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Decrypting Cryptocurrency: A Fiqh Perspective on Cryptocurrencies

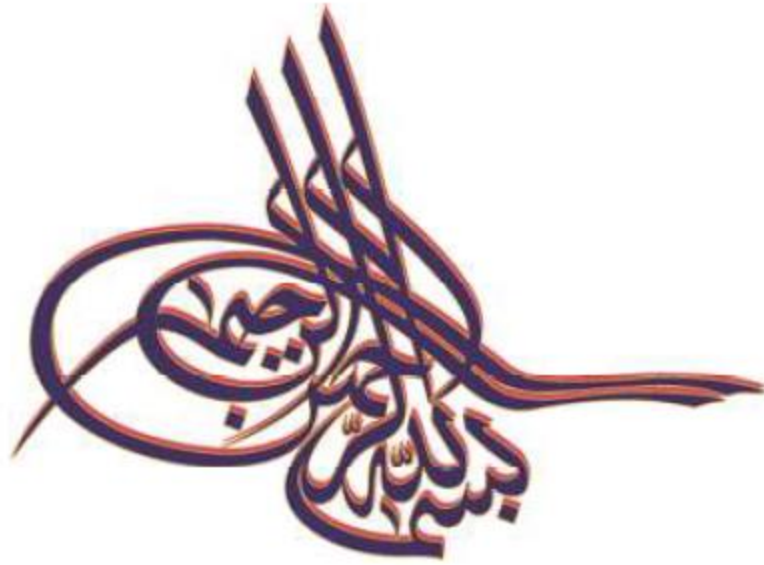
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Disclaimer: This author has never purchased Bitcoin or any cryptocurrencies nor does he intend to do so.

"الآراء في هذا البحث تعبر عن رأي الباحث وليس بالضرورة عن رأي أمجا"

Opinions in this research are solely those of the author and do not represent AMJA.



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1. INTRODUCTION

بسم الله الرحمن الرحيم

الحمد لله والصلاة والسلام على نبينا محمد

It is possible that cryptocurrency may turn out to be a fad and go the way of the pet rock. During the midst of writing this paper, cryptocurrencies have been going through a major crash, with even “stablecoins” collapsing, truly causing fear throughout the economy as billions of dollars are at risk.² However, this crash may simply be a correction to the bubble and the institution will continue. After all, the 1929 stock market crash definitely did not bring an end to stocks, even though it led to a number of suicides. Mark Cuban has called the current situation of the crypto market as a whole simply a “lull” which is similar to what the internet companies experienced in the early 2000s.³ Internet companies seem to be alive and well in 2022. On the other hand, some, including Christine Lagarde,⁴ have called cryptocurrencies worthless, and many still question whether Bitcoin is nothing more than a Ponzi scheme.⁵

In any case, a detailed discussion of the fiqh perspective of cryptocurrencies is called for. Already billions of dollars have been poured into this arena. Many Muslims have gotten involved, are considering getting involved, or wish to get involved with cryptocurrency.

² See <https://www.nbcnews.com/tech/crypto/crypto-crash-what-would-mean-for-us-economy-rcna28427> (May 17, 2022).

³ <https://decrypt.co/99894/crypto-industry-facing-same-lull-early-internet-mark-cuban>

⁴ Christine Lagarde is the president of the European Central Bank. See <https://www.techspot.com/news/94679-european-central-bank-president-calls-crypto-worthless-based.html>

⁵ Most recently, for example, Mitchell Zuckoff, “Is Cryptocurrency a Ponzi Scheme?” (May 22, 2022), <https://www.bostonglobe.com/2022/05/24/opinion/is-cryptocurrency-ponzi-scheme/>

2. WHAT ARE THOSE AMERICAN “DOLLARS”?

Much of the discussion concerning cryptocurrency revolves around the question of whether it can be considered “money.” When that question is asked by Muslim researchers, are they implying “money” like in an American dollar? But what is a “dollar” and what is it really “worth”?

First, everyone should recognize that the dollar is not tied to anything that has intrinsic value. It is not tied to gold or silver, for example. One cannot go to the Federal Reserve and demand to have one’s dollar exchanged for gold. There is absolutely nothing of that nature backing the American dollar.

Second, most of the money that is available in society has actually been created by the banks by simple accounting entries. When a person goes to a bank to borrow \$100,000, the bank does not actually move a physical \$100,000 from their “locker” into the borrower’s “locker.” All they do is enter into the borrower’s account the number 100,000. Thus, a new \$100,000 has just been created by the bank.⁶ It is sometimes referred to as “fountain pen money,”⁷ money created at the stroke of a banker’s pen.⁸

In fact, given the current reserve ratio, a bank can take \$100 and turn it into \$1,000.⁹ In fact, the bulk of the money that is currently in the American economic system is nothing more than this money created by accounting entries. According to the Federal Reserve, in February 2022, the monetary base (currency plus reserve balances) was only 6,040 billion while the main statistic for money in circulation, M1 (essentially the monetary base plus the money created by the banks), was over three times that at 20,561 billion.¹⁰ Thus, if everyone who has money in a bank account would today go to their respective bank and demand their money, the entire system would collapse. In fact, if enough people were to start to do that, the government would immediately step in and declare a “bank holiday,” a euphemism for “financial disaster,” because, simply put, that money literally does not exist. **In other words, not only is there no gold or silver to back all that money up, there is not even physical dollars or currency to back all that money up.**

⁶ Note that this means that money is created through debt, which of course involves interest. Beyond the scope of this paper is the question of how much *dhulm* (wrong and harm) is created by a system that places so much power in the hands of private banks, who in turn have their own reasons for whom they are or are not willing to lend money to (or, in other words, create money for). As will be noted later, the development of cryptocurrency was actually the result of a loss of trust in the financial industry—loss of trust as people recognized its role in the financial crisis of 2008. Meera and Larbani argue, for example, that the money creation system described above is *riba* and fails to meet *Shareeah* goals. Shapiee and Zahid stated (p. 182), “An in-depth analysis shows that fiat currencies are inherently *ribawi* (usurious) and their use involves *gharar* (uncertainty) and their roles in international markets have promoted other practices of *riba*, and *maisir* (gambling), all of which bring about economic oppressions and injustices.” Cf., Ahamed Kameel Mydin Meera and Moussa Larbani, “Part I: Seigniorage of fiat money and the *maqasid al-Shari’ah*: the unattainableness of the *maqasid*”, *Humanomics* (Volume 22, Issue 1, 2006), pp. 17 – 33; Ahamed Kameel Mydin Meera and Moussa Larbani, “Seigniorage of fiat money and the *Maqasid al-Shari’ah*”, *Humanomics* (Volume 22, Issue 2, 2006), pp. 84 – 97; Rohimi Shapiee and Anwar Zahid, “Addressing Economic Meltdown: An Evaluation of Fiat and Credit Money from Islamic Perspective,” *US-China Law Review* (Volume 11, No. 2, February 2014).

⁷ Michael McLaey, et al., “Money creation in the modern economy,” p. 16. <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2014/money-creation-in-the-modern-economy.pdf>

⁸ In a famous court case, a defendant argued that he was not liable to repay his mortgage loan from the bank because the bank did not actually forward him any money but simply created credit in their books. The defendant actually won the case but the decision was quickly overturned. See https://en.wikipedia.org/wiki/First_National_Bank_of_Montgomery_v._Daly.

⁹ The current reserve ratio is 10%. See <https://www.newyorkfed.org/research/epr/02v08n1/0205benn/0205benn.html#:~:text=The%20Federal%20Reserve%20requires%20banks,bank's%20demand%20and%20checking%20deposits>. Going from \$100 to \$1,000 is the result of the “money multiplier” effect. The money multiplier is equal to one divided by the reserve ratio. Cf., N. Gregory Mankiw, *Principles of Economics* (Boston, MA: Cengage, 2021), pp. 599-600.

¹⁰ <https://www.federalreserve.gov/releases/h6/current/default.htm>

This process of banks creating money is not a hidden fact. Everyone who has taken a course on macroeconomics is well aware of it.¹¹ Yet, still, people desire and value those dollars that are not truly supported by anything—except by fiat or government decree.¹² This demonstrates that “money” truly is whatever people are willing to accept as “money.” At least from an economist’s perspective that is the case. Of course, that may or may not be acceptable from a Shareeah aspect.

It is interesting to note that, as far as this author is aware of, the vast majority of Muslim scholars throughout the world have not objected to the use of the American dollar. This brings up some important questions: Is this “acceptance” merely the result of applying the principles of necessity and/or *umoom al-balwaa* (an issue that afflicts everyone and that simply cannot be escaped)? Is this “acceptance” the result of a conclusion that such money creation is acceptable from a Shareeah perspective because, for example, it is backed by a government decree? Or, is this “acceptance” a result of ignorance¹³ of the process in which dollars are created by the banks and hence sound rulings concerning such money are not produced?

There have been some Muslims who have objected to the current state of “money” in the world and have demanded a radical paradigm shift. In particular, there are those who insist that money from an Islamic perspective must be gold or silver.¹⁴ This has even led to the introduction of a modern-day “Islamic gold dinar” and “Islamic silver dirham.” In 2006, the Malaysian state of Kelantan started producing gold dinars and silver dirhams. (See Figure 1.) However, it seems that the Malaysian federal government did not accept this as legal tender. In addition, although the idea of gold dinars may have met with some success in Malaysia,¹⁵ the coins definitely did not take off, as probably most Muslim in the world have never even heard of this alternative form of money. Furthermore, some writers have also come out against this movement, arguing that it is not supported by religious proofs.¹⁶

11 Cf., N. Gregory Mankiw, *Principles of Economics* (Boston, MA: Cengage, 2021), pp. 598-9.

12 The United States government has approved the process of banks creating money and declared that “created” money legal to be tender. However, it is not always the case that a people are willing to accept its own country’s legal tender, as sometimes people may demand to be paid in a foreign currency.

13 Jaffar, et al., found that “most Shariah scholars are unaware of and confused about the mechanics underpinning the creation of money, especially with respect to FRB [Federal Reserve Bank] as it is practiced by the conventional and Islamic banking systems.” They found that most of the Shariah scholars they interviewed were startled and confused by the discussion of the creation of money via debt. See Syammon Jaffar, Adam Abdullah and Ahamed Kameel Mydin Meera, “Fiat Money: from the current Islamic finance scholars’ perspective,” *Humanomics*, <https://doi.org/10.1108/H-01-2017-0013>.

14 See, for example, one of the strongest proponents of such a view, Imran N. Hosein, *The Gold Dinar and Silver Dirham: Islam and the Future of Money* (San Fernando, Trinidad and Tobago: Masjid Jamiah, 2007). Based on this hadith, لَا يَأْتِيَنَّ عَلَى النَّاسِ زَمَانٌ لَا يَنْفَعُ فِيهِ إِلَّا النَّيَّارُ وَالذَّرْهَمُ “A time is certainly coming over mankind in which there will be nothing (left) that will be of use (or benefit) save a Dinār (i.e., a gold coin) and a Dirham (i.e., a silver coin),” He writes (p. 6), “This prophecy clearly anticipates the eventual collapse of the fraudulent monetary system now functioning around the world.” However, this is a weak hadith. See Shuaib al-Arnaaoot, et al., footnotes to Ahmad ibn Hanbal, *Musnad Ahmad* (Beirut, Lebanon: Muassasah al-Risaalah, 2001), vol. 28, pp. 433-4.

15 For an analysis of the uses of the gold dinar in Malaysia, see Salmy Edawati Yaacob, “The Reality of Gold Dinar Application in Malaysia,” *Advances in Natural and Applied Sciences*, 6(3): 341-347, 2012

16 Some Muslim economics have responded to the claim that money in Islam must be based on a gold dinar. See, for example, Azhar Mohamad and Intiaz Mohammad Sifat, “Gold vis-à-vis money in Islam: the case against Dinarist Movement”, *International Journal of Law and Management*, Vol. 59 Issue: 6, (2017), pp.977-992, <https://doi.org/10.1108/IJLMA-06-2016-0061>. It is well beyond the scope of this paper to enter into this debate but it will definitely have to be commented on later.



Figure 1. Gold Dinars and Silver Dirhams of the Malaysian State of Kelantan
Source: <https://emasunik2u.blogspot.com/2010/08/dirham-dan-dinar-kelantan-kgt.html>

In addition to that, the well-known extremist group Daesh or ISIS also tried to introduce a gold dinar. In 2015, their propaganda arm put out a video entitled, *"The Rise of the Khilafah and the Return of the Gold Dinar."*¹⁷ It seems that this was also not very successful and they ended up fluctuating between using their new coins and American dollars.¹⁸

The possible problem with money as it is now and the lack of a successful "Islamic" alternative brings up an interesting question: Could cryptocurrency be an Islamically acceptable alternative?.

¹⁷ https://en.wikipedia.org/wiki/Islamic_State_dinar. Also see <https://english.religion.info/2018/12/23/the-return-of-the-gold-dinar-an-analysis-of-the-islamic-state-coin-production/>. Some people were arrested in Turkey for printing these coins, <https://www.straitstimes.com/world/middle-east/turkey-arrests-six-over-minting-coins-for-isis>.

¹⁸ "De facto, however, the currency saw limited circulation. In the areas where it saw circulation, it was forbidden to use other currencies with the exception of the dollar. Other areas saw the use of different types of currencies such as the Syrian pound and the Iraqi dinar." https://en.wikipedia.org/wiki/Islamic_State_dinar

3. WHAT IS MONEY?

In Mishkin's world famous textbook on money and banking, he writes, "Economists define *money* (also referred to as the *money supply*) as anything that is generally accepted as payment for goods or services or in the repayment of debts."¹⁹ So, in general, money is whatever others are willing to as payment, regardless of what that material or item that money may be..

3.1 The Roles of Money

From that definition of money, one can branch into what roles money then needs to play in society in order to be useful and efficient. In general, three or four roles are usually discussed in textbooks: (1) a medium of exchange, (2) a unit of account, (3) a store of value, and (4) a standard of deferred payment. It should be noted that not all that qualifies as money may necessarily fulfill these roles in an excellent manner. For example, Figures 2 and 3 show the recent fluctuations in the value of the Turkish Lira vis-à-vis the American Dollar and the recent inflation rates in Turkey. During such wild swings in a currency's value accompanied by high inflation, the currency is definitely not a good "store of value" and many merchants may even request payments in foreign currencies, yet no economist would deny that the Turkish Lira, for example, was and still is "money."



Figure 2. Turkish Lira Exchange Rate Fluctuations vis-a-vis American Dollar
Source: <https://www.xe.com/currencycharts/?from=USD&to=TRY>

¹⁹ Frederic S. Mishkin and Apostolos Serletis, *The Economics of Money, Banking, and Financial Markets* (Seventh Canadian Edition) (Ontario, Canada: Pearson Canada Inc., 2020), p. 50.

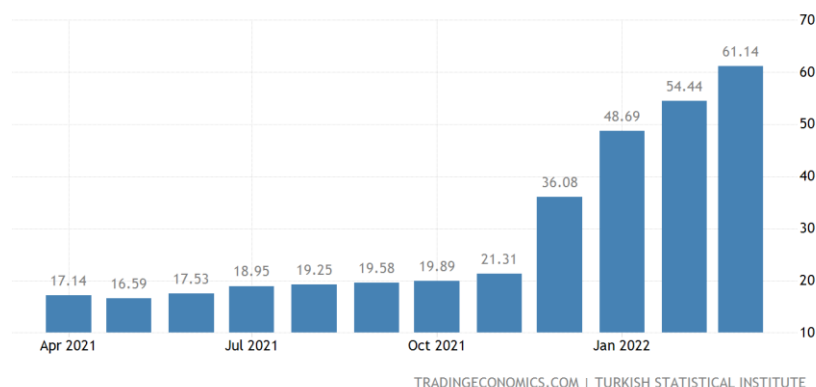


Figure 3. Inflation Rate Turkey 2021-2022

Source: <https://tradingeconomics.com/turkey/inflation-cpi>

It is important to note that “money” is different from “wealth.” According to Mishkin, “wealth” is “the total collection of pieces of property that serve to store value. Wealth includes not only money but also other assets, such as bonds, common stock, art, land, furniture, cars, and houses.”²⁰ The significant point here is that “money” is distinct from wealth as a whole and has specific functions to perform, which other forms of wealth do not perform. Similarly, the word “asset” is a much more general concept than “money” as well. Mishkin defines asset as, “any financial claim or piece of property that is subject to ownership.”²¹

3.2 The History, Evolution, and Different Types of Money

Money has definitely evolved over the centuries. Early on, humans found money to be very useful. Before money, people needed to rely on barter. The problem with barter is what is known as the problem of “double coincidence of wants,” (if a person only possesses a 1965 VW Beetle to trade, he or she is going to have to find someone willing to accept such a car in trade.) Money solved this problem by offering a medium of exchange that the sellers knew that they would in turn be able to use to buy other items.

Early on, different natural resources or commodities were adopted as money. Such money is sometimes referred to as “primitive money.”²² An interesting case in point is the cowrie shell. Davies writes,

Of the many hundreds of objects that have been used as primitive moneys we begin with the cowrie because of all forms of money, including even the precious metals, the cowrie was current over a far greater space and for a far greater length of time than any other. The cowrie is the ovoid shell of a mollusc widely spread over the shallower regions of the Indian and Pacific Oceans. It comes in various types, colours and sizes,

²⁰ Ibid., p. 51.

²¹ Ibid., p. 3.

²² In an interesting work, Gregory demonstrates how governments attempt to abolish “primitive,” or what he calls “savage money.” See C.A. Gregory, *Savage Money: The Anthropology and Politics of Commodity Exchange* (Australia: Harwood Academic Publishers, 1997), passim. There is no question that the control over the money supply by the federal government (or the sometimes independent central bank) is the source of a great deal of power. President James Garfield is claimed to have said, “He who controls the money supply of a nation controls the nation.” <https://www.allgreatquotes.com/quote-186324/>

from about the size of the end joint of the little finger up to about the size of a fist. The most prolific single source was the Maldive Islands whence for hundreds of years whole shiploads were distributed around the shores of Oceania, Africa, the Middle and Far East, their values rising as they became scarcer farther from their point of origin. Quite apart from their religious and obvious ornamental qualities, the cowries are durable, easily cleaned and counted, and defy imitation or counterfeiting. For many people over large parts of the world, at one time or other they have appeared as an ideal form of money. Modern moneys found the cowrie a formidable rival, especially for items of small value. An interesting example of their modern use was described to the writer by one of his Nigerian students, who as a small boy regularly collected the smaller cowries which tended to be lost during the hustle and bustle of the open Ibo fair days. If he managed to collect between six and eight of these, he could purchase something useful to eat or play with. This personal illustration is also a powerful reminder of the speed of change in financial matters in developing countries, for the student concerned, Dr G. O. Nwankwo, later became the first professor of banking and finance at the University of Lagos and an executive director of the Central Bank of Nigeria and chairman of one of the country's largest commercial banks, in which capacities he has represented his country abroad at OPEC and similar conferences – from cowries to petro-currencies in the course of a single career.²³



Figure 4. Assorted Cowrie Shells

Source: <https://www.pinterest.com/pin/46513808629750616/>

As is well-known, by the time of the Prophet Muhammad (peace and blessings of Allah be upon him) gold and silver were the basis of dinar and dirham, respectively. Gold and silver, of course, were valued as being precious metals, meaning they have intrinsic value to them. Hence, they have historically been commonly used as money.

²³ Glyn Davies, *A History of Money: From Ancient Times to the Present Day* (Cardiff, Wales: University of Wales Press, 2002), p. 36.

However, money continued to evolve and develop after gold and silver became standard usage in many parts of the world. Instead of discussing the history of money, more important is an understanding of the different types of money that have existed or continue to exist.

Money can be divided into the following different types:

Commodity money refers to something used as money that is a good in and of itself. That is, it has value independent of its status as money. In other words, it has intrinsic value besides being used for money. For example, gold, silver, rice, cigarettes, alcohol, shells, and other items have all been used as money at one time or another. These have some shortcomings with respect to their use as money, so over time most of them fell out of use as money.

Representative money refers to paper money that is actually backed by a commodity, such as gold or silver, and as such has no intrinsic value to speak of. The United States at one time was on a silver standard and at another on a gold standard. Meaning, one dollar actually represented a certain amount of silver or gold, respectively. The dollar is no longer "representative money" as it currently is not attached to gold, silver, or anything else. (Figure 5 demonstrates how the change took place in the bills themselves as they used to say "gold certificate" and "in gold coins payable...," while such is missing from the dollar today.)



Figure 5. The Change in the US Dollar from a Gold Certificate to Simply Legal Tender
Source: <https://www.worldbanknotescoins.com/2014/10/1928-20-dollar-gold-certificate.html>

Fiat money is money that is not backed by any commodity and is money simply because a government has declared it to be money or legal tender. The bottom \$20 bill shown in Figure 5 is of this nature. It is stated to be legal tender. Its value lies in the fact that the United States government and others are willing to accept it as payment.

