fiqh*, Bitcoin contains a lot of *syubhat* and is not recommended for use.

Cryptocurrency position with foreign currency is not the same. In Indonesia for example, the money that applies is money issued by a trusted government agency (for example rupiah), but may exchange it for foreign money (for example dollars) under certain conditions such as foreign travel, investment or trade in goods and services related to international market (Bank Indonesia Regulation no. 18/20 pbi 2016. In Indonesia itself, Bank Indonesia bans transactions using virtual currency (bitcoin) (Bank Indonesia regulation chapter VII article 34 number 14/40 /pbi/ 2016. In AAOIFI and Fatwa standards DSN-MUI states that foreign currency transactions may only be done directly/spot and may not be forwarded to avoid potential *gharar* and *riba* due to changes in the value of a currency in the future.

Although some foreign currencies are often unstable (sometimes weakening and rising), they are still within reasonable limits. Changes in the value

of a country's currency against another country's currency have nothing to do with the validity of the currency in the country itself. Although the money compared to foreign currencies tends to weaken, it still applies in its own country based on regulations made by the local government. Unlike Bitcoin, it can be worthless at any time if no country wants to accept it. On the other hand, the main function of Bitcoin is trading and investment tools. The function of bitcoin as a payment medium is still very limited to certain merchants and it only aims to promote the cryptocurrency itself so that its value continues to soar without having an intrinsically certain use.

Bitcoin is one of the most unique cases in Islamic finance. Unlike the conventional financial system, in the Islamic economic paradigm the status or position of a business object implies the law of *halal* and *haram*, whether Bitcoin is money, commodities, or financial assets? The following characteristics of Bitcoin are shown in Table 2.

Table 2: Position Bitcoin (Marjan, 2017)

Characteristic of Bitcoin	Money	Commodities	Financial Assets
	Acceptability (yes)	Recognized by <i>sharia</i> as valuable (Yes)	Value is dependent on the time is priced (Yes)
	Difficult to Imitate (yes)		
	Storable (yes)	Must have an intrinsic value that can be benefited from (No)	Recognized by <i>sharia</i> as valuable (Yes)
	Stability of value (No)		Identifiable/transferable (Yes)
	Legal tender (No)		Can be owned (Yes)
	Portability (Yes)	Can be owned (Yes)	Store of value (Yes)
	Divisibility (Yes)	Identifiable (Yes)	Must be backed by underlying asset/ <i>sharia</i> compliant investment activities (No)
	Durability (Yes)	Transferable (Yes)	

Based on the analysis, Bitcoin does not qualify either as money, commodity, or financial assets. In Islam, it should not intentionally seek profit from the

margin of buying and selling currency because it is included in the category of *riba*.

Moreover, one of the functions of Bitcoin is as a trading tool, it is clearly not allowed in Islam because it contains elements of *maisir* (gambling). It is regarded as a commodity raises a hardship because there is no use/intrinsic function contained in Bitcoin. Its existence becomes worthless because it serves as a means of exchange (money). While Bitcoin also cannot be said to be a financial asset because it has no underlying assets. Its value is based solely on market schemes (supply-demand) and trust, without the support of the guarantor/regulator of the government to make the future Bitcoin contains elements of *Gharar*.

3 CONCLUSIONS

The results of this study indicate that Bitcoin does not qualify either as money, commodity, or financial assets. In Islam, it should not intentionally seek profit from the margin of buying and selling currency, because it is included in the category of *riba*. One of the functions of Bitcoin is as a trading tool, it is clearly not allowed in Islam because it contains elements *maisir* (gambling). If Bitcoin is regarded as commodity then it causes a *gharar* because there is no intrinsic use/function contained in Bitcoin.

Bitcoin also cannot be said to be a financial asset because it has no underlying assets. Its value is based solely on market schemes (supply-demand) and trust. However, as a currency, money cannot be a commodity at the same time because *fiqh* law has different rules between commodities and currencies. Money will not be used as an investment object because money is a medium of payment. Based on *fiqh*, Bitcoin contains a lot of *syubhat* and is not recommended for use.

REFERENCES

Marjan Muhammad (2017), *Shari'ah Analysis of Cryptocurrency: bitcoin*. a presentation made at Shariah Fintech Forum (SFF), 8 November 2017, Hilton Hotel, Petaling Jaya.
 Hasan. Ahmad.2005. *Mata Uang Islami*. Jakarta : PT Raja Grafindo Persada
<http://www.goldscape.net> accessed 05-05-2018.
 Nubika, Ibrahim. 2018. *Bitcoin:mengenal cara baru berinvestasi generasi milenial*. Yogyakarta :Ganesa Learning

- Sondakh, Alfred M. 2016. *Berburu Bitcoin: Bagaimana Meemanfaatkan Peluang Sukses Melalui Mata Uang Global Ini*. Jakarta : PT.Gramedia
- Wijaya, Dimasz Anka, Darmawan, Oscar. 2017. *Blockchain : Dari Bitcoin untuk Dunia*. Jakarta :Jasakom.