There are some basic differences between commodity money and fiat money. A commodity or representative money based on gold, for example, will have its value tied to the value of gold, will be redeemable in gold, and will have its money supply determined by the amount of gold. Fiat money, such as the current American dollar, is based only on one's confidence in it, cannot be redeemed for anything, and its amount will be determined by the monetary authorities (who, theoretically, are free to print as much of it as they wish). Finally, if commodity money is lost, completely damaged or destroyed, it is forever lost. However, if fiat money is damaged or destroyed, new fiat money can be printed to replace it.

Some economists also discuss "electronic money" or "e-money." Debit cards, company cards (such as Starbucks cards²⁴) and Paypal are examples of this category. These essentially replace cash. However, in reality, this is nothing more than representative money, as those cards are all tied to some account that has dollars, for example, deposited in them.

Beyond that there is something known as "virtual money," which is not based on cryptography (and therefore not cryptocurrency). This "virtual money" has very limited usage but it can act like money. For example, air miles in frequent flyer clubs or the miles one earns from a credit card fall into this category. The use of that "money" is quite restricted but, in reality, one is able to purchase something with those miles.²⁵

The expectation is that money will continue to evolve, relying less on actual "cash" and more and more on "digital money." Writing back in 2002, The Organisation for Economic Co-operation and Development (OECD) stated,

To put it in succinct and current terms, money's destiny is to become digital. This general conclusion emerges from an examination of money's long historical record and its likely relationship to future socioeconomic changes. Historically, money has been on the path towards greater abstraction, or pure symbolic representation disassociated from a precise physical materialisation, for millennia. Less evident, when looking to the future, is the question of the rate at which the last vestiges of physical money will disappear and, in the minds of some, if it is really destined to vanish.²⁶

Of course, yet another, newer form of money has recently been introduced: cryptocurrency. This shall be discussed in detail in a later section in-shaa-Allaah.

24 Starbucks money holdings in these cards is greater than what some banks have in deposits. See, "Starbucks has more customer money on cards than many banks have in deposits," <https://www.marketwatch.com/story/starbucks-has-more-customer-money-on-cards-than-many-banks-have-in-deposits-2016-06-09>.

25 Cf., Farrukh Habib and Salami Saheed Adekunle, "A Case Study of Bitcoin and Its Halal Dimension," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 241.

26 OECD, *The Future of Money* (Paris, France: OECD, 2002), p. 7. Note that that was written in 2002 and Bitcoin was not introduced until 2009.

4. WHAT IS MONEY? REVISITED—AN ISLAMIC PERSPECTIVE

The above discussion is essentially what one could find written by any “secular economist.” Does the answer to the question, “What is money?” change if the question is changed to, “What is money from an Islamic perspective?” In particular, is there some form of money as defined by contemporary capitalist economics that would not be acceptable as money from an Islamic perspective? Unfortunately, the response to that question from contemporary Muslim economists is quite varied. For some contemporary Muslim economists, the answer to that question is clearly, “Yes, there are some forms of money which are *haram* for which Muslims must find a satisfactory alternative.” In particular, as was mentioned earlier, these writers consider any money other than gold and silver to be improper. Others see absolutely nothing wrong with, for example, the American dollar (fiat, paper money) and the way that it is created today (as described earlier).²⁷

In an enlightening paper, Jaffar, et al., interviewed twenty-six specialists in Islamic finance²⁸ to get their take on the question of fiat money from an Islamic perspective.²⁹ Figure 6, from that paper, is a table showing the results of their survey. One sees (question iii) that the vast majority of those interviewed (80.8%) do not consider gold and silver to be the only forms of money in Islam. The majority of those questioned (57.7%) also stated that fiat money is acceptable in Islam.

H 33,3 286	Questions	Results
	<i>Distribution of questionnaire:</i>	<i>Respondents' opinions:</i>
	i Most money is created as debt when commercial banks give out new loans	73.1% agreed; 3.8% disagreed; and 23.1% didn't know
	ii We should move away from paper money to gold and silver as money	15.4% agreed; 15.4 disagreed; and 69.2 were neutral
	iii Only gold and silver are money in Islam	19.2% agreed; and 80.8% disagreed
	iv Types of money in Islam	50% – gold and silver, consumption commodities, representative money, electronic money and paper currency 15.4% – gold and silver, consumption commodities, representative money and paper currency 15.4% – gold and silver, consumption commodities and representative money 7.7% – gold and silver, consumption commodities and paper currency 3.8% – gold and silver, representative money and paper currency 3.8% – gold and silver, consumption commodities, representative money and electronic money 3.8% – gold and silver and consumption commodities
	v Fiat money is acceptable in Islam	57.7% agreed; 11.5% disagreed; and 30.8% were neutral
	vi Fiat money is forbidden (<i>haram</i>)	15.4% agreed; 76.9% disagreed; and 7.7% were neutral
	vii Interest charges are acceptable in Islam	100% disagreed
	viii Interest rates can be used as benchmarks in Islamic finance	32% agreed; 36% disagreed; and 32% were neutral
	ix Interest charges are not <i>riba</i> in Islamic finance	92.3% disagree; 7.7% didn't know
	x Fractional-reserve banking system practiced today is acceptable in Islam	19.2% agreed; 42.3% disagreed; and 38.55% didn't know

Table II.
Summary of results

²⁷ One of the best and most detailed discussions of paper money from an Islamic perspective is Abdullah ibn Manee, *al-Waraq al-Naqdi: Haqeeqatuh, Tareekhuh, Qeematuh, Hukmuh* (published by the author, 1984), *passim*.

²⁸ Note that the field of finance is different from the field of economics. One would expect specialists in Islamic economics to have a clearer picture of this question than specialists in Islamic finance.

²⁹ Syammon Jaffar, Adam Abdullah, Ahamed Kameel Mydin Meera, “Fiat money: from the current Islamic finance scholars’ perspective,” *Humanomics*, Vol. 33 Issue: 3 (2017), pp.274-299, <https://doi.org/10.1108/H-01-2017-0013>

Figure 6. Results from the Findings of Jaffar, et al., "Fiat money: from the current Islamic finance scholars' perspective."

4.1 What Can be Money from an Islamic Perspective?

The disagreement over the nature of money in Islam is not restricted to contemporary scholars. It definitely has a long history and different fiqh *madhhabs* have varying approaches to the question as well. Mohamad and Sifat, in their paper arguing against the Islamic gold dinar movement described earlier, have laid out in a table some of the classical differences of opinion concerning money in Islam. Figure 7 is from their paper and spells out some of the differences between those scholars who argue that money must be commodity money (metallic, in particular) versus those who argue that such is not necessary, all that matters is that what is money qualifies as a standard value (the *numeraire* view).³⁰

Particulars	The Metallic View	The <i>numeraire</i> View
Summary	<ul style="list-style-type: none"> Only gold and silver count as money 	<ul style="list-style-type: none"> Moneyness doesn't depend on physical content Emphasizes efficiency in serving as medium of exchange, store of value, and <i>numeraire</i> unit
Rationale	<ul style="list-style-type: none"> Prophetic practice Mention of gold and silver as precious objects both in this world and '<i>akhirah</i>' in Qur'an Necessary for dispensing criminal justice; e.g. to implement blood money and thievery punishments To dissuade <i>iktinaz</i> (hoarding) Historic stability of gold and silver 	<ul style="list-style-type: none"> No explicit legislative scripture on what constitutes money; no definitive command to use gold or silver Accommodates '<i>urf</i>' (custom, convention) Delegates authority to learned '<i>ulama</i>' to decide what constitutes money based on economic factors, time, necessity, removal of hardship, etc.
Advocates	Ahnaf: Abu Hanifah, Abu Yusuf, Jassas	Ahnaf: al-Shaybani
	Malikiyyah: Ibn Nafi', 'Illiyish, al-Adawi	Malikiyyah: Malik, al-Hattab, al-Wansharisi
	Shafi'iyyah: al-Nawawi, al-Ghazali, al-Suyuti, al-Maqrizi	Hanabilah: Ahmad, Ibn Taymiyyah, Ibn Qayyim
	Modern: al-Nabahani, Imran Hosein, Baqir al-Sadr, Ibn Badran	Modern: Taqi Uthmani, Islamic Fiqh Academy, Yusuf al-Qaradawi, Muslim World League

Figure 7. Differences of Opinion Whether Money in Islam Must be Commodity/Metalic Money
Source: Azhar Mohamad, Imtiaz Mohammad Sifat, "Gold vis-à-vis money in Islam: The case against Dinarist Movement"

The differences that exist among these *madhhabs* are definitely relevant to the discussion of the permissibility of cryptocurrency in Islam. The different fiqh positions are used as arguments by contemporary authorities when they write about cryptocurrency. Hence, they will be dealt with in more detail later when specific arguments related to cryptocurrency are discussed, in-shaa-Allaah.

³⁰ Azhar Mohamad, Imtiaz Mohammad Sifat, "Gold vis-à-vis money in Islam: The case against Dinarist Movement", International Journal of Law and Management, <https://doi.org/10.1108/IJLMA-06-2016-0061>, p. 4.

Definitely, though, there are some aspects that all scholars would agree upon. For example, all scholars would agree that having commodity money (such as gold and silver coins) is something permissible in Islam. Thus, one finds Muslim economists advocating what is known as “the gold standard” for money.³¹ However, even then, not all Muslim economists agree that such may be the best approach in contemporary times.

According to Mufti Faraz Adam, al-Ghazaali refers to gold and silver as “natural money” which Allah had created for the purpose of use as “money,” such as a measure of value and the like.³² Adam further notes, “What is interesting to consider is that besides their unique properties, gold and silver have nothing unique about them to signify the attribute of *Thamaniyyah* [monetary value]. Nevertheless, across time, humans have naturally valued gold and silver which led them to use it as currency. It is as if the *Thamaniyyah* is placed by Allah into the hearts of humans for gold and silver and thus, *Thamaniyyah* has become a permanent description of gold and silver.”³³

Although it may be true that humans have commonly used gold and silver as money, as it was at the time of the Prophet (peace and blessings of Allah be upon him), it is also well-established that humans have often used other things as money, as was mentioned earlier.³⁴ Actually, the Shareeah texts do not lay down specific conditions for what can be considered money. It is part of the flexibility of the Shareeah that some matters have not been specifically defined, thus leaving the matter to “language” and “custom or convention,” as ibn Taimiyyah argues.³⁵ Imam Malik stated that if animal skins were used by the people as money, then its ruling would be the same as that of gold and silver.³⁶ There is a quote from Imam Ahmad as well that demonstrates that if a people accept anything as a currency, then, he stated, he “hopes there is no harm in that.”³⁷ Within the Hanafi school, according to Adam,

Imam Abū Ḥanīfah (d.150 H) and Imam Abū Yūsuf (d.182 H) were of the opinion that a commodity can be considered as money upon the agreement of only the two transacting parties. Whereas, Imam Muhammad (d.189 H) viewed that for commodities to be considered currency and money, general and widespread *Iṣṭilāḥ* [usage] is required for commodities to be money and currency. Thus, according to Imam Muhammad (d.189 H), only when commodity has public acceptance will it be regarded as money. Mufti Muhammad Taqi Uthmani states that the preponderant position is that of Imam Muhammad. Thus, *Iṣṭilāḥ* [usage] can only be activated and deactivated by the public and not by the transacting parties alone.³⁸

31 Cf., Hossein Askari and Nouredine Krichene, *The Gold Standard Anchored in Islamic Finance* (New York, New York: Palgrave MacMillan, 2014), *passim*. Even among secular economists there is a minority, most notably among the Austrian school of economics, who argue that a gold standard would be best. In addition, Hazik Mohamed makes a very important observation, “For argument's sake, if the world decided to switch back to the gold standard and adopt an Islamic Gold Dinar system, would this unequivocally mean the end of financial manipulation and debt crises? We doubt so as history has already shown us otherwise. No system is free from greed and manipulation.” Hazik Mohamed, “Gold Standard (Dinar) and Fiat Money: A Comparative View from Traditional and Modern as well as Conventional & Islamic Perspectives,” pp. 14-15.

32 Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 12.

33 Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 12.

34 Ibn Manee argues that the established history of money puts into question that idea that gold and silver were naturally money. That idea is not something proven directly in the Quran and Sunnah. See Abdullah ibn Sulaimaan ibn Manee, *Al-Waraq al-Naqdi: Haqeeqatuh, Tareekhuh, Qeematuh, Hukmuh* (published by the author, 1984), p. 21.

35 Ahmad ibn Taimiyyah, *Majmoo al-Fataawaa Shaiikh al-Islaam ibn Taimiyyah* (Riyadh, Saudi Arabia: Majma Malik Fahd, 1995), vol. 19, p. 251.

36 Malik ibn Anas, *al-Mudawwanah* (Beirut, Lebanon: Daar al-Kutub al-Ilmiyyah, 1994), vol. 3, p. 5.

37 Quoted in Abdullah ibn Ahmad ibn Qudaamah, *al-Mughni* (Cairo, Egypt: Maktabah al-Qaahirah, 1968), vol. 4, p. 40.

38 Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), op cit., p. 16.

If it were not the case that money is not restricted to gold and silver alone, then the “paper money” that is in existence today should not be accepted by any scholar.³⁹ In many ways, the discussion concerning cryptocurrency could parallel the fiqhi discussion of the acceptance of paper money. Perhaps the quintessential study of the Shareeah position on paper money is ibn Manee’s *al-Waraq al-Naqdi*.⁴⁰ Ibn Manee discussed in detail the different views concerning paper money—especially those views that insist that it is not “money.” These views are (a) paper money is nothing other than simply an IOU; (b) paper money is only a commodity; (c) paper money is the same as *fulloos* (or copper money); and (d) paper money is simply a substitute or representative of gold or silver. Although all of those views may have a semblance of proof behind them, ibn Manee critiqued and debunked all of them and demonstrated that “paper money,” from a Shareeah perspective, is simply “money.”

Thus, there is actually nothing a priori in the Shareeah definition of money that would necessarily preclude Bitcoin or other cryptocurrencies from being considered money.

4.2 The Purpose of Money from an Islamic Perspective

The prohibition of *riba* (“interest”) has a direct impact on the Islamic perspective of money. The idea of making money off of money not connected to any real economic activity is a characteristic of *riba*. Money in Islam is not supposed to be a “commodity.” This has been the view of numerous scholars throughout history.

Abu Haamid al-Ghazaali stated that Allah created dinars and dirhams to be the measure of value of all other things and the means to procure all other things, and are not to be sought for themselves.⁴¹ Ibn Taimiyyah also stated that money as a measure of value is not to be intended for its own benefit, as that would then defeat the purpose of money.⁴² Ibn Taimiyyah’s student, ibn al-Qayyim, has even stronger words, “Money is never sought for itself; rather, it is used as a means to gain commodities. When money begins to be treated as a commodity and becomes the object of transactions, the entire [economic] system will become corrupted and in crisis.”⁴³

Al-Ghazaali wrote,

One who opens the business of purchase and sale of gold and silver in order to earn profit or to take interest will be working against the plan and object of Allah and therefore commit sin. He is ungrateful to the gift of God as these coins are created for other purposes and are not needed for themselves. When someone is trading in dirhams and dinars themselves, he is making them as his goal, which is contrary to their objectives. Money is not created to earn money, and doing so is transgression..... The

³⁹ If they do accept it simply as a necessity, then they should be working to get out of the necessity and also use it, that is paper money, only to that amount that is absolutely needed, and no more—as that is a general principle regarding resorting to things out of necessity.

⁴⁰ Abdullah ibn Sulaimaan ibn Manee, *Al-Waraq al-Naqdi: Haqeeqatuh, Tareekhuh, Qeematuh, Hukmuh* (published by the author, 1984), *passim*.

⁴¹ Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 9.

⁴² Cf., Ibid., p. 9. ibn Taimiyyah, *Majmoo al-Fataawaa*, vol. 29, pp. 471-2 and 473. See also Abdul Azim Islahi, *Economic Concepts of Ibn Taimiyyah* (Leicester, United Kingdom: The Islamic Foundation, 1996), p. 140.

⁴³ Quoted in Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 9. Originally from *Ilaam al-Muwaqieen*.

two kinds of money [gold and silver] are means to acquire other things; they are not meant for themselves.⁴⁴

To emphasize this role of “money,” Adam quotes the following verse,

وَلَا تُؤْتُوا السُّفَهَاءَ أَمْوَالَكُمُ الَّتِي جَعَلَ اللَّهُ لَكُمْ قِيَمًا

«And do not give the weak-minded your property which Allah has made a means of sustenance for you » [An-Nisaa: 5]

Although the verse specifically mentions “wealth,” Adam’s comment may still be valid,

The word used to describe wealth in this verse is *Qiwam*. This refers to something made to maintain, support and sustain others. This word reflects the true essence of money; money is a powerful means which Allah has created to upkeep and maintain the entire worldly system. It is the means to an end; not an end in and of itself. The end goal of money is to sustain one’s worldly affairs to facilitate focus on the Hereafter.⁴⁵

4.3 A Governmental Source of Money?

It has been narrated that Imam Ahmad said that it is not proper for anyone to mint *dirhams* except the ruler.⁴⁶ Imam al-Nawawi wrote, “It is disliked for the citizenry to mint *dirhams* even if they are pure.”⁴⁷ Amri and Mohammed quote ibn al-Qayyim as saying, “If the sultan (ruler) forbids the use of a currency, it is forbidden to use such a currency in a permissible transaction.”⁴⁸

Such views are very understandable. Counterfeit moneys—like all counterfeit items—can produce a lot of harm and injustice. The citizens’ well-being is influenced by the strength and trustworthiness of their money.

Interestingly, though, at the time of the Prophet (peace and blessings of Allah be upon him) there were two types of currency in use among the Arabs. One was the Byzantine gold dinar and the other was the Persian silver dirham. The Prophet (peace and blessings of Allah be upon him) himself accepted and used those two coins, which during his lifetime had a fixed exchange rate between them. Furthermore, the Prophet (peace and blessings of Allah be upon him) did not take any steps to establish his own mint or source of money. Also, the Rightly-Guided Caliphs accepted the international system as it was and did not alter it or challenge it. It was not until the time of the Umayyads that the Muslim government started to produce its own money and currency.

Some *madhhabs* have looked at the reality as it was in the time of the Prophet (peace and blessings of Allah be upon him) and concluded that for a currency to be acceptable from an Islamic perspective, it must be backed by an authorized government. This is a curious conclusion to say the least. There is no explicit Quranic or Sunnaic text that establishes this position. True, it was the reality at the time of the Prophet (peace and blessings of Allah be upon him), yet there is no

44 Quoted in Muhamed Zulkhibri, “*Halal* Cryptocurrency and Financial Stability,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 44.

45 Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 10.

46 Al-Qaadhi Abu Yala al-Faraa, *al-Ahkaam al-Sultaaniyyah* (Beirut, Lebanon: Daar al-Kutub al-Ilmiyyah, 2000), p. 181.

47 Muhiy Al-Deen al-Nawawi, *Raudhah al-Taalibeen wa Umdah al-Mufteen* (Beirut, Lebanon: al-Maktab al-Islami, 1991), vol. 2, p. 258.

48 Mohamed Cherif El Amri and Mustafa Omar Mohammed, “The Analysis of Cryptocurrency Based on Maqasid al-Shariah,” in Billahi, p. 128. Unfortunately, they do not provide the source for their quote.

statement or action from the Prophet (peace and blessings of Allah be upon him) that suggests in any way that it was anything beyond the mere custom of his time. Would this also imply any government, no matter how oppressive or anti-Islamic it might be? For example, the Persian Empire at the time of the Prophet (peace and blessings of Allah be upon him) and afterwards clearly opposed Islam and Muslims and yet such is a governmental authority whose currency is considered acceptable from a Shareeah perspective?

Rationally speaking, one could argue that there are clear benefits to requiring a governmental source for "money." This could have been the entire point of Imam Ahmad's and al-Nawawi's statements quoted above. Adam writes,

It is evident that the jurists and economists in Islam favoured a centralised monetary system because of the following reasons:

- 1) Trust in the currency
- 2) Presence of a regulatory framework
- 3) Secure system
- 4) Wide acceptance
- 5) Ease for the people in pricing and transacting
- 6) A benchmark for transactions

Thus, if these characteristics are found in a decentralised system, there is nothing to prohibit such a system in Islam. These underpinning principles are the ideals for currency and money in Islam...

Considering that a centralised system is not necessary, Shaykh Abdullah al-Mani' states: "Money is thus whatever is agreed to be such, whether by government authority or public practice." Thus, money can be determined by centralisation and decentralisation. If a decentralised system can provide benefits similar to that of a centralised system, a medium of exchange can become money through public practice and widespread acceptance.⁴⁹

Thus, if such benefits could be attained without government involvement, such as via blockchain technology for example, then government-backing for a currency should no longer be considered a Shariah requirement.

The silence of the Quran and Sunnah on this issue may actually *speak* volumes. It is known that the Shareeah has been meant for all times until the Day of Judgment. At the time of the Prophet (peace and blessings of Allah be upon him) it may not have been practical to even hint of a currency free of government control. However, the time for it could have been coming after the death of the Prophet (peace and blessings of Allah be upon him), like current times. The Quran and Sunnah remaining silent on this issue has left the door open for the permissibility of this possibility.

In any case, it is clear that those who argue that a Shareeah-acceptable currency must be backed by some government do not, from an Islamic legal theory perspective, have any clear support to base this view on. Perhaps though the basis is a *maslahah* or public benefit type of argument. This also would not necessarily preclude the acceptability of Bitcoin or other

49 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), pp. 47-48.

cryptocurrencies. As was mentioned earlier, Bitcoin was first developed as a result of a financial crisis—driven by banks but under the auspices of governments with their fiat monies—wherein people lost trust in the financial system. This would imply that the people's *maslahah* or well-being could possibly be found in taking such control away from the governments. In addition, it is possible that Bitcoin or other cryptocurrencies may simply operate alongside the fiat currencies and not actually cause any harm, simply being an alternative for convenience, for example.

5. INTRODUCTION TO CRYPTOCURRENCY

"Crypto-assets" may be divided into five categories: Currency tokens or cryptocurrency (like Bitcoin, Litecoin); utility tokens (FileCoin); Equity tokens (DAO); Commodity tokens (GoldX); Hybrid tokens (Ether, Petro).⁵⁰ By now, most likely everyone has heard of cryptocurrency in general and Bitcoin in particular. Cryptocurrency is defined in Wikipedia as, "a digital currency designed to work as a medium of exchange through a computer network that is not reliant on any central authority, such as a government or bank, to uphold or maintain it."⁵¹ Cryptocurrencies differ from e-money in that e-money represents banknotes and is regulated by government-authorized financial institutions. Cryptocurrencies, on the other hand, are intended to be free of state authority while also not tied to any money other than itself. The essence of what Bitcoin, for example, is all about is described in the first line of its white paper, "A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution."⁵² Antonopolous has defined Bitcoin as, "a collection of concepts and technologies that form the basis of a digital money ecosystem."⁵³ (Of course, the fiqh ruling concerning something is not going to be based on what the item is named, such as "currency," but what the item is in reality.)

Thus, cryptocurrencies can be viewed as a new revolution in finance. In fact, Bitcoin, the earliest cryptocurrency, was developed in response to the financial crisis of 2008. The loss of trust in the financial system at that time opened the door for new alternatives. According to Oziev and Yandiev, before cryptocurrency there were three models of financial relations: classical, corporate, and Islamic. Digital finance has since become the fourth model.⁵⁴

The popularity of cryptocurrencies can be seen by the fact that as of May 8, 2022, the global crypto market capitalization was \$1.55T.⁵⁵ At the same time, many may not be aware that many different cryptocurrencies have been introduced. In fact, as of March 2022, there were over 18,000 cryptocurrencies in existence.⁵⁶ The ten leading cryptocurrencies with respect to market cap as of May 2022 are given in Figure 8. A couple of them will be introduced here and then afterwards some of the comments will have to be kept general. (Some cryptocurrencies started off as jokes and

50 Cf., Farrukh Habib and Salami Saheed Adekunle, "A Case Study of Bitcoin and Its Halal Dimension," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 236.

51 <https://en.wikipedia.org/wiki/Cryptocurrency>. Accessed May 8, 2022.

52 Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," p. 1. (Available at <https://bitcoin.org/bitcoin.pdf>.) Note that many consider "Satoshi Nakamoto" to be simply a pseudonym, perhaps representing a group of people. Of course, this has added to the mystery of Bitcoin.

53 Andreas Antonopoulos, *Mastering Bitcoin* (Beijing, China: O'Reilly Media, 2015), p. 1.

54 Gapur Oziev and Magomet Yandiev, "Cryptocurrency from a Shariah Perspective," *Al-Shajarah* (Vol. 23, No. 2, 2018), p. 316. On p. 317, they present a table characterizing the differences among the four approaches.

55 <https://coinmarketcap.com/> Accessed on May 8, 2022. Market cap or capitalization is the total market value.

56 <https://www.investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/#:~:text=One%20reason%20for%20this%20is,communities%20of%20backers%20and%20investors>. However, coinmarketcap.com listed only 10,138 on May 9, 2022.

have yet remained around and became serious⁵⁷, while many times there are fake cryptocurrencies which are nothing but scams, with phony initial coin offerings or ICOs.⁵⁸)











# ▲	Name	Price	24h %	7d %	Market Cap ⓘ
☆ 1	 Bitcoin BTC Buy	\$32,185.07	▼ 6.91%	▼ 16.95%	\$617,473,399,483
☆ 2	 Ethereum ETH Buy	\$2,361.42	▼ 7.06%	▼ 16.34%	\$288,180,319,983
☆ 3	 Tether USDT	\$1.00	▲ 0.01%	▼ 0.00%	\$83,214,536,872
☆ 4	 BNB BNB Buy	\$322.86	▼ 10.05%	▼ 16.92%	\$53,383,976,850
☆ 5	 USD Coin USDC	\$0.9998	▼ 0.02%	▼ 0.03%	\$48,596,403,278
☆ 6	 XRP XRP	\$0.5248	▼ 8.39%	▼ 14.25%	\$25,683,222,546
☆ 7	 Solana SOL Buy	\$69.93	▼ 10.41%	▼ 20.29%	\$23,832,314,077
☆ 8	 Cardano ADA	\$0.6547	▼ 12.25%	▼ 16.03%	\$22,422,596,964
☆ 9	 Terra LUNA Buy	\$57.82	▼ 11.85%	▼ 30.65%	\$20,146,725,735
☆ 10	 TerraUSD UST	\$0.991	▼ 0.63%	▼ 0.94%	\$18,539,396,773

Figure 8. The Ten Leading Cryptocurrencies with Respect to Market Capitalization (May 2022) Source: <https://coinmarketcap.com/>

Unfortunately, it is beyond the scope of this paper to discuss the technical differences among some of these cryptocurrencies. However, the differences among the cryptocurrencies actually

⁵⁷ See <https://www.axios.com/2021/07/09/joke-meme-coins>. Dogecoin is perhaps the most famous meme coin, as it is still in the top 15 of the cryptocurrency market (<https://coinmarketcap.com/>, accessed May 9, 2022). One that was meant to be a joke and stayed a joke was ponzi coin—and yet although warned against it, people still bought the coin. Finally, it was shut down with the following message: “We hope everyone had a good laugh :) But we have to shut down. This was a parody art performance/joke. I did not ‘run off’ with the money, I never sold any of my PonziCoins, and the contract was drained from other users withdrawing. Please be careful when investing in shady cryptocurrencies, especially ones that look like pyramid schemes - it's a zero-sum game and money doesn't appear out of thin air.” <https://ponzi coin.co/home.html>. People still buy such coins because essentially it is gambling—there is hope that somehow this coin, even if only a joke, will take off and riches will be made.

⁵⁸ See <https://news.trendmicro.com/2022/01/31/a-list-of-fake-crypto-websites-trading-platforms-2022/>.

pose a problem from a fiqh perspective—as not all cryptocurrencies are the same. Hileman and Rauchs note,

In contrast, a number of cryptocurrencies have emerged that, while borrowing some concepts from Bitcoin, provide novel and innovative features that offer substantive differences. These can include the introduction of new consensus mechanisms (e.g., proof-of-stake) as well as decentralized computing platforms with ‘smart contract’ capabilities that provide substantially different functionality and enable nonmonetary use cases. It can be useful to distinguish between altcoins lacking any significant innovation and what we refer to as ‘cryptocurrency and blockchain innovations’, which can be grouped into two categories: *new (public) blockchain systems* that feature their own blockchain (e.g., Ethereum, Peercoin, Zcash), and *dApps/Other* that exist on additional layers built on top of existing blockchain systems (e.g., Counterparty, Augur).⁵⁹

For example, as shall be noted later, the difference between the proof-of-work of Bitcoin (ranked #1) and the proof-of-stake that Ethereum (ranked #2) still plans on completely shifting to is significant. Dash (ranked #77 as of May 9, 2022⁶⁰) has been around since 2014 and differs in that block rewards are shared between the miners and the masternodes, while leaving some percentage for further development. Ripple is actually a payment protocol that does not use blockchain technology but instead uses a “global consensus ledger.”⁶¹ Litecoin (ranked #21 as of May 9, 2022⁶²) does not use Bitcoin’s SHA-256 but instead uses an algorithm based on Scrypt.⁶³ Tether (ranked #3 as of May 9, 2022) is backed by interest bearing instruments. Monero (ranked #31 as of May 9, 2022) due to its privacy-based approach is easier to use for criminal purposes.⁶⁴ Zcash (ranked #47 as of May 11, 2022) is similar to Monero in this respect.⁶⁵

Many cryptocurrencies were developed in order to solve some of the “problems” that Bitcoin faces. In reality, one has to read the white papers of each cryptocurrency in order to determine exactly how it is supposed to operate. The fiqh conclusion concerning specific cryptocurrencies will be determined by what is found in the white paper (the theory) and then what is found in practice. It is possible that a fiqh conclusion may change from one cryptocurrency to another due to what is found in the theory and practice of the respective cryptocurrency. This point was well stated by Selcuk and Kaya who wrote,

Each cryptocurrency should be examined separately. Evaluating all cryptocurrencies using just Bitcoin will result in incorrect inferences because the purpose and characteristics of each cryptocurrency are different. Whitepapers should be examined first. The points that do not comply with Islamic law should be investigated one by one.

59 Dr. Garrick Hileman and Michel Rauchs, *Global Cryptocurrency Benchmarking Study* (Cambridge, UK: Cambridge Centre for Alternative Finance, 2017), p. 14.

60 <https://coinmarketcap.com/currencies/dash/>

61 [https://en.wikipedia.org/wiki/Ripple_\(payment_protocol\)#XRP](https://en.wikipedia.org/wiki/Ripple_(payment_protocol)#XRP).

62 <https://coinmarketcap.com/currencies/litecoin/>

63 <https://en.wikipedia.org/wiki/Litecoin>.

64 According to Wikipedia, “Its privacy features have attracted cypherpunks and users desiring privacy measures not provided in other cryptocurrencies. It is increasingly used in illicit activities such as money laundering, darknet markets, ransomware, and cryptojacking. The United States Internal Revenue Service (IRS) has posted bounties for contractors that can develop monero tracing technologies.” <https://en.wikipedia.org/wiki/Monero> Accessed May 9, 2022.

65 Monero and Zcash are “privacy coins.” See <https://www.yahoo.com/now/mexican-cartels-chinese-crypto-brokers-190320977.html>.

If cryptocurrencies have features that are *haram* in terms of Islamic law, these cryptocurrencies are not accepted as permissible.⁶⁶

Only two cryptocurrencies will be introduced here: Bitcoin and Ethereum (Ether). With respect to market capitalization, these are clearly the two most important cryptocurrencies available today. Bitcoin is also important because it was the first true cryptocurrency. Bitcoin still has the largest market value of all cryptocurrencies, although its share of the total cryptocurrency market has fallen quite a bit.⁶⁷

5.0.1 Bitcoin

The white paper for Bitcoin is entitled, "Bitcoin: A Peer-to-Peer Electronic Cash System." In this paper, Satoshi Nakamoto⁶⁸ described the idea and working of Bitcoin,

A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work.⁶⁹

Assuming that this statement is sincere (and not part of some conspiracy or Ponzi scheme, as some have suggested), it makes it clear that the intent and purpose behind Bitcoin is to be a currency—"electronic cash." It can fulfill (especially theoretically) all of the functions of money, even if in practice it has not fulfilled them very well or completely as of yet. However, some currencies do not fulfill all of their functions properly yet they are undoubtedly still currency.

Bitcoin uses blockchain technology, a technology in which information is not on a single server but is actually stored on every computer in the network. It is simply a type of "public" ledger or database. As new data occurs, that data is added in new blocks, similar to new pages in a book, which is then added to the existing chain of blocks, hence the name blockchain. Each block contains a SHA-256 cryptographic hash of the previous block. Again, this new extended blockchain is stored on every computer in the network. Since, when anyone spends any bitcoin, all the computers will record that that bitcoin has been spent, it will be virtually impossible for anyone to double spend, that is, using the same virtual bitcoin in one's wallet more than once.

The process of creating and verifying these new blocks is known as mining. (Mining shall be commented upon in an appendix.) The new blocks must contain a proof-of-work (PoW), which is the result of a time-consuming, energy-consuming guesswork to find a nonce (random number). The miners compete to solve this puzzle. Once the puzzle has been solved, the rest of the network will accept the new block. Mining has been set to take about ten minutes per block.

⁶⁶ Mervan Selcuk and Suleyman Kaya, "A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective," *TUJISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 149.

⁶⁷ Reiff notes, "At the start of the cryptocurrency boom in 2017, Bitcoin's market value accounted for close to 87% of the total cryptocurrency market. By February 2022, as other cryptocurrencies gained in popularity, Bitcoin's market share had declined to 42% of the cryptocurrency market." Nathan Reiff, "Bitcoin vs. Ethereum: What's The Difference," <https://www.investopedia.com/articles/investing/031416/bitcoin-vs-ethereum-driven-different-purposes.asp>.

⁶⁸ Many have argued that this is simply a pseudonym.

⁶⁹ Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," <https://bitcoin.org/bitcoin.pdf>, p. 1.

As of March 26, 2022, Bitcoin was 45.3% of the total cryptocurrency marketcap.⁷⁰

Bitcoin, being the first, definitely has some shortcomings to it, especially from a technological perspective. This has led to the development of alternative cryptocurrencies, known as altcoins. Some of these attempt to remedy some of the concerns related to Bitcoin, such as speed or damage to the environment. One such altcoin is Ether.

5.0.2 Ethereum (Ether)

Ethereum was described by one of its founders, Vitalik Buterin, as a “decentralised mining network and software development platform rolled into one.”⁷¹ Ethereum was never intended as a substitute for national currencies nor for Bitcoin either. Instead, “Ethereum was intended as a platform to facilitate immutable, programmable contracts and applications via its own currency.”⁷² The cryptocurrency related to this network is Ether. Ether, therefore, is more about working with Ethereum smart contracts and dApp (decentralized apps) platform. According to Reiff, “Ether was intended to complement rather than compete with bitcoin, but it has nonetheless emerged as a competitor on cryptocurrency exchanges.”⁷³

Ethereum is expected to experience a major upgrade shortly, called “the merge.” If this takes place successfully, it will greatly enhance its speed and also greatly decrease its energy consumption (by about 99%).⁷⁴ It will shift completely to Proof-of-Stake (PoS), which will bring an end to its mining.

As of March 26, 2022, Ether was 18.2% of the total cryptocurrency marketcap.⁷⁵

5.1 How to Classify Cryptocurrencies: Money, Asset, Commodity, or Security?

As noted earlier, the fiqh ruling concerning something is not going to be based on what the item is named, such as “currency,” but what the item is in reality. There has been much debate by Muslims as well as non-Muslims concerning how to categorize cryptocurrencies. Although they claim to be money, are they in actuality simply non-monetary assets, commodities, or securities? Even the IRS and Treasury Department have not seen eye-to-eye on this question.⁷⁶

70 <https://coinmarketcap.com/currencies/bitcoin/>

71 Quoted in https://en.wikipedia.org/wiki/Vitalik_Buterin.

72 Nathan Reiff, “Bitcoin vs. Ethereum: What’s The Difference,” <https://www.investopedia.com/articles/investing/031416/bitcoin-vs-ethereum-driven-different-purposes.asp>

73 Nathan Reiff, “Bitcoin vs. Ethereum: What’s The Difference,” <https://www.investopedia.com/articles/investing/031416/bitcoin-vs-ethereum-driven-different-purposes.asp>

74 Taylor Locke, “Ethereum’s blockchain is nearing a huge turning point that could push Ether’s market value ahead of Bitcoin’s,” <https://fortune.com/2022/03/23/ethereum-merge-bitcoin/#:~:text=Currently%2C%20Ethereum%20has%20both%20a,chain%20currently%20processes%20users'%20transactions>.

75 <https://coinmarketcap.com/currencies/ethereum/>

76 Currently the IRS considers cryptocurrency to be property, like real estate or stocks. Thus, the IRS wants their cut in any capital gains. Landy, et al, show that the Treasury Department, Federal Reserve, Commodity Futures Trading Commission, and several court cases at times consider them money but not in a formal sense, since they are not issued by the government. See Douglas Landy, et al., “Virtual ‘Currencies’: Not Actual Currencies,” <https://www.whitecase.com/publications/alert/virtual-currencies-not-actual-currencies>. Many central banks do not consider cryptocurrencies to be currency. Although the views of the IMF and Bank of England are generic to virtual currencies, most virtual currencies and in particular Bitcoin, were produced as currency to be independent of any central authority, transferable electronically, more or less instantly, with very low transaction fees. Therefore, given the fact that virtual currencies have an anti-central authority element to it, the opinions of the IMF and the Bank of England which represent central authority may be somewhat biased and may not reflect reality.

First, it seems rather unquestionable that cryptocurrencies are not commodities. They do not exist except as data on a computer network. They have absolutely no usufruct or intrinsic value.⁷⁷ Warren Buffet recently heavily criticized Bitcoin saying, "But the one thing I'm pretty sure of is that it doesn't produce anything." He also stated that he would prefer to own farmland or apartments because they can produce food or rent.⁷⁸ This is a rather amazing statement coming from someone the likes of Warren Buffet. What he was also describing was none other than the American dollar. In economics, money is not a factor of production. It has no worth in and of itself except in being a medium of exchange.

Virtually all one can do with Bitcoin and other cryptocurrencies is buy something. It cannot be eaten, planted, or even hung on a wall—it cannot even be used to prop up a table with one leg shorter than the others. Bitcoin does not even give its owner the ownership or rights to anything else except itself. This is, plain and simple, money or currency. As Adam has written, "Nonetheless, cryptocurrencies resembles [sic] fiat currencies from the aspect that in and of itself, it [sic] has no intrinsic value, rather, something extrinsic is giving it value. In the case of fiat currencies, it is the government backing that is giving value, whereas, cryptocurrencies draw their value from the trust of people, supply and demand and from the overall concept."⁷⁹

Some have put forward the opinion that Bitcoin is a security. However, Bitcoin is not asset-backed, as a security would be. Izhar and Gundogdu have done a good job of addressing the issue of consider Bitcoin to be a security, writing,

While no court or government agency has yet opined on whether cryptocurrency is a security, based on an analysis of case law applying the definition of "security" under the Securities Act in the USA, it appears that cryptocurrency is not a security. Let us take an example of Bitcoin; Bitcoin does not fall within the definition of any common type of security. In addition, Bitcoin does not appear to fall within the broad definition of "investment contract." A sale of Bitcoin is not an investment contract because a purchase of Bitcoin is not an investment in a common enterprise and purchasers should not expect to receive profits from their purchase based on the efforts of the seller. In a nutshell, a cryptocurrency transaction does not reflect an ownership right that can be enforced, over which future economic benefits may flow to the owner.⁸⁰

If it truly is money, though, one would expect that it would be liquid, that is, one could easily exchange it for other things, such as commodities. First, it must be recognized that a specific currency could lose its value and therefore people may not be very willing to accept it, perhaps even demanding other currency. This only means that the currency is not fulfilling its role as money very well but it is still considered money. Due to hyperinflation in Zimbabwe, its currency was being rejected by its own people. That actually opened the door for one of the early usages of

⁷⁷ There are those who argue that cryptocurrency, like gold and silver, even has intrinsic value. A curious argument is presented in Shajahan K. Kakkattil, "Blockchain Technology in Managing Halal Cryptocurrency," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 57-58. Kakkattil argues that the "strength or power of blockchain" is the intrinsic value of cryptocurrency. Also see https://www.youtube.com/watch?v=odKRYC_ePqA&t=1s, arguing that cryptocurrency has intrinsic "properties," which is the important question and not supposed intrinsic "values." Also see <https://bitcoinmagazine.com/culture/does-bitcoin-have-intrinsic-value>.

⁷⁸ See "Crypto world reacts to Buffett and Munger slamming Bitcoin as worthless, 'stupid' and 'evil'," <https://www.kitco.com/news/2022-05-02/Crypto-world-reacts-to-Buffett-and-Munger-slamming-Bitcoin-as-worthless-stupid-and-evil.html>

⁷⁹ Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 46.

⁸⁰ Hylmun Izhar and Ahmet Suayb Gudogdu, "Characterizing Cryptocurrencies and Why it Matters," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 112.

Bitcoin (as a protection against hyperinflation⁸¹) and perhaps a new cryptocurrency.⁸² Second, the number of places that accept Bitcoin is still relatively small. However, when these places accept Bitcoin, they accept it as money. If not many places accept it, again, that does not mean that it is not money, it is simply not very good in fulfilling its role as money. Of course, the number of places that do accept Bitcoin is growing. Apparently, even Domino's Pizza accepts Bitcoin and gives a discount when purchasing with it.⁸³ According to spendbitcoins.com, over 100,000 merchants accept bitcoin.⁸⁴

One critique of Bitcoin is money is that it does not have independent value and is always tied to the dollar or other currency to see its worth. This is a curious critique as there are currencies around the world that are pegged to the dollar, such as the Saudi riyal and many others.⁸⁵ To truly know how much a Saudi riyal is worth, one has to see how the American dollar is faring. Yet, obviously, the Saudi riyal is considered currency/money.

Another critique of Bitcoin is that it is no more than a speculative investment or asset. There seems to be no doubt that this is how people have treated Bitcoin and other cryptocurrencies. Many people also speculate on the value of the yen vis-à-vis the dollar or the Euro vis-à-vis the dollar. This goes on all the time and it does influence the exchange rate and can often cause great damage to individual economies. In 1998, Weller wrote,

The financial turmoil in eastern Asia has thrown its people out of work, shut down factories, and led investors to remove their capital from the area. The severe crisis in South Korea, for example, may raise unemployment to two million people this year, and has already led to drastic actions among those suffering the most. Fathers are stealing rice to feed their children, workers are going on hunger strikes to gain back wages and maintain job security, and Choi Dae-Rim, a labor activist, burned himself to death to protest layoffs.

But one group is sitting pretty in the midst of this mess: currency speculators, who buy and sell currencies to profit from fluctuations in the value of those currencies. Speculators have posted record earnings from such buying and selling since the crisis began last summer, a coincidence that many have noticed. Rightly or wrongly, the president of Malaysia has blamed his country's misfortune on currency speculators—directing much of his ire at financier George Soros—and has called for new constraints on their freedom to bet as they please.

This is just the latest, though most widespread, crisis linked to the operation of currency speculation—following soon after the Mexican financial and currency crisis in 1994-95 and the crisis over several European currencies in 1992 and 1993. Then as now, the crisis was marked by widespread economic suffering somehow linked to speculators, a few of whom amassed spectacular profits amidst the rubble. Then as now, the crisis fueled concern and anger over the functioning of currency markets.⁸⁶

81 See <https://www.reuters.com/article/us-zimbabwe-bitcoin/think-bitcoins-getting-expensive-try-zimbabwe-idUSKBN1DD0NF>

82 See <https://www.weforum.org/agenda/2019/06/zimbabwe-needs-its-own-cryptocurrency>

83 For a list of places that accept Bitcoin, see <https://spendmenot.com/blog/who-accepts-bitcoin/> or <https://bitpay.com/directory/>

84 See <https://spendbitcoins.com/> Accessed May 26, 2022.

85 For a list of countries whose currency is pegged to the dollar, see <https://www.investopedia.com/articles/forex/061015/top-exchange-rates-pegged-us-dollar.asp>

86 Christian Weller, "Currency Speculation: How Great a Danger?" <http://www.dollarsandsense.org/archives/1998/0598weller.html>

The point, once again, is that those economies were damaged by the speculation that took place with respect to their currencies. The damage was real but all along those currencies were currencies, that is money. Those currencies were still considered money and not merely speculative assets. No one would argue otherwise. Hence, the fact that people are speculating with Bitcoin and other cryptocurrencies does not change the nature of what these cryptocurrencies are.

5.1.1.1 But is Bitcoin a form of wealth (maal) from an Islamic perspective?

Among the different fiqh schools, there is a difference of opinion concerning the definition of “wealth” (*maal*). Hence, it is not surprising that many of the researchers dealing with Bitcoin felt the necessity to tack the question of whether Bitcoin can be considered wealth (*maal*) from an Islamic perspective. For example, Mufti Faraz Adam wrote,

For anything to be considered as *Mal*, it must have desirability and storability. Bitcoin possesses features which gives it desirability. For example, the blockchain technology behind Bitcoin, the replacement of trusted party intermediations with the proof-of-work protocol, decentralization, limited supply and borderless payments with less transactional fees all make Bitcoin desirable. This has resulted in a demand for Bitcoin. In respect to storability, Bitcoins are encoded within the blockchain and are entries on a public ledger. Your ownership is reflected by your Bitcoin address being credited with a balance. Considering that Bitcoins are merely digits and entries on a public ledger, there is no evidence or premise indicating to them being unlawful. Hence, Bitcoins have *Taqawwum* [having legit value]. Hence, it can be argued that Bitcoin is something which has existence; it is *Mal* with *Taqawwum* [having legit value].⁸⁷

Elsewhere, Adam also wrote,

They rebut those who say it is not *Māl* and is merely settling of prices and speculation by arguing that Bitcoin is a digital representation of a value which can be transferred and used. The entire digital world can be summarised as algorithms. However, to understand the reality of Bitcoin, one needs to observe the benefits (*thamarāt*) and uses to see how different it is from other financial assets; Bitcoins can be used and are used to trade. The Bitcoins in themselves are *the* assets, whereas, derivatives and financial instruments are nothing in themselves but representations of the price fluctuations of underlying assets they represent. Thus, the difference between the two is: The value of Bitcoin is in themselves and not in an underlying asset, whereas, derivatives do not hold any value, instead, the value represents an underlying asset and the derivative contract and instrument is purely a price reflecting the price of the underlying asset.⁸⁸

It is important to explicitly note that Bitcoin is *taqawwum* (possessing value from an Islamic perspective), as otherwise buying or selling Bitcoin would not be considered valid from a Shareeah perspective.

Habib and Adekunle list the main features of *maal* as: “(1) ownership can be established on it; (2) it can be possessed; (3) it can be stored; and (4) it can be used at the time of necessity.”⁸⁹

⁸⁷ Faraz Adam, “*Fatawa Analysis of Bitcoin*,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 141.

⁸⁸ Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 41.

⁸⁹ Farrukh Habib and Salami Saheed Adekunle, “A Case Study of Bitcoin and Its Halal Dimension,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 244.

It can be demonstrated without much difficulty that Bitcoin meets all of those criteria.⁹⁰ Noting the slightly different views of the Hanafis and non-Hanafis, Habib and Adekunle conclude their discussion by saying,

Based on this discussion, it can be said that it is generally allowed to use and benefit from bitcoins as *mal* from Shari'ah perspective. Hence, Bitcoin can be considered as *mal mutaqaawam* for Hanafi jurists and simply *mal* for majority of the jurists.

Actually, from one perspective, once it is determined that Bitcoin is truly money, meeting any of the necessity requirements for money from an Islamic perspective, then by necessity it must also be wealth (*maal*), as money, a financial asset, forms part of one's wealth. Thus, when one speaks about the zakat of wealth (*maal*), one's money holdings is definitely included in that term wealth (*maal*).

5.2 Shariah Compliant Cryptocurrency

In 2018, it was announced that HelloGold's GOLDX earned the world's first Shareeah-compliance certification, coming from the Syariah Supervisory Board of Amanie Advisors. GOLDX is an Ethereum ERC20 token backed by 99.99% gold. Their tokens are only issued based on the amount of gold they possess.⁹¹ As a whole, the Islamic finance industry has been actively involved in fintech, so it is not surprising that "Shariah-compliant" cryptocurrencies appeared.

However, GOLDX is not truly a cryptocurrency. It is a commodity token, wherein one is actually purchasing ownership of a real asset, gold. There are actually a number of gold-backed "cryptocurrencies."⁹² Since there are many Muslim theorists who argue that "money" must be backed by something with intrinsic value, such as gold or silver, it is not surprising to see authors essentially saying that a "cryptocurrency" can only be Shareeah-compliant if it is backed by an asset.⁹³

Based on the earlier discussion, it is clear that "money," from an Islamic perspective, does not need to be backed by an asset. Money can be whatever the people accept as money and payment. In fact, pegging a cryptocurrency to an asset could virtually defeat the purpose of a cryptocurrency. Kakkatill noted,

The intrinsic value of cryptocurrency is far superior that it gives courage to initiate discussions of making a *halal* currency from scratch following the success of bitcoin and other cryptocurrencies based on "transparent truth" which is clearly visible in making, storing, distributing, exchanging and utilizing the cryptocurrency. The gold pegging is not at all a necessity to make cryptocurrency *halal*—instead, the underlying blockchain value itself would suffice. Some may think that backing with gold would increase the worthiness of cryptocurrency, but it will actually diminish the value of the cryptocurrency to the value of gold. What if the bitcoin was pegged with 1gm of gold at its genesis block? It would have been of great value at that time, because at genesis block time no

90 Habib and Adekunle, *Ibid.*, pp. 244ff, go on to demonstrate how Bitcoin meet all of those criteria.

91 See "HelloGold's GOLDX is now Syariah-compliant," <https://www.digitalnewsasia.com/startups/hellogolds-goldx-now-syariah-compliant>. For more about HelloGold, visit their website <https://www.hellogold.com/>

92 <https://www.goldscape.net/gold-blog/gold-backed-cryptocurrency/>

93 This is one of the two criteria used by Aliyu, et al., when it came to judging existing Shareeah-compliant cryptocurrency. The second criteria they stipulated was that the cryptocurrency must have a regulating authority for it. Needless to say, it is not surprising that a number of the cryptocurrencies that they reviewed did not meet these criteria. See Ahmed Aliyu, "Review of Some Existing Shariah-Compliant Cryptocurrency," *Journal of Contemporary Islamic Studies* (UTM Press, 2019).

one was considering any value to it. Since the bitcoin was not pegged with gold, it now possesses more value; 12.5 bitcoins minted at present possess a lot more value than 12.5 gram of gold. Does this mean that bitcoin blockchain has more intrinsic value or not?⁹⁴

If it is concluded that Bitcoin is permissible, then that means that it is Shariah-compliant. However, it is recognized that Bitcoin is definitely not perfect. There may be ways to tweak it to make it more in line with Shariah goals overall. Billah is among those who have envisioned a, what could be called, “very” Shariah compliant cryptocurrency. He writes,

Halal cryptocurrency is a *Shari’ah* compliant digital currency operated within the ambit of *Maqasid al-Shari’ah* (divine objectives) through cryptography based on a blockchain technology (platform)... Its blockchain technology, system, model, objectives, operational mechanisms, technicalities, culture and all activities shall be in total compliance with the principles (*Halal* standard), which shall regularly be advised by the company’s board of advisors, screened through by the company’s technical experts prior to the approval by the *Shari’ah* advisory board (SAB) of the company and thereafter shall be operated or executed accordingly.⁹⁵

Later In a long table, Billah gives a lengthy description of all of the differences that would exist between conventional cryptocurrency and halal cryptocurrency.⁹⁶ Much of that table is very theoretical or hypothetical as such cryptocurrencies do not exist. Furthermore, much of the difference between them is related to management and restriction of practices rather than the nature of cryptocurrencies themselves.

5.2.1 Muslims Looking for Halaal Especially Must be Aware of Scams

Muslims sincerely (and sometimes naively) looking for purely halaal means of investments or businesses are probably prime targets for scams. The idea that a specific cryptocurrency (or mortgage, for that matter) has actually been approved as “Shariah compliant” by a “board” is very appealing. The Muslim emotionally feels relief that he has finally discovered a halaal solution to his economic concerns and well-being. It is emotions that makes one easy prey for a scammer.

Back in 2017, there was one particular cryptocurrency that came out with a lot of hype for being Shariah compliant: Onegram. It produced a white paper speaking about how it is backed by gold and that transaction fees will allow it to continue to buy gold and grow. (Its motto, seen in

94 Shajahan Kakkattil, “Blockchain Technology in Managing Halal Cryptocurrency,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 59. Later, pp. 61-2, Kakkattil also makes the following important point: “For those who still need the gold backing to double ensure the ‘Halalness’, this [gold/precious asset backed cryptocurrency] ‘seems to be’ the reasonable best option. This is similar to normal gold-backed currency minting. The central bank takes the gold reserve and mints the cryptocurrency proportional to the value of possessed gold. Each gold bar has to be uniquely identified and linked to the crypto header of the matching currency to ensure a truthful ‘one to one’ minting. The critical questions raised here are, who will be the central bank and how trustworthy they would be to produce equivalent cryptocurrency to be verified in an automated digital world. The central bank can be the already established central banks but the latter part of the question remains unclear. Tokenized assets are not new even in the cryptocurrency world, and government-controlled ones such as ‘Petro’ from Venezuela are [sic] already made its debut. This proves that countries could put any mechanism to start its own cryptocurrency but it will remain as a traditional currency mechanism.”

95 Mohd Ma’Sum Billah, “Preface,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. xi.

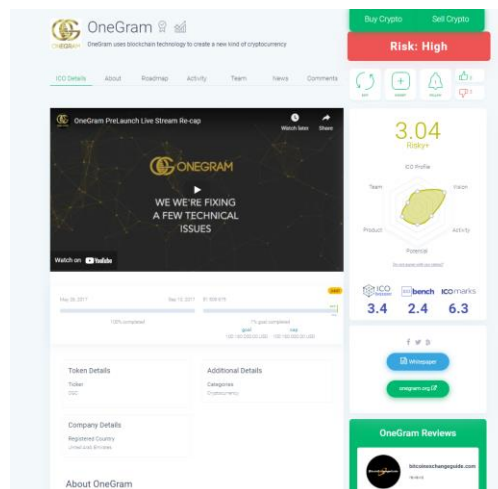
96 Mohd Ma’Sum Billah, “Cryptocurrency? Its Halal Alternative Model,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 10-13. Just to give an example of the different topics compared, the first few rows are law and policies, system, receiver, sovereignty, privacy, and control.

Figure 9, was definitely questionable: “In Gold We Trust.”) This currency has been accused of running a pump and dump scam. This is where they spread a lot of phony hype about the currency to get people interested and drive up the price. Once the price is driven up, the original holders of the currency who were behind the hype bail on the project, causing the price to plunder.

This type of scam, unfortunately, is difficult to prove and therefore the scammers usually get away with it. Additionally, this author cannot claim for certain that this cryptocurrency was such a scam.⁹⁷ It definitely seems to be defunct currently. This cryptocurrency cannot even be found on either coinmarketcap.com or investing.com (as of May 26, 2022), both of which list over 10,000 cryptocurrencies. Coinranking.com lists its current price at \$0. Additionally, the argument that it was a scam has been laid out by Jonathan Roseland.⁹⁸ Furthermore, icoholder.com has also declared its risk to be high (see Figure 10).⁹⁹



Figure 9. The Motto of OneGram



97 The website, isthiscoinascam.com, was created to spot “nefarious and low-quality cryptocurrency projects.” They grade current cryptocurrencies from “A+” to “F”. This author was not able to find Onegram on that website.

98 Jonathan Roseland, “The OneGram Scam: Credibility Analysis: Are pump and dump schemes Sharia-compliant?” <https://roselandj.medium.com/the-onegram-scam-bb7c85033ef8>.

99 <https://icoholder.com/en/onegram>

Figure 10. Analysis of OneGram from icoholder.com

6. FIQHI PERSPECTIVES ON CRYPTOCURRENCY

A number of scholars and researchers have expressed views on the permissibility or impermissibility of cryptocurrency from a Fiqh perspective. Clearly, there is definitely no consensus in the opinions so far expressed.

6.1 Those who say it is permissible

Those who argue for the permissibility of Bitcoin¹⁰⁰ include Joe Bradford,¹⁰¹ Mufti Muhammad Abu-Bakar,¹⁰² Oziev and Yandiev (but with strict reservations),¹⁰³ Abu Bakr, et al.,¹⁰⁴ Mohd Daud Bakar,¹⁰⁵ Charles Evans,¹⁰⁶ Muawiyyah Tucker,¹⁰⁷ Habib and Adekunle,¹⁰⁸ and others. Apparently, there are also a couple of fatwaas on the well-known islamweb.net website that permit bitcoin.¹⁰⁹ The website Islamic Finance Guru even provides a list of “halal cryptocurrencies.”¹¹⁰

There are some who argue that cryptocurrency—and the fintech of blockchain technology as a whole—is the halal alternative that can finally free the Islamic banking and finance industry from *riba* (interest) based systems. Kakkattil is one such researcher, arguing,

Blockchain has a greater space in halal wealth management as truthfulness, transparency and preset rule-based execution are common to both. Cryptocurrencies give a space for halal wealth management to reestablish it from scratch, instead of depending on the impure interest-based economy. Instead of doing step-by-step corrective measures and survival tactics in the present-day financial space, the Islamic banking now can build its foundation purely utilizing blockchain and cryptocurrencies by accepting the intrinsic value of cryptocurrencies based on the same principles it applies to gold and precious assets. Using blockchain technology, modern-day Islamic banking is powerful enough to mint its halal currency and take the world by storm by programming

100 Most of the literature has focused specifically on Bitcoin. To some extent, their conclusions could be extended to cryptocurrencies as a whole.

101 <https://www.joebradford.net/bitcoin-crypto-islamic-law-joe-bradford/>. He specifically mentions Bitcoin and cryptocurrencies in general.

102 M. Abu-Bakar, *Shariah Analysis of Bitcoin, Cryptocurrency, & Blockchain* (Blossom Labs, Inc. 2017, April 05), passim. He explicitly states that bitcoin and most cryptocurrencies are permissible.

103 Gapur Oziev and Magomet Yandiev, “Cryptocurrency from a Shariah Perspective,” *Al-Shajarah* (Vol. 23, No. 2, 2018), p. 315.

104 Yusuf Sani Abubakar, Ahamad Faosiy Ogunbado, and Mpawenimana Abdallah Saidi, “Bitcoin and Its Legality from Shariah Point of View,” *SEISENSE Journal of Management* (Vol. 1, no. 4, 2018), passim.

105 Cf., Faraz Adam, “*Fatawa* Analysis of Bitcoin,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 138-139.

106 Charles W. Evans, “Bitcoin in Islamic Banking and Finance,” *Journal of Islamic Banking and Finance* (Vol. 3, No. 1, June 2015), passim.

107 <https://www.youtube.com/watch?v=qI1OJpOvm7Q&t=18s>. Tucker argues that it is “more halaal” than fiat money. In addition, he also says that cryptocurrency is nothing more than a means of communication, so if it is haram, that means that twitter, whatsapp, and others should also be haram.

108 Habib and Adekunle, op cit., p. 253.

109 Quoted in Oziev and Yandiev, pp. 321-322. On the other hand, what seems to be the only *fatwaa* at islamqa.info is quite non-committal, only recommending to stay away from it until the matter becomes clearer, even though that fatwaa was dated September 2, 2021. See <https://islamqa.info/en/answers/360668/what-is-the-ruling-on-buying-and-selling-bitcoin>.

110 <https://www.islamicfinanceguru.com/crypto>

halal functions to provide a smart and competitive alternative to the interest-based economy.¹¹¹

6.2 Those who say it is impermissible

According to Selcuk and Kaya, "Most Islamic scholars claim that cryptocurrencies do not conform with Islamic law. They issued fatwas that cryptocurrencies are considered as haram."¹¹² These scholars and researchers would include Shaikh Abdullah ibn Muhammad al-Mutlaq,¹¹³ Abdus Sattar Abu Ghuddah,¹¹⁴ the economist Monzer Kahf,¹¹⁵ al-Quradaaghi,¹¹⁶ Baasim Aamir,¹¹⁷ Abdul-Hameed al-Karraani,¹¹⁸ and Haitham al-Haddad.¹¹⁹ Mufti Faraz Adam, who emphasized the issues of preservation of wealth and principles of the Islamic moral economy, is clearly of the view that Bitcoin does not meet requirements for acceptability.¹²⁰ Izhar and Gundogdu concluded that cryptocurrency, in general, is really nothing more than a token and a platform.¹²¹

With respect to governmental organizations or representatives, the Directorate of Religious Affairs, or Diyanet, in Turkey,¹²² Grand Mufti of the Egyptian Government,¹²³ and the UAE General Authority of Islamic Affairs & Endowments¹²⁴ have declared Bitcoin impermissible.

There are also those who do not argue against the essential permissibility of bitcoin or cryptocurrency but who, for external reasons or current circumstances, argue that such currency

111 Kakkattil, op cit., p. 67.

112 Mervan Selcuk and Suleyman Kaya, "A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective," *TUISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 142.

113 <https://arabic.cnn.com/tech/2018/01/15/ksa-bitcoin-religious-clerk>

114 Cf., Faraz Adam, "Fatawa Analysis of Bitcoin," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 139-140.

115 [FATAWA WAQF AND TRUSTS \(kahf.com\)](https://www.fatawa.waqf.org.uk/monzer-kahf). Elsewhere, there was something slightly different attributed to Monzer Kahf where he does not display a lot of confidence in them but it seems that they are acceptable currencies. Cf., <http://lightuponlight.com/blog/fatwa-on-bitcoin-by-monzer-kahf/>.

116 <https://mubasher.aljazeera.net/news/economy/2021/2/27/%D8%A7%D9%84%D9%82%D8%B1%D8%A9-%D8%AF%D8%A7%D8%BA%D9%8A-%D8%A7%D9%84%D9%85%D8%B3%D8%AA%D9%82%D8%A8%D9%84-%D9%84%D9%84%D8%B9%D9%85%D9%84%D8%A7%D8%AA-%D8%A7%D9%84%D8%B1%D9%82%D9%85%D9%8A%D8%A9-2>. He stated that it is "forbidden as it is a means to something worse" and not "forbidden in and of itself," like *riba*.

117 Baasim Ahmad Aamir, *العملات الرقمية البنوكيين أنموذجاً ومدى توافقها مع ضوابط النقود في الإسلام*, *Majallah Jaamuah al-Shaariqah* (Vol. 16, No. 1, June 2019), passim.

118 Abdul Hameed al-Karraani, *دراسة فقهية: النقود الرقمية المشفرة البنوكيين أنموذجاً*.

119 <https://dorar.net/article/1982/%D8%AD%D9%83%D9%85-%D8%A7%D9%84%D8%AA%D8%B9%D8%A7%D9%85%D9%84-%D8%A8%D8%A7%D9%84%D8%B9%D9%85%D9%84%D8%A9-%D8%A7%D9%84%D8%A5%D9%84%D9%83%D8%AA%D8%B1%D9%88%D9%86%D9%8A%D8%A9-%D8%A7%D9%84%D9%85%D8%B4%D9%81%D8%B1%D8%A9:-%D8%A7%D9%84%D8%A8%D8%AA%D9%83%D9%88%D9%8A%D9%86-%D9%88%D8%A3%D8%AE%D9%88%D8%A7%D8%AA%D9%87%D8%A7#>. His argument is that they are not backed by anything nor are they legal tender. He also cast doubt on those cryptocurrencies that claim to be backed by gold or other commodities as to whether they are truly backed by what they claim.

120 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy). At the same time, he writes (p. 49), "Nevertheless, any return on Bitcoin investments would be lawful and Shariah compliant."

121 Hylmun Izhar and Ahmet Suayb Gudogdu, "Characterizing Cryptocurrencies and Why it Matters," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 115-116.

122 <https://cointelegraph.com/news/bitcoin-ethereum-not-suitable-for-muslims-says-turkish-government>

123 <https://www.bbc.com/news/world-middle-east-42541270#:~:text=Egypt's%20top%20imam%20has%20endorsed,of%20knowledge%2C%20and%20cheating%22>.

124 <https://www.awqaf.gov.ae/ar/Pages/FatwaDetail.aspx?did=89043>.

should be avoided, at least until the problematic issues are solved. This category would include researchers Aiman al-Azhari,¹²⁵ and Abdullah al-Aqeel.¹²⁶

Selcuk and Kaya argue that only cryptocurrencies that have some haram quality to them are forbidden; otherwise, they must be considered permissible.¹²⁷

6.3 A Discussion of the key arguments

In this section, the focus will be on the arguments presented for or against the permissibility of cryptocurrency. It is hoped, in-shaa-Allaah, that a detailed analysis of the proofs presented by both sides will lead to a sound, objective conclusion on this question.

125 Abu Ahmad Aiman al-Azhari, *Hukum al-Nuqood al-Ilikturooni (al-bitkaween)*: Diraasah Fiqhiyyah Muqaaranah, passim
126 Abdullah ibn Muhammad al-Aqeel, *al-Ahkaam al-Fiqhiyyah al-Mutalaqah bi-l-Umlaat al-Ilikturooni (Bitcoin)* (Madinah University Research Paper).

127 Mervan Selcuk and Suleyman Kaya, "A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective," *TUJISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 150.

7. THE EVIDENCE FOR THE PROHIBITION OF BITCOIN AND CRYPTOCURRENCIES

7.1 Bitcoin and Cryptocurrencies are not Legal Tender

For Hassan, et al., the fact that Bitcoin and cryptocurrencies are not legal tender is the main reason they consider them non-Shareeah compliant. They wrote, "Cryptocurrency seems to satisfy the prerequisites of currency from Shari'ah perspective except the legal tender status. From the deliberation made, it seems that legal tender stands out to be the most important prerequisite for currency to be recognized from Shari'ah standpoint."¹²⁸ Izhar and Gundogdu also argue,

The principles of monetary economics theory on money suggest that anything to be considered as money or currency should fulfill the following primary functions: (1) unit of account, medium of exchange, and store of value. While at the outset, different types of cryptocurrency, such as Bitcoin and Ethereum, may fulfill these functions; such currency lacks of the fourth fundamental customary condition, namely being a legal tender issued by government or financial authority such as a central bank. This fourth condition coincidentally is also put forward by Muhammad Rawas Qal'ah Ji in his "*al-Mu'amalat al-Maliyah al-Mu'ashirah fi Dhau' al Fiqh wa al-Shar'iyyah*."¹²⁹

The question of legal tender essentially means that a government recognizes a specific form of money as legally meeting the requirements of fulfilling a debt. Thus, for example, in the United States, dollars are legal tender, meaning that if someone were owed a monetary debt and the debtor offered to pay in dollars but the lender refused them, the debtor has discharged the debt and fulfilled his legal obligation. Interestingly, that is not absolute. For example, in the United States, it is permissible for a vendor to refuse to accept cash.¹³⁰ Not only that, it is permissible for stores to refuse to accept \$100 bills if, for example, they feel that would not be safe for them. Most importantly, though, laws do not prevent barter. In other words, one does not have to use a country's legal tender to fulfill a debt as long as the two contracting parties agree to that. For example, a seller in the United States could accept Canadian dollars or Euros if they desire to do so.

Bitcoin, by the way, is currently legal tender in at least two countries (El Salvador and the Central African Republic). As this paper is being written, the President of El Salvador is actively working to convince others (representatives from 44 developing countries) to also accept Bitcoin as legal tender.¹³¹ Since it is now legal tender in at least one country, on this question, from a fiqh perspective, one could argue that it should be considered the same as any foreign currency.

¹²⁸ Rusni Hassan, Nadiyah Syahira Nordin and Rizal Mohd Nor, "Regulatory and *Shari'ah* Framework of Cryptocurrency," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 214.

¹²⁹ Hylmun Izhar and Ahmet Suayb Gudogdu, "Characterizing Cryptocurrencies and Why it Matters," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 111.

¹³⁰ Amazon Go (brick and mortar stores) originally were not accepting cash but then they succumb to public pressure and started to accept cash. See <https://www.cbsnews.com/news/amazon-to-accept-cash-at-brick-and-mortar-stores/>.

¹³¹ <https://www.coindesk.com/policy/2022/05/17/el-salvadors-nayib-bukele-promotes-bitcoin-adoption-by-emerging-countries/>
The IMF, which clearly has vested interests on this issue (and many other issues) have tried to sway both El Salvador and the Central African Republic from this position they have taken. There are those who take issue with President Bukele of El Salvador, especially during the "crash" of cryptocurrency. One article states, "Like many other crypto investors, Bukele seems to have gotten caught up in cryptocurrency's potential for high returns—except that he made a gamble not with his own money, but with El Salvador's. From the start,

In any case, this point does not seem to be relevant to the fiqh ruling. In the time of the Prophet (peace and blessings of Allah be upon him) and the Rightly-Guided Caliphs were dirhams and dinars legal tender in this contemporary meaning? If not, then on what basis can this be made a criterion for money from an Islamic perspective. As Mohd Daud Bakar has argued, "Due to the fact that Bitcoin is not a legal tender, this has become one of the main reasons of its impermissibility, according to various Shari'ah scholars. However, this is an administrative issue, not a Shari'ah issue. It may be a concern for a state or national government, but it is not a basic Shari'ah requirement for a currency."¹³²

7.2 Bitcoin is not Issued by a Central Authority or a State

An oft-encountered argument is that Bitcoin is haram because it is not issued by a central authority or a state. This is, for example, Ibraaheem's main argument against Bitcoin and cryptocurrency.¹³³ Perhaps the strongest statement on this point has come from Amri and Mohammed who wrote, "The absence of monetary authority or lack of intervention of a ruler is a clear manifestation of injustice and betrayal of the citizens."¹³⁴

It was previously demonstrated in the section, "A Governmental Source of Money?" that there is no evidence proving that this is necessary for money from an Islamic perspective. However, since Amri and Mohammed made the comment that they made and given that historically speaking many scholars emphasized the importance of the state in controlling money, more comments may be necessary. Actually, decentralization and freedom from government may be one of the most important benefits of Bitcoin and cryptocurrencies. In the current times of non-asset backed fiat money—as opposed to when classical Muslim scholars lived—monetary policy has often been abused and misused, wreaking havoc on society.¹³⁵

It is well-established that the hyperinflation in Zimbabwe was brought upon by its government's excessive printing of money, in response to its own governmental debt.¹³⁶ The actions of the government made the people's money worthless. That is one of the many possible problems with today's fiat money. Governments can have their own short-term political motives in mind rather than the long-term interest of its citizens at heart and hence manipulate the money supply. This entire phenomenon is something completely foreign to earlier Muslim scholars and hence their ijtihaad and views may not be the best given today's realities. With Bitcoin and cryptocurrencies, governments completely lose this power.

the Bitcoin experiment was met with disdain from Salvadorans, two-thirds of whom opposed the plan. As a result, the currency did not take hold among the population. That saved most Salvadoreans' personal finances from the carnage of the past few months, which has accelerated greatly in recent weeks. But for their country's finances, it's a different story." The article goes on to state that the country may default on sovereign debt and its bonds are being called junk. (<https://www.worldpoliticsreview.com/articles/30549/the-el-salvador-crypto-gamble-just-went-bust>.) This is unfortunate for El Salvador but this can happen to countries when they use stable currencies and are not involved in cryptocurrency at all. For example, Italy, which uses the euro, not too long ago had its bonds lowered to near junk rating. <https://www.reuters.com/article/italy-bonds-ratings/follow-the-money-why-the-junk-rating-threat-matters-for-italy-idUSL8N2CN6RL>

¹³² This point has been attributed to Mohd Daud Bakar in Habib and Adekunle, op cit., p. 243.

¹³³ Ahmad Eid Ibraaheem, *Al-Nuqood al-Raqamiyyah wa Athar al-Taamul biha fi Namat al-Hayaat al-Islaamiyyah* (Dubai, UAE: Daairah al-Shuoon al-Islaamiyyah wa al-Amal al-Khairi, 2018). However, he does leave the door open for the possibility of virtual currencies as long as they are under the authority of the state. Many central banks are looking into developing their own digital currency, known as CBDC. These will be digital tokens which are pegged to the country's fiat currency.

¹³⁴ Mohamed Cherif El Amri and Mustafa Omar Mohammed, "The Analysis of Cryptocurrency Based on Maqasid al-Shari'ah," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 126.

¹³⁵ This could perhaps be one of the main reasons why governments are wary of cryptocurrency. Controlling the money supply is equivalent to having a great deal of power.

¹³⁶ <https://corporatefinanceinstitute.com/resources/knowledge/economics/hyperinflation/>

In March of this year, after the Russian invasion of the Ukraine, the Egyptian government devalued its currency by fourteen percent. Figure 11 shows the exchange rate between the US dollar and the Egyptian pound. By the stroke of a pen, with respect to their imported goods or traveling overseas, from one day to the next, the Egyptian people became much poorer. Of course, part of the motivation behind this was the government's hope that it could help them in getting loans from the IMF.¹³⁷ (Although it is well-established that the IMF is very beneficial for the United States,¹³⁸ it is very controversial as to whether it is truly beneficial for the citizens of developing countries, as it often forces austerity and privatization.¹³⁹) Again, Bitcoin and cryptocurrencies would take this tool and power out of the hands of the government.

USD to EGP Chart

US Dollar to Egyptian Pound

1 USD = 18.3775 EGP May 12, 2022, 06:49 UTC



Figure 11. US Dollars to Egyptian Pounds Exchange Rate
Source: <https://www.xe.com/currencycharts/?from=USD&to=EGP>

Related to this point, Adam has an interesting passage. He writes,

The Hanbali jurists are explicit in stating that it is not permissible for the Sultan to ban the currency commonly used by people as it will cause financial harm to the people, unless they are recompensed proportionately in the new currency without a fee. Considering the benefit and harm for the masses, Imam al-ṣuyūṭī (d. 911 H) also states that it is disliked for the government to withdraw or nullify a currency commonly used among people.¹⁴⁰

If one agrees with these scholars, one could argue that if people have already started using and accepting Bitcoin, for example, it would not be proper for the state to then interfere or prevent

¹³⁷ <https://www.reuters.com/world/africa/egyptian-pound-drops-10-after-ukraine-war-prompts-dollar-flight-2022-03-21/>

¹³⁸ Cf., <https://www.piie.com/commentary/testimonies/international-monetary-fund-and-national-interests-united-states>

¹³⁹ Cf., <https://reliefweb.int/report/world/over-80-cent-imf-covid-19-loans-will-push-austerity-poor-countries>. Also see <https://www.cfr.org/background/imf-worlds-controversial-financial-firefighter>. In the words of Carlos, summarizing her findings, “This [sic] results from this study supports Hutchison (2004), Hardoy (2002) and many other research that the IMF is only focused on making the conditions favorable for itself in the immediate medium term to regain its loans and the repayments.” Lutete Celina Carlos, “The Effects of IMF’s Lending and Conditionality on Economic Growth: Case of SADC Countries” (Master’s Thesis: Eastern Illinois University, Summer 2021), p. 29.

¹⁴⁰ Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 47.

the masses from using this currency.

7.3 Bitcoin is not a Store of Value

One of the functions of money is to be a store of value. Currencies, however, vary as to how well they perform this function. Simply because a specific currency may not currently be that good of a store of value, that does not mean that it is no longer to be considered a currency or money.

This has been adequately addressed by Adam who wrote,

In terms of being a store of value, Bitcoin surely suffers from volatility. However, the notion of being a store of value is something in respect to money [sic]. Currency on the other hand is something which has no intrinsic value. While money stores intrinsic value within itself, fiat currency possesses buying power bestowed upon it by the government. If we consider the case of fiat currencies, a number of currencies have had their values wiped off as a result of inflation and hyperinflation, yet they were still considered to be functional currencies.

Does a currency require intrinsic value or utility? According to Islamic economics, a currency does not need to possess any utility besides being a medium of exchange. Money has no intrinsic utility; it is only a medium of exchange (Usmani 1998). Thus, it seems that a currency does not have to be a “store of value.” Where is the value then derived from if it has no intrinsic value? What would make people trade, transact and desire in a currency which has no intrinsic value or worth? Similar to fiat currencies, it seems that Bitcoin entertains extrinsic value. While fiat currencies acquire value due to being a legal tender and a trusted means of exchange, Bitcoin acquires value due to the blockchain technology, anonymity, the replacement of trusted party intermediations with the proof-of-work protocol, borderless payments with less transactional fees and the notion and craze over an innovative monetary system.¹⁴¹

7.4 *Gharar* (Undue Risk), Speculation, Gambling, and Unjustified Rewards

Al-Mutlaq emphasized that the risk is “very, very” high with respect to Bitcoin and other cryptocurrencies.¹⁴² In the Turkey’s Directorate of Religious Affairs ruling the question of speculation was specifically mentioned as a reason for forbidding Bitcoin.¹⁴³

Perhaps everybody has heard the news of the wild swings in the price of Bitcoin vis-à-vis the dollar. For a currency, this is no doubt worrisome and problematic as it affects its ability to be a store of value or a reliable medium of exchange. There are clear responses to this argument though.

First, as noted earlier with the example of Turkey, fluctuations are bad for a currency but they still remain a currency. Adam had also made this point, writing,

141 Faraz Adam, “*Fatawa Analysis of Bitcoin*,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 143-4.

142 <https://arabic.cnn.com/tech/2018/01/15/ksa-bitcoin-religious-clerk>

143 Cf., Farrukh Habib and Salami Saheed Adekunle, “A Case Study of Bitcoin and Its Halal Dimension,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 242.

Baur et al. (2015) argue that Bitcoin falls short of being money as the extreme volatility compromises Bitcoin being a store of value and a unit of account. However, volatility alone is not a sufficient argument to disprove something as a currency. Fiat currencies in the past have also suffered extreme volatility. For example, Zambian kwacha fell 42% against the U.S. dollar in 2015 as copper, which accounts for 70% of the African nation's exports, dropped to a six-year low (Bloomberg, 2015). The Belarusian Ruble experienced a 41.8% drop against the U.S. dollar in 2015, falling from 11,900 Belarusian Rubles to the U.S. dollar on Jan. 1, 2015, to 18,569 on the same day in 2016 (EADaily, 2015). The Argentine peso had suffered a 2015 drop of roughly 35% against the U.S. dollar as of Dec. 24 (Financial Times, 2015). Brazil struggled with headwinds including budget woes, concerns about China's economy and high inflation. Amid these woes, the real dropped 33% against the U.S. dollar in 2015 (Bloomberg, 2016). Mozambique, a nation in southern Africa, struggled to cope with the effects of a decline in exports of sugar, coal and cotton. Economic growth in the nation suffered because of the drop-in shipments to other countries, and amid these difficulties, the metical fell 32% in 2015 (Bloomberg, 2016). Therefore, volatility is not a strong argument to dismiss Bitcoin as a currency. Volatility can be explained by the fact that Bitcoin is still in its infancy and people are speculating on its future.¹⁴⁴

The second thing that must be noted is that this has nothing to do with the nature or essence of Bitcoin or cryptocurrencies. Figure 12 shows the price of Bitcoin vis-à-vis the dollars since the beginning of Bitcoin. The graph shows that for years the price was not volatile whatsoever.



Figure 12. The Exchange Rate between Bitcoin and Dollars Since the Inception of Bitcoin. Source: <https://coinmarketcap.com/currencies/bitcoin/>

144 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 32.

Speculators, “day-traders” and others looking for a quick gain can make any market volatile. If this makes something forbidden from a Shareeah perspective, then almost anything is forbidden, especially stocks. How many times can one see the Dow Jones Industrial Average literally dropping hundreds of points in one day, have a complete rally and end the day in positive territory. Sometimes it does not bounce back and the savings of millions of people take a big hit. Interestingly, until recent days (late May 2022), cryptocurrency prices had been moving pretty consistently with stock prices. (See Figure 13.) Traditionally, Muslim scholars have referred to gold and silver as “natural monies.” Even the price of these two with respect to each other has been very volatile. Figure 14 shows for over the last five years how much silver can be purchased for an ounce of gold. One can see that the ratio has been volatile. Certainly, no Muslim scholar is going to declare gold or silver forbidden or unacceptable as a currency due to this volatility.

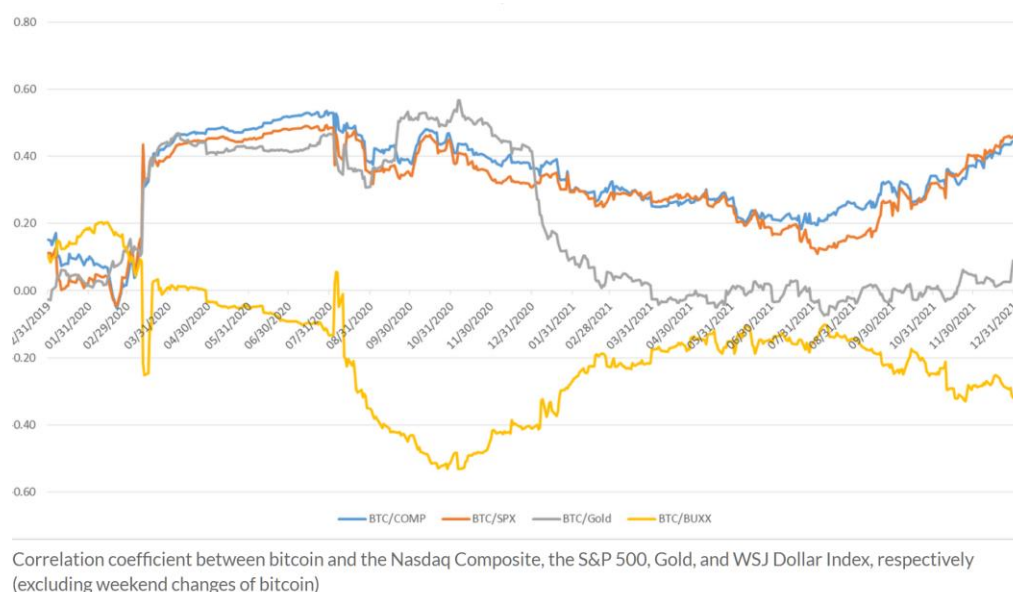


Figure 13. Bitcoin in Tandem with Stocks

Source: <https://www.marketwatch.com/story/bitcoin-is-trading-in-tandem-with-stocks-this-chart-shows-that-relationship-as-markets-face-a-more-hawkish-fed-11641944180>

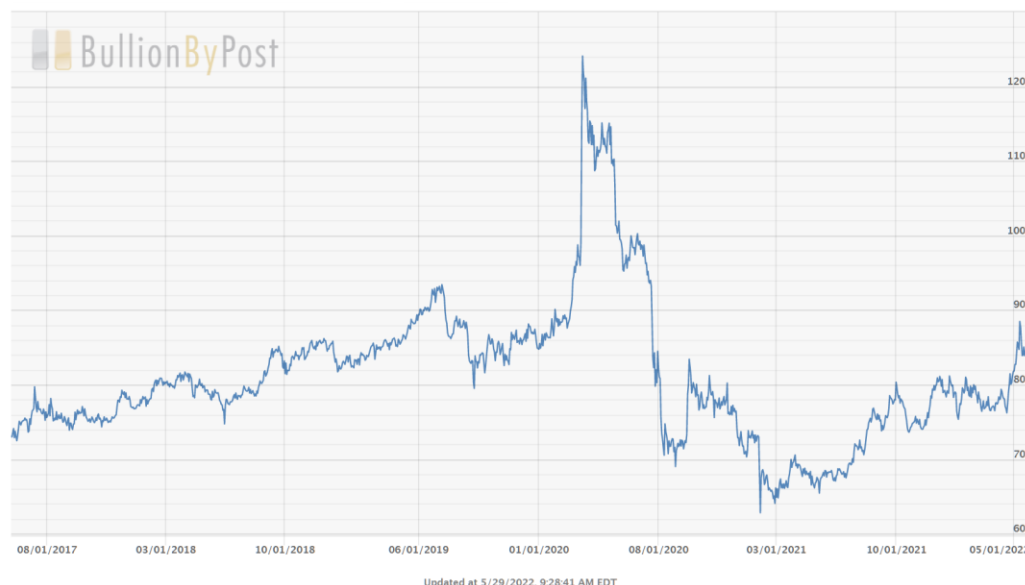


Figure 14. The gold: silver ratio is the proportional relationship between the respective spot prices of gold and silver. Put simply this describes how many ounces of silver can be bought with one ounce of gold. Source: <https://www.bullionbypost.com/price-ratio/gold-silver-ratio-chart/>

In other words, the abuse of a currency or an asset does not change the nature of the currency or asset. For example, stocks are real assets, to the real economy, and yet day traders and others are abusing the stock market and turning it into a gambling parlor.¹⁴⁵ That practice is condemnable but that practice does not change the nature of what a stock is.

7.5 Criminal Activity, Bitcoin and Cryptocurrencies

This objection was highlighted in the Turkey's Directorate of Religious Affairs ruling.¹⁴⁶ Magdy Ashour, Counsellor to the Grand Mufti of Egypt, stated that Bitcoin "is used directly to fund terrorists."¹⁴⁷

Although no one questions that a good amount of illegal activity takes place via cryptocurrencies, it is very possible that these claims have been overblown. There have been reports demonstrating that percentage wise, they are small in number with respect to the total cryptocurrency transactions and that the bulk of the criminal activity has been scams, not things like terrorist funding.¹⁴⁸

¹⁴⁵ That was exactly a recent critique of Wall Street stated by Warren Buffet. See <https://theloadstar.com/cnbc-warren-buffett-rips-wall-street-for-turning-the-stock-market-into-a-gambling-parlor/#:~:text=Subscribe%20to%20Premium-.CNBC%3A%20Warren%20Buffett%20rips%20Wall%20Street%20for%20turning%20the,market%20into%20a%20gambling%20parlor'&text=CNBC%20reports%3A,into%20a%20%E2%80%9Cgambling%20parlor.%E2%80%9D>.

¹⁴⁶ Farrukh Habib and Salami Saheed Adekunle, "A Case Study of Bitcoin and Its Halal Dimension," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 242.

¹⁴⁷ Ibid., p. 242. Also quoted in Nafis Alam and Abdolhossein (Pejman) Zamani, "Existing Regulatory Frameworks of Cryptocurrency and Shari'ah Alternative," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 190.

¹⁴⁸ <https://blog.coinbase.com/fact-check-crypto-is-increasingly-being-used-for-criminal-activity-and-is-a-haven-for-illicit-856a71dfb399>. Also see <https://www.forbes.com/sites/haileylennon/2021/01/19/the-false-narrative-of-bitcoins-role-in-illicit-activity/?sh=267cec543432>. Many important crime reports have been made available concerning cryptocurrency and related issues.

In any case, this is a rather curious argument against cryptocurrencies. Does one think that the local drug pusher accepts credit cards or strictly cash? The answer is obviously strictly cash, as there is no greater anonymity than in cash. As one commentator stated, "Still, though, cash is king when it comes to drug purchasing, yet, there are no calls to ban the USD despite \$100 bln worth contributing to the drug epidemic."¹⁴⁹ In other words, unless scholars also make the argument that cash is not acceptable from a Shareeah perspective, this argument cannot be seriously considered.

Actually, it is not just cash, it is banks as well that drug cartels and others use. One blog has facetiously written,

A report from The International Narcotics Control Board (INCB) shows that bitcoin is not the preferred method for drug cartels and other criminal groups to launder money, they rather use banks. This opposes the widespread narrative that claims the digital coin creates the opportunity for crime.

Said argument is often used to excuse the hostility of different entities toward bitcoin and tends to propose banning it. But if it is actually the traditional financial institutions that are enabling criminal schemes, should authorities ban those instead and adopt bitcoin? (I'm just pointing out the irony).¹⁵⁰

Theoretically, a currency based on blockchain technology could be the most secure and safest forms of currency. The blockchain network enters every transaction into a public ledger, open to all of its members. It is also extremely difficult to change or delete any entered transaction. These records are also relatively safe from cyberattacks because the information is not kept on a single server but throughout the entirety of the network. However, regulations are needed to require "real IDs," for example, from anyone who opens a wallet, such that the true owners will be identifiable. This has been currently dealt with via "Know Your Client" (KYC) and Anti-Money Laundering (AML) regulations. For many exchanges, one has to verify one's identity before being allowed to create a wallet.

7.6 If Bitcoin is Not Currency, It is Not an Acceptable Form of Wealth

Mufti Faraz Adam writes,

Although the opinion that Bitcoin is not *Māl* (asset) at all has some weight, there seems to be a difference between Bitcoin and other derivatives. This paper reasons that Bitcoin does seem to be *Māl* (wealth) with *Taqawwum* (legal value), however, it does not possess *Thamaniyyah* (currency attributes). Furthermore, the associated risks with Bitcoin, the *Maqāsid al-Sharia* framework are considered to determine whether Bitcoin fulfils the Islamic ideals of an Islamic economic function. Bitcoin falls short of fulfilling the principles of the preservation of wealth in Shariah. Bitcoin is further assessed in terms of the principles of Islamic moral economy. A key theme and objective of Islamic moral economy is embedded financing and investments linked to the real economy. Bitcoin and cryptocurrency investments do not serve the real economy and do not promote real growth of an economy. Thus, it was concluded that Bitcoin is not ideal as a

Perhaps, a bigger problem for cryptocurrency is the hacking of its exchanges. Adam stated, "Data released by Reuters shows that a third of bitcoin trading platforms have been hacked in the period from 2009 to 2015. In contrast, in the same period, from 6000 operational US banks, only 67 experienced a data breach and cyber theft, roughly 1% of US banks. Fear among investors and users can bring severe volatility and insecurity into the entire industry." Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 34.

¹⁴⁹ <https://cointelegraph.com/news/crypto-vs-cash-how-the-numbers-stack-up-on-drugs-guns-murders>

¹⁵⁰ <https://bitcoinist.com/is-bitcoin-a-tool-for-criminals-drug-cartels-prefer-banks/>

long-term investment and neither should the Islamic finance industry consider its use in exchange unless there is a specific need to until a regulated and transparent framework is established. At this current time, Bitcoins are just another investment which are for individual profit maximization.¹⁵¹

Adam also stated, "Despite this usage [as a currency], investors are speculating on it which in turn is creating its own endogenous risks. Speculation has led to Bitcoins to behave more like popular stocks and less like currencies."¹⁵²

This argument highlights the importance of recognizing Bitcoin as either a currency or an asset. In Adam's view, in this passage, he supports the opinion that Bitcoin is *maal* (wealth) but then argues that it is not a truly acceptable form of wealth, as it adds nothing to the real economy. Herein he is essentially supporting the opinion of those who say that Bitcoin is not an asset or *maal* but a currency. As stated earlier, the abuse of a currency or an asset does not change the nature of the currency or asset. For example, stocks are real assets, to the real economy, and yet day traders and others are abusing the stock market and turning it into a gambling parlor.¹⁵³ That practice is condemnable but that practice does not change the nature of what a stock is.

7.5 Harmful to Society, Contrary to the Preservation of Wealth

This objection was highlighted in the Egypt's Dar Al Iftaa ruling.¹⁵⁴ Although in many ways Adam showed that cryptocurrencies should be considered currency (as can be seen in some of the references in this paper), in his conclusions he argues,

However, Bitcoin fails to fulfil the role of money which has been described by Shariah and thus cannot be considered to possess *Thamaniyyah* (currency). This was ascertained by considering the associated risks with Bitcoin as well as the *Maqāṣid al-Shariah*. The following risks were ascertained in relation to Bitcoin: Security risk, technological risk, money laundering risk, volatility risk, data risk, transaction risk, intermediary risk, regulatory challenge, structural deflation risk, competition, Bitcoin scalability risk, monopoly risk, liquidity risk. After highlighting the above risks, Bitcoin was screened to see if it passes the *Maqāṣid al-Shariah* principle of preservation of wealth. Bitcoin failed in terms of marketability, circulation, transparency, *hifẓ al-Māl* and equity (*'adl*). Bitcoin failed in the aspect of marketability and circulation as the volatility has only increased speculation resulting in Bitcoin investors to hoard and hold Bitcoin instead of spending it, making Bitcoin illiquid and further inflating the bubble. The issue with Bitcoin in terms of transparency was that the entire network is cryptic. Every merchant and trader is anonymous. In addition, a lack of a regulatory framework can cause more dispute. Bitcoin failed in terms of *hifẓ al-Māl* since the very nature of Bitcoin is cryptic. With the lack of regulatory safeguards and complex technology, Bitcoin has become an attractive prospect to hackers and fraudsters as there is an extra layer of secrecy within the industry protecting their identity. Furthermore, any regulatory changes can severely

151 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 6.

152 Ibid, p. 8.

153 That was exactly a recent critique of Wall Street stated by Warren Buffet. See <https://theloadstar.com/cnbc-warren-buffett-rips-wall-street-for-turning-the-stock-market-into-a-gambling-parlor/#:~:text=Subscribe%20to%20Premium-.CNBC%3A%20Warren%20Buffett%20rips%20Wall%20Street%20for%20turning%20the,market%20into%20a%20gambling%20parlor'&text=CNBC%20reports%3A,into%20a%20%E2%80%9Cgambling%20parlor.%E2%80%9D>.

154 Farrukh Habib and Salami Saheed Adekunle, "A Case Study of Bitcoin and Its Halal Dimension," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 242.

impact the world's bitcoin industry. Bitcoin was further assessed in terms of the principles of Islamic moral economy. A key theme and objective of Islamic moral economy is embedded financing and investments linked to the real economy. Bitcoin and cryptocurrency investments do not serve the real economy and do not promote real growth of an economy. Therefore, considering the overarching principles of Islamic moral economy and the established principles of investing in the real economy, one should consider the different arguments before making long-term, concentrated investments in digital assets which are not linked to the real economy. Concentrating all of one's wealth into digital assets can have more harm for the society than good. Investing in such assets are fueled by profit and utility maximization. Investing in Bitcoin does not benefit the society nor the real economy; Bitcoin investments do not boost services, labour nor the production of goods. Nevertheless, any return on Bitcoin investments would be lawful and Shariah compliant according to this argument.¹⁵⁵

This is a rather strong statement from Mufti Faraz Adam and explains well how and why he came to the conclusion that Bitcoin must be avoided. Obviously, there is a lot to digest in that statement. However, the response can basically be broken into three parts:

Definitely there are risks, problems, and issues related to Bitcoin and other cryptocurrencies. However, some of those risks may not be related to the question of whether cryptocurrencies are halal or not. Certainly, the question of permissibility is different from the question of whether it is wise or advisable to purchase Bitcoins. Sixty percent of new restaurants fail within the first year and nearly eighty percent shutter within five years.¹⁵⁶ That is very risky, indeed. However, although a jurist may advise his friend not to open a restaurant due to this, it is doubtful that any jurist would then declare it haram to open a restaurant. Adam himself clearly acknowledges this point when he wrote in a separate article, "Investing in high-risk investments such as shares in a *Shari'ah* compliant start-up company cannot be deemed impermissible even though there is exposure to high risk. The volatility of such an investment will not impact the inherent compliance of the assets and transaction."¹⁵⁷

Similarly, many of the risks that Adam mentions are clearly not related to the permissibility or otherwise of Bitcoin. For example, under competition risk, he mentions that Bitcoin faces competition from other cryptocurrencies.¹⁵⁸ That may not be good for Bitcoin but clearly facing competition in and of itself is not forbidden. Under scalability risk, he speaks about the problem of Bitcoin handling higher transaction volumes. The processing time makes it unattractive for merchants to use.¹⁵⁹ Similarly, some merchants accept some credit cards while rejecting others because their transaction fees are too expensive. Again, this does not render those less competitive cards haram. He also speaks about "monopoly risk,"¹⁶⁰ which is what is known as the "51% Attack." This is a purely hypothetical situation where one mining operation gains control of over 50% of the blockchain. Theoretically then they could manipulate matters and allow themselves "double spending" of the same coins. However, as Frankenfeld wrote, "Major cryptocurrencies, such as Bitcoin or Ethereum, are extremely unlikely to suffer from 51% attacks

155 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 49.

156 <https://www.cnbc.com/2016/01/20/heres-the-real-reason-why-most-restaurants-fail.html#:~:text=Around%2060%20percent%20of%20new,actually%20being%20in%20that%20location>.

157 Faraz Adam, "Fatawa Analysis of Bitcoin," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 145.

158 Mufti Faraz Adam, "Bitcoin: Shariah Compliant?" (Amanah Finance Consultancy), p. 37.

159 Ibid., p. 37.

160 Ibid., p. 37.

due to the prohibitive cost of acquiring that much hashing power. For that reason, successful 51% attacks are limited to smaller cryptocurrencies with more limited mining networks.”¹⁶¹ Fiqh conclusions should not be based on such hypotheticals. Finally, in this light, virtually all online activity is risky. Identity thefts occur all the time. In fact, 33% of US Citizens have experienced identity theft and it cost people \$56 billion in 2020.¹⁶² Note that in some schools of fiqh, especially related to Islamic finance, 33% is the threshold between large and too large. As Ma’Sud Billah wrote, the risks that cryptocurrency faces fall within the realm of normal risks for economic activity:

In a cryptocurrency management, it involves numerous risks against the user, receiver, management, operation and the system. The risks are due to technology failure, system crash, hacks, capital loss, fraudulent acts, malpractices, war risk, natural disasters, death, insolvency, sanctions and non-compliance. These all classes of risks may fall within the above recognized categories of risks (subjective, objective or pure risk).¹⁶³

As for the problems of transparency and the like, regulatory agencies have already started to step in and handle some of those issues. Again, secrecy in itself is not forbidden. Of course, secrecy for the sole intent of hiding criminal activities is forbidden. That, though, was not the philosophy behind Bitcoin’s cryptic approach.

As for the last part, his statement above, “Investing in Bitcoin does not benefit the society nor the real economy; Bitcoin investments do not boost services, labour nor the production of goods,” simply is not logical. Bitcoin is a currency or money. Money, from an economics perspective, is not a factor of production.¹⁶⁴ It is not expected to add to the real economy; it is essentially only what is used to pay for the true factors of production. His statement would be like saying, “Exchanging dollars for Euros does not add to the real economy...” That statement would also be true. It is virtually a tautology as it is one of the aspects that distinguishes money from the factors of production.

Although they do not make a final conclusion concerning the permissibility of Bitcoin, Amri and Mohammed highlight in their discussion the injustice found in Bitcoin. They make three points. First,

The objective of economic justice in financial transactions is reflected in the stability of the currency. The turbulence in its value and frequency in the price does not achieve economic justice in the transactions nor among the dealers. Therefore, it leads to injustice, which makes one affected by the price turmoil to feel that he is unjustly treated. This can be seen in the bitcoin where its value can fluctuate drastically.¹⁶⁵

Definitely, a stable currency is desirable for numerous reasons, including justice. As noted earlier, for many years the price of Bitcoin was stable. It is the fault of the actors and not the item

161 Jake Frankenfield, “51% Attack,” <https://www.investopedia.com/terms/1/51-attack.asp>

162 <https://fortunly.com/statistics/identity-theft-statistics/#gref>

163 Mohd Ma’Sud Billah, “Shariah Paradigm of Risk Management,” in Mohd Ma’Sud Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 308.

164 The factors of production are those inputs used to produce goods, essentially, land, labor, and capital. One can also add entrepreneurial ability.

165 Mohamed Cherif El Amri and Mustafa Omar Mohammed, “The Analysis of Cryptocurrency Based on Maqasid al-Shariah,” in Mohd Ma’Sud Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 126.

itself that produces this instability. This can happen to any currency or even silver. This does not make the item or currency itself forbidden.

Their second argument is a rather peculiar one,

Another manifestation of the absence of justice from this cryptocurrency transaction is that the amount of bitcoins is limited and does not exceed certain millions of units, which shows injustice. On the contrary, one of the conditions of the currency being traded is that it should not be limited because it is used as a store of value that can be readily used by other members of the society as price for goods and services. The limited number of bitcoins can be the direct cause of high fluctuation of the bitcoin price, where people compete to obtain it before it drained. The latter reason, limited amount, disqualifies cryptocurrencies from being traded because they lose the main feature of currency as medium of exchange, as there is no currency worldwide that is limited in number. In contrast, throughout the history people strive to increase wealth.¹⁶⁶

It is true that in the long-run there will be only 21 million Bitcoins mined. (There are only about 2 million left to be mined.) The implication of the authors is that the production of money should be unrestrained. Under a gold standard, the amount of money is strictly restricted by the amount of gold available. Even with fiat money, every government tries to restrict the amount of money printed. A specific money can actually become worthless when there is too much of it available. It is true that there are a lot of questions as to what will happen when Bitcoin reaches its maximum of 21 million but to argue that limiting output "shows injustice" seems to be baseless.

They present their third argument thusly,

The absence of monetary authority or lack of intervention of a ruler is a clear manifestation of injustice and betrayal of the citizens. It is the right of the ruler and monetary authority to declare the issuance of currency and maintain the standard that people use in their transactions. Otherwise, if we allow the issuance of currency this way, such as cryptocurrency, we will see the issuances of many currencies and all will claim that their currency is the standard that must be relied upon for determining the prices of goods. This will cause turbulence in prices, lead to disputes, and result in injustices and many other problems that the rulers will fail to solve.¹⁶⁷

The question of whether it is a must from an Islamic perspective for the government to be in charge of the money supply was addressed earlier. Especially with fiat money, a government itself can cause injustice via their monetary policies. Finally with respect to this passage, how can a currency claim to be the standard currency? It will be the will of the consumers that will determine which currency will be the standard by which all the other currencies will be evaluated.

It is fascinating to note how some authors relate cryptocurrency to injustice and failure with respect to the goals of the Shareeah (*maqasid al-Shareeah*) while, at the same time, others highlight the justice that blockchain and cryptocurrency bring about. Beik, et al., write,

A blockchain is invented from blocks of data that are linked through a sequenced cryptographic chain with hashes contains three main elements namely block data, chaining-hash, and block-hash (Leon et al. 2017). By using blockchain, both parties can have transactions without using third parties so it will reduce the cost (Papadopoulos

¹⁶⁶ Ibid., p. 126.

¹⁶⁷ Ibid., p. 126.

2015). Blockchain technology brings together Islamic values (trust, justice, equality, and efficiency) in finance that formulate and uphold the spirit of Islamic finance. This is in line with the expectations of all stakeholders of Islamic finance. Blockchain's records of transactions cannot be manipulated or altered. Hence, it fulfills the *Shari'ah* compliance aspects of Islamic finance.¹⁶⁸

7.8 Harmful to the Environment and a Waste of Energy

One of the arguments against Bitcoin in particular and other Proof-of-Work cryptocurrencies as well is that the amount of energy that they consume is a threat to the environment and extremely wasteful. If something overall causes a great deal of harm, even in a general sense, this could be used as an argument to declare it haram. Waste is also prohibited, so if something is deemed wasteful, it could also be considered prohibited.

Bitcoin's blockchain technology requires "mining." In the process of validating transactions (and miners earning rewards), computers have to essentially guess the answer to a puzzle. The first to guess the correct answer gets rewarded with bitcoins and gets paid fees. This guessing game has been intentionally made difficult, taking up a great deal of energy. The more computer power one possesses, the better one's odds for winning. Hence, massive computer setups are used to mine Bitcoin, such as that seen in Figure 15. De Vries, et al., states, "In May 2021, approximately 2.9 million specialized hardware devices worldwide competed in this game, generating 160 quintillion guesses per second² and consuming approximately 13 gigawatts (GW) of electricity."¹⁶⁹ Another way of looking at the enormity of amount of energy consumed, as Carter noted, it is "roughly equivalent to the annual energy draw of small countries like Malaysia or Sweden."¹⁷⁰ Recently, China has shut down all mining activities, which has shifted energy sources from a good amount of hydropower in China to coal-fired power in Kazakhstan.¹⁷¹ In addition to the amount of energy being used, Bitcoin also produces a large amount of e-waste, which is monitored in the "Bitcoin Electronic Waster Monitor."¹⁷²

168 Irfan Syauqi Beik, Mohammad Soleh Nurzaman, and Aisha Putrina Sari, "Zakat Standard Framework of Halal Cryptocurrency," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 277.

169 Alex De Vries, Ulrich Gellersdorfer, Lena Klaassen, and Christian Stoll, "Revisiting Bitcoin's carbon footprint" *Joule* (2022), <https://doi.org/10.1016/j.joule.2022.02.005>, p. 1.

170 Nic Carter, "How Much Energy Does Bitcoin Actually Consume?" *Harvard Business Review*, <https://hbr.org/2021/05/how-much-energy-does-bitcoin-actually-consume>

171 Alex De Vries, Ulrich Gellersdorfer, Lena Klaassen, and Christian Stoll, "Revisiting Bitcoin's carbon footprint" *Joule* (2022), <https://doi.org/10.1016/j.joule.2022.02.005>, p. 2.

172 <https://digiconomist.net/bitcoin-electronic-waste-monitor/>



Figure 15. Inspecting a bitcoin mining operation in 2018. Source:
<https://www.marketplace.org/2022/03/04/how-bitcoin-mining-works-as-simply-as-we-can-put-it/>

The harms of something must always be weighed with respect to its benefits as well. The fossil fuel industry continues to wreak havoc on the environment yet, at this point in time, since humans have become so reliant on it, to abandon fossil fuels without an adequate replacement could cause insufferable harm. There are a number of articles concerning Bitcoin that are very alarming.¹⁷³ Some of the more alarming claims have been critiqued. As Carter noted, “It’s important to understand that many environmental concerns are exaggerated or based on flawed assumptions or misunderstandings of how the Bitcoin protocol works.”¹⁷⁴

Could this amount of energy use possibly be justified? With respect to Bitcoin, Carter noted,

This certainly sounds like a lot of energy. But how much energy *should* a monetary system consume? How you answer that likely depends on how you feel about Bitcoin. If you believe that Bitcoin offers no utility beyond serving as a ponzi scheme or a device for money laundering, then it would only be logical to conclude that consuming any amount of energy is wasteful. If you are one of the tens of millions of individuals worldwide using it as a tool to escape monetary repression, inflation, or capital controls, you most likely think that the energy is extremely well spent. Whether you feel Bitcoin has a valid claim on society’s resources boils down to how much value you think Bitcoin creates for society.¹⁷⁵

Carter concludes,

That means that when we ask, “Is Bitcoin worth its environmental impact,” the actual negative impact we’re talking about is likely a lot less alarming than you might think. But there’s no denying that Bitcoin (like almost everything else that adds value in our society) does consume resources. As with every other energy-consuming industry, it’s

¹⁷³ See, for example, <https://youmatter.world/en/bitcoin-bad-environment-impact/> or Mora, et al., “Bitcoin emissions alone could push global warming above 2°C,” *NATURE CLIMATE CHANGE* (November 2018, Vol 8), www.nature.com/natureclimatechange

¹⁷⁴ Nic Carter, “How Much Energy Does Bitcoin Actually Consume?” *Harvard Business Review*, <https://hbr.org/2021/05/how-much-energy-does-bitcoin-actually-consume>

¹⁷⁵ Ibid.

up to the crypto community to acknowledge and address these environmental concerns, work in good faith to reduce Bitcoin's carbon footprint, and ultimately demonstrate that the societal value Bitcoin provides is worth the resources needed to sustain it.¹⁷⁶

One should also keep in mind that sustaining "physical money/currency" also costs a lot of money and consumes energy. The Federal Reserve System in the US has a budget of over \$1 billion simply to print money (and replace old bills and so on).¹⁷⁷ In fact, there is a lot of infrastructure that needs to go along with the physical money. For example, if people have physical cash, they need brick and mortar banks to deposit that cash. It has been estimated that switching to a digital currency (not a cryptocurrency but simply digital) would save the US economy \$750 billion a year.¹⁷⁸ This is one of the many reasons why many central banks are considering digital currencies.

7.8.1 Harmful? What About Fiat Money?

This discussion about cryptocurrency should be viewed in the light of the arguments of Jaffar, et al., against fiat money.¹⁷⁹ Figure 16, from their paper, summarizes their findings. Here is an example of what they wrote concerning the environmental impact of fiat money:

Deforestation activities usually affect poor and developing countries. Some academics have associated deforestation with the problem of fiat money. To survive, these countries borrow funds from international financial institutions such as the IMF and the World Bank. Therefore, the easiest way for these countries to serve the debt and its attached interest is to use their natural resources. For example, there is a high correlation between the top 20 deforested countries in the world and those nations with increased external debts (Meera, 2010). Lietaer and Belgin (2011) asserted that deforestation by developing and poor countries contributes to biodiversity loss, soil erosion and rising temperatures. According to the Food and Agriculture Organization of the UN (FAO), "Deforestation continues at an alarming rate of about 13 million hectares a year" (FAO, 2005), i.e. an area that is half the size of Great Britain. Furthermore, the UN Climate Change Conference in Bali in 2007 warned that deforestation would be one of the main reasons for future climate change (UNFCCC, 2007).¹⁸⁰

¹⁷⁶ Ibid.,

¹⁷⁷ <https://www.federalreserve.gov/foia/files/2022currency.pdf>

¹⁷⁸ Ajay S. Mookerjee, "What if Central Banks Issued Digital Currency?" *Harvard Business Review*, <https://hbr.org/2021/10/what-if-central-banks-issued-digital-currency>

¹⁷⁹ Syammon Jaffar, Adam Abdullah, Ahamed Kameel Mydin Meera, "Fiat money: from the current Islamic finance scholars' perspective," *Humanomics*, Vol. 33 Issue: 3 (2017), pp.274-299, <https://doi.org/10.1108/H-01-2017-0013>, *passim*.

¹⁸⁰ Ibid., p. 282.

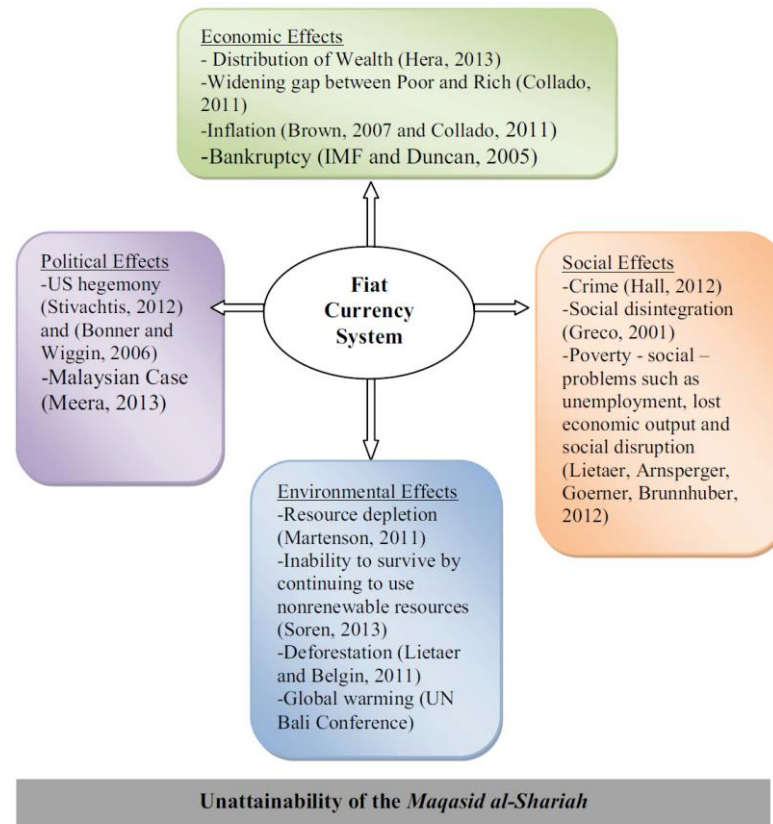


Figure 16. The Harms of Fiat Money. Source: Jaffar, et al., p. 283.

Two Wrongs Do not Make a Right

It is possible that some of these types of writings may be similar to Malthus' famous predictions about population explosion and the inability to feed the world. That is, these writings may have exaggerated projections and also suffer from some logical flaws. Many of these harms or potential harms of fiat money have been recognized by various economists.¹⁸¹

However, simply because fiat money is suffering from similar issues as cryptocurrency (such as environmental damage), that does not make cryptocurrency permissible. That is, two wrongs do not make a right. Furthermore, one could argue that fiat money in today's world is a necessity and inescapable while such is not the case for cryptocurrency. Thus, one has to bear with the harms of the one but there is no excuse to bear with the harms of the other.

It does though demonstrate that from an Islamic perspective more research and effort needs to be done to move on from the prevailing system. This explains why some have so much hope in cryptocurrency.

¹⁸¹ See, for example, Murray Rothbard, *The Mystery of Banking* (Auburn, Alabama: Ludwig von Mises Institute, 2008), *passim*; also, https://austrianeconomics.fandom.com/wiki/For_and_against_paper_money or <https://mises.org/library/fiasco-fiat-money>.

7.9 Bitcoin is Nothing more than a Ponzi Scheme

One commonly heard claim is that Bitcoin is nothing but a Ponzi scheme.¹⁸² Robert McCauley, from Boston College and Oxford, claimed that it is even worse than a Ponzi scheme, as it is unclear if it will ever have any real use and its energy usage makes it a negative-sum game.¹⁸³ European Central Bank Executive Board member Fabio Panetta after saying, "Crypto-assets are speculative assets that can cause major damage to Society. They derive their value mainly from greed, they rely on the greed of others and the hope that the scheme continues unhindered," then compared cryptoassets to a Ponzi scheme and similar to the sub-prime mortgages of the 2008 financial crisis.¹⁸⁴ Vaughan-Nichols also considers Bitcoin a Ponzi scheme and a scam but he also emphasizes or asks the question as to what will happen when no one buys Bitcoins at any price.¹⁸⁵ (Needless to say, the collapse of a currency, which has happened more than once, does not mean that the currency was all along a Ponzi scheme.)

A Ponzi scheme is essentially where earlier investors are paid off via funds from newer investors and not from the profits of the venture. The profits being paid out also lure in new investors. The idea here is that if Bitcoin eventually collapses, the people who got in early and sold off their holdings would have gotten their money back while those holding the coins at the collapse will get nothing. Another reason for naming it as such is if there is really nothing to Bitcoin but simply the hype around it from certain personalities that has led to people buying into it, those who got in early are essentially making their money off of those who came in later and are buying into the hype.

However, as Schwartzer has pointed out, when one analyzes what makes up a Ponzi scheme, Bitcoin definitely does not meet the definition of a Ponzi scheme. (At least, it does not meet the definition of a traditional Ponzi scheme.) Here are some of the points that she makes in her article: Among the signs that it is not a Ponzi scheme, Satoshi, the originator of Bitcoin, has apparently never cashed out his bitcoin holdings that he got from being the first to mine bitcoin. It should be noted that Satoshi did that mining openly and others could have done it as well. There is no promise of returns to the purchaser, which typically accompanies Ponzi schemes. Bitcoin is open source, which is the opposite of secrecy, upon which most Ponzi schemes must rely. The only red flag exists for Bitcoin is that it is unregulated but, she points out, being unregulated does not mean that it is a Ponzi scheme. Her conclusion, which definitely seems supported by her argument: Bitcoin is "clearly not a Ponzi scheme." She notes that some people then try to apply a broader definition of a Ponzi scheme to Bitcoin. Even here, she concludes, the claims fall short.¹⁸⁶

It should be noted that there have numerous scams and Ponzi schemes related to cryptocurrencies and cryptoassets. One should definitely be aware of them. The FBI has issued

¹⁸² See, for example, <https://www.cnbc.com/2021/04/23/bitcoin-a-gimmick-and-resembles-a-ponzi-scheme-black-swan-author-.html> or <https://www.scmp.com/comment/opinion/world/article/3154210/why-bitcoin-looking-more-pyramid-scheme-and-central-banks>. Also see the articles referred to below.

¹⁸³ See <https://seekingalpha.com/news/3783493-academic-says-bitcoin-is-worse-than-a-ponzi-scheme-cryptocurrency>

¹⁸⁴ <https://www.coindesk.com/policy/2022/04/25/ecbs-panetta-blasts-crypto-as-ponzi-scheme-fueled-by-greed/>

¹⁸⁵ Steven J. Vaughan-Nichols, "Bitcoin: Delusions of money," <https://www.computerworld.com/article/3648339/bitcoin-delusions-of-money.html>

¹⁸⁶ Lyn Alden Schartzer, "Is Bitcoin a Ponzi Scheme? Point by Point Analysis," <https://seekingalpha.com/article/4404419-is-bitcoin-ponzi-scheme-point-point-analysis>. Also see <https://medium.datadriveninvestor.com/why-simply-calling-bitcoin-a-ponzi-scheme-is-lazy-thinking-a3dfc67c25e>, and also <https://hackernoon.com/debunked-bitcoin-is-a-ponzi-scheme-zj1n35nh>.

warnings concerning them.¹⁸⁷ This, though, has nothing to do with the nature of Bitcoin or cryptocurrencies and, therefore, does not affect their ruling.

7.10 Other Arguments

The above actually does not cover all of the arguments presented against the permissibility of Bitcoin and cryptocurrencies. There are some, though, that simply do not deserve much or any attention. One person, for example, objected to Bitcoin because only Allah can create, so it is not permissible to create Bitcoin out of nothing. No comment seems necessary here.

Of course, conspiracy theories always abound, such as the claim that Jews are being Bitcoin. The most attractive aspect of conspiracy theories is that they are simply unproven. Fiqh, though, requires proof.

Finally, there is the claim that cryptoassets as a whole are nothing but a scam. Here is what one person has said,

I still see heaps of money being funnelled [sic] in by crypto promoters. They're waiting for a fresh batch of fools to come in. This happens in cycles. You wait for a while for the collective memory of the world to forget about how much of a scam it is. We've had ICOs [initial coin offerings], DAOs [decentralised autonomous organisations], now it's NFT [non-fungible tokens]. Now I'm seeing initial game offerings as the latest thing. Sadly I wish it was the end of crypto, but it's not. More holistically, in this system of griftonomics, hypercapitalism, rentier capitalism, increasingly people are doing nothing but making money off doing nothing.¹⁸⁸

Under normal circumstances, such a claim probably would not make its way into a paper of this nature. However, when this thought is expressed by one of the founders of an altcoin, it needs to at least be considered. These statements were made by Dogecoin creator Jackson Palmer. (Dogecoin is currently ranked #10 in market cap, as of May 31, 2022.¹⁸⁹) Although he created Dogecoin as a parody or joke, the coin actually took off. Starting it as a joke, though, does show that from the beginning he was skeptical and did not buy into the cryptocurrency idea. At the same time, though, his statement does seem to contain a lot of truth to it. In other words, what he described often does seem to be the ethics and behavior of those who get involved in cryptoassets. Regardless of the fiqh conclusion concerning the permissible of cryptocurrency on a theoretical level, no one should be duped by some of the hype surrounding cryptoassets.

7.11 General Comments on the Arguments of Those who Say that Bitcoin and Cryptocurrencies are Forbidden

Kakkattil has astutely observed that when it comes to critiquing Bitcoin/cryptocurrencies, there seems to be some sort of double standard going on when compared to how scholars treat fiat money. Kakkattil wrote,

It is interesting to note that there were no "high intensity discussions" about halal fiat currency in Islamic banking schools of thought. But when it comes to cryptocurrency, the halal cryptocurrency seems to be a de facto and a must wanted. It implies that

¹⁸⁷ https://www.sec.gov/files/ia_virtualcurrencies.pdf

¹⁸⁸ <https://www.crikey.com.au/2022/05/30/dogecoin-jackson-palmer-elon-musk-crypto-bubble-pauline-hanson/>

¹⁸⁹ <https://coinmarketcap.com/currencies/dogecoin/>

Islamic banking accepts the fiat currencies as halal by default, just because it is already established (?). The way of production of fiat currencies and whether it is backed by precious assets doesn't seem to be a matter of importance. At present, many countries' currencies (including US Dollar) are not backed by gold on which Islamic banking operates on. This looks like a double standard as it is very demanding to have halal cryptocurrency but not the halal fiat currency—at least not demanding with the same intensity.¹⁹⁰

Indeed, many or most of the arguments that are used against Bitcoin/cryptocurrency can be used against any currency today, as well as stocks—even cash itself. In other words, many fatwaas have confused the ruling on Bitcoin/cryptocurrencies with a reaction to what is occurring nowadays with respect to those currencies. This is a conceptual error. Volatility and manipulation may be separate from the nature of something. Again, as was demonstrated in this paper, if this same analysis were to be done for gold, silver, the stock market, various currencies of the world, the conclusion would be that they are all haram.

Furthermore, the distinction between something being a currency and something performing its roles as a currency well has been practically ignored. There is no doubt that Bitcoin/cryptocurrency has its challenges but that does not mean that it is not a currency.

Additionally, when it comes to judging Bitcoin/cryptocurrency, governments, government-related institutions, international financial institutions (such as the IMF) and others have a vested interest in preventing the spread of cryptocurrencies. This is truly a matter of power and profit for these players. Hence, one has to be cautious at taking their comments on Bitcoin/cryptocurrency at face value.

In this author's opinion, the proponents of the view that Bitcoin/cryptocurrency is forbidden have failed to prove their case. They have perhaps just one point that survives critique: Bitcoin and similar cryptocurrencies could be very harmful to the environment, thus putting all humanity at risk. This is discussed again in the next section.

190 Shajahan Kakkattil, "Blockchain Technology in Managing Halal Cryptocurrency," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 58.

8. THE EVIDENCE FOR THE PERMISSIBILITY OF BITCOIN AND CRYPTOCURRENCIES

8.1 *Istishaab* or the Maxim that the Default Ruling for All Things is Permissibility (الأصل في الأشياء الإباحة)

The principle that “all things are permissible by default (unless proven otherwise)” is the main argument presented by Joe Bradford for the permissibility of cryptocurrency.¹⁹¹ It is also the basis of Selcuk and Kaya’s view¹⁹² as well as Mohd Daud Bakar’s.¹⁹³ Muneeza and Mustapha invoke this principle for the entirety of fintech, not just cryptocurrencies, stating,

First and foremost... it is pertinent to begin from the general rule of Shariah governing business dealings that every transaction is permitted unless there is express and clear authority that prohibits such a transaction. This rule of default permissibility for all transactions gives room for flexibility towards novel practices and other innovations in financial dealings. Accordingly, innovations in business transactions are regarded as permitted and gladly allowed. Therefore, fintech innovations would only be considered impermissible when there is a clear rule of Shariah as the authority that such innovations contradict.¹⁹⁴

The essence of this maxim puts the burden of proof on those who claim that Bitcoin and cryptocurrency is forbidden. Thus, if those who say Bitcoin is haram cannot come up with a sound proof demonstrating that it is haram, then it must be considered permissible. This is one of the reasons why, in this paper, the arguments against Bitcoin and cryptocurrencies were so closely scrutinized. If this maxim is accepted, the crux of the issue lies in the opponents presenting a sound case.

This invoked legal maxim is, obviously, not a verse of the Quran or a hadith. Instead, it is a maxim that is concluded via induction and various general statements in the Quran and hadith. For example, Allah says,

هُوَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا

«It is He who created for you all of that which is on the earth. Then He directed Himself to the heaven, [His being above all creation], and made them seven heavens, and He is Knowing of all things» [Al-Baqara: 29]

Allah also says,

¹⁹¹ <https://www.joebradford.net/bitcoin-crypto-islamic-law-joe-bradford/>.

¹⁹² Mervan Selcuk and Suleyman Kaya, “A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective,” *TUJISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 143.

¹⁹³ As quoted in Farrukh Habib and Salami Saheed Adekunle, “A Case Study of Bitcoin and Its Halal Dimension,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 242.

¹⁹⁴ Aishath Muneeza and Zakariyah Mustapha, “Blockchain and Its Shariah Compliant Structure,” in Mohd Ma’Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 76.

قُلْ مَنْ حَرَّمَ زِينَةَ اللَّهِ الَّتِي أَخْرَجَ لِعِبَادِهِ وَالطَّيِّبَاتِ مِنَ الرِّزْقِ

«Say, "Who has forbidden the adornment of Allah which He has produced for His servants and the good [lawful] things of provision?"» [Al-A'raf: 32]

In another verse, Allah also says,

وَقَدْ فَصَّلَ لَكُمْ مَا حَرَّمَ عَلَيْكُمْ

« He has explained in detail to you what He has forbidden you » [Al-An'am: 119]

This is not the place for a detailed discussion of the evidence behind this legal maxim. However, two very important points need to be mentioned. First, this is not an agreed upon maxim. Second, even those who accept this maxim recognize that there are exceptions—branches of law—where the default is prohibition and not permissibility. Third, there are some clear conditions that must be put on the application of this legal maxim. In other words, there are other legal maxims that essentially work as a check on the misuse of this legal maxim.

It is important to highlight that this is not a universally accepted principle. Many times when people refer to it, they speak as though it must be acceptable to all. According to al-Suyooti, a follower of the Shafiee school, this maxim is accepted in the Shafiee school but it is not acceptable to Abu Hanifah.¹⁹⁵ However, ibn Nujaim, a follower of the Hanafi school, provides some more detail with respect to the Hanafi school. Some Hanafis, including al-Karkhi, do accept this maxim. He also says that some of the Ahl al-Hadith take the position that the default is that of prohibition. Then he adds that some Hanafis say that there is no default. One must find either permitting or prohibiting evidence and, if one is not able to do so, one must refrain from judgment.¹⁹⁶ There is another important way in which this maxim is sometimes looked at by some Hanafis. This is to distinguish between prior to the revelation of the Shareeah and after the revelation of the Shareeah. After the revelation of the Shareeah, humankind is never left without guidance. Therefore, one cannot resort to a position of the default being permissible.¹⁹⁷

As mentioned, this is not the appropriate place to go into the proofs and counterproofs concerning this legal maxim. In this author's opinion, as the majority have concluded, it is a valid principle. However, it is also definitely not absolute. For example, the default ruling concerning sexual relations or taking lives is that of prohibition. Similarly, the default concerning acts of worship is *tauqeef*, meaning any such act must be based on guidance from Allah. The default concerning "wealth" is also that of prohibition. What is meant by that here is that an individual

195 Jalaal al-Deen al-Suyooti, *al-Ashbaah wa Nadhaair* (Beirut, Lebanon: Daar al-Kutub al-Ilmiyyah, 1990), p. 60.

196 Zain al-Deen ibn Nujaim, *Al-Ashbaah wa al-Nadhaair ala Madhhab Abi Haneefah al-Numaan* (Beirut, Lebanon: Daar al-Kutub al-Ilmiyyah, 1999), p. 57.

197 See Shams al-Deen al-Husaini al-Hamawi al-Hanafi, *Ghamz Uyoon al-Basaair fi Sharh al-Ashbaah wa Nadhaair* (Beirut, Lebanon: Daar al-Kutub al-Ilmiyyah, 1985), vol. 1, p. 223. Note that in general when the majority of scholars when invoke this maxim, they are referring to both before and after the time of revelation. See Auni Musaarawah, *Al-Istishaab: Hujjiyat wa Atharuh fi al-Ahkaam al-Fiqhiyyah: Diraasah Nadhariyyah Taseeliyyah Tatbeeqiyyah*, Master's Degree (Nablus, Palestine: Jaamiah al-Najaah al-Watiniyyah), 2003, p. 59. In fact, most jurists are invoking the term while discussing items that appeared after the Shareeah, demonstrating that that is clearly what they intend by it. It is only legal theorists who have a tendency to discuss the question of before or after the revelation. See Abdul Rahmaan al-Abullateef, *al-Qawaaid wa al-Dhawaabit al-Fiqhiyyah al-Mutadhamin li-l-Taiseer* (Madinah, Saudi Arabia: Al-Jaamiah al-Islamiyyah, 2003), vol. 1, p. 146.

cannot take “wealth” until he has evidence that it belongs to him or he has some right over it.¹⁹⁸ On these exceptions, there is general agreement.

However, a disputed exception is the maxim that states, “The default concerning contracts is prohibition.” The question of the default ruling concerning contracts is an important question. Al-Zuhaili wrote,

The first opinion is that the default concerning contracts is prohibition. That is the view of the majority. It is stated explicitly by ibn Hazm. The foundations of Abu Hanifah indicate this as does much of the foundations of al-Shaafiee. This opinion is followed by some of Malik’s and Ahmad’s followers. Some stretching the principle more than others. The second opinion is that the default is that of soundness and permission. This is explicitly stated by ibn Taimiyyah and ibn al-Qayyim. Most of the textual foundations of Ahmad are of this view. Imam Malik is also very close to it as well. It is the apparent view of al-Shaafiee, al-Jasaas al-Hanafi, al-Fakhr al-Raazi al-Shaafiee, and al-Shaatibi al-Maliki. In fact, ibn al-Qayyim ascribes this opinion to the majority while some ascribe it to the [majority of] the Hanbalis only.¹⁹⁹

It is very interesting to see how al-Zuhaili’s attributions are very different from that of Ibhees. Ibhees wrote that there are three opinions on the default ruling:

The first opinion is that the default concerning contracts and stipulations is prohibition. Nothing is permissible or binding except what the Lawgiver has explicitly stated is permissible and allowable. This is the view of ibn Hazm, al-Abhari of the Malikis, and Shaikh al-Hasan ibn Haamid of the Hanbalis.

The second opinion is that the default concerning contracts and stipulations is that of permissibility. Nothing of them can be prohibited except that for which there is a clear text. This is the view of some Hanafis, such as al-Karkhi and al-Jassaas, as well as of the Malikis, Shaafiees, Hanbalis, ibn Taimiyyah, and ibn al-Qayyim. Ibn Rajab al-Hanbali said, “Some have even declared a consensus on this point.”

The third opinion is that of no default ruling. That is, one does not declare a contract either valid or invalid except via a proof that indicates that. This view has been attributed to Taaj al-Deen al-Subki.²⁰⁰

Clearly, there seems to be a difference of opinion concerning this maxim. However, would this maxim and its related difference of opinion actually have any ramifications for cryptocurrency? If cryptocurrency is in fact a currency, as has been concluded in this paper, this maxim should not be relevant, regardless of the difference of opinion concerning it. This is because purchasing cryptocurrency would be nothing more than money exchange (*al-sarf*), which was well-known and permitted by the Shariah during the time of the Prophet (peace and blessings of Allah be upon him). If Bitcoin, for example, is considered a non-monetary asset, then the purchase of it may not be a new type of transaction, as that type of “asset” is definitely unique.

When the classical scholars discussed this maxim, they were not living at a time in which the dominant financial paradigm was *riba*-based (interest-based). Nowadays, numerous innovative

¹⁹⁸ For a review of these exceptions to the general maxim, see Ahmad al-Suwaikhi, *Qaaidah al-Asl fi al-Ashyaa al-Ibaahah* (Riyadh, Saudi Arabia: Jaamiah al-Imaam, 2007), pp. 145-151.

¹⁹⁹ Muhammad Mustafa al-Zuhaili, *Al-Qawaaid al-Fiqhiyyah wa Tatbeeqaatuha fi al-Madhaahib al-Arba* (Damascus, Syria: Daar al-Fikr, 2006), vol. 2, p. 815.

²⁰⁰ Marwaan Ibhees, “Qaaidah ‘al-Asl fi al-Uqood al-Ibaahah’: Diraasah Fiqhiyyah Taseeliyyah,” Master’s Degree (Nablus, Palestine: Jaamiah al-Najaah al-Wataniyyah, 2016), pp. 23-25.

financial products have been developed, such as derivatives, that earlier scholars would have never imagined. Even if one is going to invoke this maxim, it should not be done lightly. In other words, one must do one's due diligence to truly determine that there is nothing forbidden in the new financial products. It can never be assumed that it is simply a financial transaction and should fall under the maxim that the default for such contracts is permissibility. For example, a number of "Islamic mortgages" have been presented as being "Shariah compliant" but a closer inspection has found that since some of them are part of a *riba*-based (interest-based) financial/banking legal system, they do incorporate *riba* (interest) aspects.²⁰¹ In the case of Bitcoin, for example, it could be the mining process, that is a must for Bitcoin, that may not be acceptable from an Islamic perspective. If this were the case, that could conceivably close the door to the permissibility of Bitcoin. It is clear from some statements made that some have made the conclusion that Bitcoin is permissible but they have yet to look into the issue of mining. (Mining is discussed more in the first appendix of this paper.)

However, there is still yet one other condition that the general maxim quoted above must meet. Actually, the maxim, "the default ruling concerning things is that of permissibility," is not quoted in what should be its entirety. The correct and complete form of the maxim should be, "The default ruling concerning beneficial things is that of permissibility while the default ruling concerning harmful things is that of prohibition" (الأصل في المنافع الإباحة وفي المضار التحريم).²⁰²

This is a significantly different way of considering this principle. In this new light, it is not sufficient simply to discover explicitly prohibited fiqh practices related to business. It is possible that there is nothing objectionable in a technical sense with cryptocurrency but if it is found to be harmful overall, it will be considered prohibited. The one item that stands out in particular here is the effect on the environment. One report, perhaps exaggerated, states that at the current rate Bitcoin "could push global warming above 2 degrees C in a couple decades."²⁰³ The issue of its energy usage and related concerns are well-known and admitted by the Bitcoin community itself. For example, according to Marco Streng, Bitcoin miners are "converging toward renewable sources."²⁰⁴ In fact, a recent survey found that Bitcoin mining "ranked as one of the world's most sustainable industries."²⁰⁵ The environment impact of Bitcoin was discussed earlier and it was left as something of an open question. However, this is something that could change the ruling to haram, even if technically speaking there were no fiqh issues with the structure of Bitcoin. At that point, it will be a matter of *ijtihad* to determine if the benefits of cryptocurrencies outweigh their harms.²⁰⁶

201 See this author's "Murabaha as Home Financing in the United States," AMJA Annual Imam's Conference, 2014.

202 Cf., Safi al-Deen al-Armawi al-Hindi, *Nihaayah al-Wusool fi Diraayah al-Usool* (Makkah, Saudi Arabia: al-Maktabah al-Tijaariyyah, 1996), vol. 8, p. 3938; Fakhr al-Deen al-Raazi, *al-Mahsool fi Ilm al-Usool* (Beirut, Lebanon: Muassasah al-Risaalah, 1997), vol. 6, pp. 97f.

203 <https://www.sciencedaily.com/releases/2018/10/181029130951.htm>. Also see <https://news.yahoo.com/how-bitcoin-mining-contributes-to-climate-change-161229231.html>

204 Quoted in <https://techcrunch.com/2022/04/28/bitcoin-miners-say-energy-efficiency-and-regulatory-certainty-are-crucial-for-the-industrys-success/>

205 <https://bitcoinist.com/bitcoin-mining-ranked-one-world-most-sustainable/>

206 There could be much upside to cryptocurrencies and the digitalization of money. Selcuk and Kaya state, "The positive effects of this digitization on economics and finance are mentioned following sentences. (i) The digitalization of money increases trade volume all around the world. (ii) It eliminates the continuous printing costs of money. (iii) A common currency can be created for the use of international societies. This has a positive impact on trade, production, and consumption volume. (iv) It can be liquidated more quickly by merchants, thus motivating businesses on the Internet. (v) It provides the opportunity to make transactions 24/7 by decreasing the fees charged on money transfers." Mervan Selcuk and Suleyman Kaya, "A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective," *TUJISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), pp. 138-9

8.2 A Narration from Umar ibn al-Khattaab

There is a narration concerning Umar ibn al-Khattaab that is used as evidence against the idea that money must be gold or silver based. It is also used as evidence that money from a Shareeah perspective can be based on whatever is accepted by the people as money. This narration is invoked in the context of cryptocurrency to demonstrate that there is nothing necessarily prohibiting its use as currency from a Shareeah perspective.

The referred to narration is as follows:

حَدَّثَنَا عَمْرُو النَّاقِدِ، قَالَ: حَدَّثَنَا إِسْمَاعِيلُ بْنُ إِبرَاهِيمَ، قَالَ: حَدَّثَنَا يُونُسُ بْنُ عُبَيْدٍ عَنِ الْحَسَنِ... وَلَقَدْ كَانَ عُمَرُ بْنُ الْخَطَّابِ قَالَ: هَمَمْتُ أَنْ أَجْعَلَ الدِّرَاهِمَ مِنْ جُلُودِ الْإِبِلِ فَقِيلَ لَهُ إِذَا لَا بَعِيرَ فَأَمْسَكَ

Al-Hasan [al-Basri] said, "Umar ibn al-Khattaab said, 'I considered making dirhams from camel skins,' but then he was told that there would be no camels left, so he refrained from doing it."²⁰⁷

Unfortunately, as is not atypical in works on fiqh, it is quoted without any discussion (or perhaps regard) as to its authenticity.²⁰⁸ This narration is problematic on a couple of fronts. First, the chain is broken between al-Hasan al-Basri and Umar ibn al-Khattaab. Thus, this report is from what is known as the *mursal* reports of al-Hasan al-Basri, which are, for most scholars, considered very unreliable.²⁰⁹ The second issue concerns Yoonus ibn Ubaid. He has been described by al-Nasaaee and others as having committed *tadlees* (making it seem like he heard the narration directly while he did not). Ibn Hajar puts him into the second category of those who commit *tadlees*.²¹⁰ However, ibn Abi Haatim gives an explicit example of a narration from Yoonus that he attributed to al-Hasan but actually he did not hear it from him but from an intermediate source, al-Ashath.²¹¹

207 Ahmad ibn Yahya al-Balaadhuri, *Futooh al-Buldaan* (Beirut, Lebanon: Daar wa Maktabah al-Hilaal, 1988), p. 452.

208 This narration was quoted as a proof, without any discussion of its authenticity, in, for example, Muhammad Aslam Haneef and Emad Rafiq Barakat, "Must Money be Limited to Only God and Silver?: A Survey of Fiqhi Opinions and Some Implications," *JKAU: Islamic Economics* (Vol. 19, No. 1, 2006), p. 28; Rafeeq al-Misri, *Al-Islaam wa al-Nuqood* (Jaamia al-Malik Abdul-Azeez, 1990), p. 10; Muhammad Ali al-Hareeri, "Qeemah al-Nuqood wa Ahkaam Taghyraatihaa fi al-Fiqh al-Islaami," *Majallah al-Buhooth al-Islaamiyyah* (No. 40), p. 305; Abdullah al-Manee, "Bahth fi al-Dhahab fi Badh Khasaaisih wa Ahkaamih," *Majallah al-Buhooth al-Islaamiyyah* (No. 50), p. 103; Ajeel Jaasim al-Nushaimi, "Taghyir Qeemah al-Umlah fi al-Fiqh al-Islaami," *Majallah Majma al-Fiqh al-Islaami* (Vol. 5), p. 1213; Muhammad al-Haaj al-Naasir, "Al-Muamalaat al-Islaamiyyah Wa Taghyeer al-Umlah Qeemah wa Aina," *Majallah Majma al-Fiqh al-Islaami* (Vol. 5), p. 1668; and numerous others places.

209 Al-Hasan's *mursal* reports are from the weakest of the *mursal* reports. His *mursal* reports have been described as being "like the wind," meaning that they have no value to them. Ibn Hajar (vol. 11, p. 547) stated that the *mursal* reports from al-Hasan are not relied upon because he used to accept narrations from anyone. Cf., Ahmad ibn Ali ibn Hajar al-Asqalaani, *Fath al-Baari Sharh Saheeh al-Bukhari* (Beirut, Lebanon: Daar al-Marifah, 1379), A.H., vol. 11, p. 547; Shams al-Deen al-Dhahabi, *al-Mauqidaah fi Ilm Mustalah al-Hadith* (Aleppo, Syria: Maktabah al-Matboo'at al-Islaamiyyah, 1412 A.H.), p. 40; Jalaal al-Deen al-Suyooti, *Tadreeb al-Raawi fi Sharh Taqreeb al-Nawaawi* (Daar Teebah), vol. 1, p. 231.

210 Ahmad ibn Hajar al-Asqalaani, *Tabaqaat al-Mudalliseen* (Amman, Jordan: Maktabah al-Manar, n.d.), p. 36. The second category refers to scholars who although they committed *tadlees* were well aware of their responsibilities in narrating hadith. Therefore, some scholars will overlook their *tadlees*.

211 Abu Muhamad Abdul-Rahmaan ibn Abi Haatim, *al-Jarh wa al-Tadeel* (Beirut, Lebanon: Daar Iyaa al-Turaath al-Arabi), vol. 1, p. 135.

There is also a second narration recorded by al-Kattaani (who died in 1382 A.H.) which states that Umar ibn al-Khattaab did in fact use skins as money.²¹² (Thus, contradicting the apparent meaning of the above narration.) However, that report apparently has no known source linking it back to Umar and, as such, cannot be considered as evidence.

In conclusion, these reports are not of the quality that will qualify them to be proofs in Islamic Law, neither singularly nor together²¹³—not to speak of using them as a basis for a very important principle of Islamic economics.

8.3 Summary

Given that the maxim that the default concerning business contracts is that of permissibility, the burden of proof falls on those who wish to say that Bitcoin and cryptocurrencies are forbidden. As seen earlier, those who claim that Bitcoin and cryptocurrencies are forbidden did not truly prove their point. They could not point to any aspect of cryptocurrencies that is clearly forbidden.

However, using this maxim of permissibility, those who argue that cryptocurrencies are permissible essentially needed to prove only one thing: Bitcoin or cryptocurrencies are not harmful in and of themselves. On this point, there is one glaring issue: the environmental impact of Bitcoin and similar cryptocurrencies. This is definitely still an open question that may take some time to resolve as actually things are constantly changing with respect to this question, as miners move from one part of the world to another and one energy source to another. That harm also needs to be weighed against any benefits, which, one could argue, are relatively minimal at this time.

212 Muhammad Abdul Hayy al-Kattaani, *Al-Taraateeb al-Idaariyyah wa al-Umalaat wa al-Sanaat wa al-Mutaajir wa al-Haal al-Ilmiyyah allati Kaanat ala Ahd Tasees al-Madaniyyah al-Islaamiyyah fi al-Madeenah al-Manuwarah al-Ilmiyyah* (Beirut, Lebanon: Daar al-Arqam), vol. 1, p. 333.

213 Thus, one can ignore the question of the legal authority of the statements or actions of the Companions.

9. CONCLUSIONS: THE DETAILS OF INTERACTING WITH CRYPTOCURRENCY

Allah has said,

حُرِّمَتْ عَلَيْكُمْ أُمَّهَاتُكُمْ وَبَنَاتُكُمْ وَأَخَوَاتُكُمْ وَعَمَّاتُكُمْ وَخَالَاتُكُمْ وَبَنَاتُ الْأَخِ وَبَنَاتُ الْأُخْتِ وَأُمَّهَاتُكُمُ الَّتِي
أَرْضَعْنَكُمْ وَأَخَوَاتُكُم مِّنَ الرِّضْعَةِ وَأُمَّهَاتُ نِسَائِكُمْ وَرَبِّبُكُمُ الَّتِي فِي حُجُورِكُمْ مِّنْ نِّسَائِكُمُ الَّتِي دَخَلْتُمْ بِهِنَّ فَإِنْ لَّمْ
تَكُونُوا دَخَلْتُمْ بِهِنَّ فَلَا جُنَاحَ عَلَيْكُمْ وَحَلَائِلُ أَبْنَائِكُمُ الَّذِينَ مِنْ أَصْلَابِكُمْ وَأَنْ تَجْمَعُوا بَيْنَ الْأُخْتَيْنِ إِلَّا مَا قَدْ سَلَفَ
إِنَّ اللَّهَ كَانَ غَفُورًا رَحِيمًا

«Prohibited to you are your mothers, your daughters, your sisters, your father's sisters, your mother's sisters, your brother's daughters, your sister's daughters, your [milk] mothers who nursed you, your sisters through nursing, your wives' mothers, and your step-daughters under your guardianship [born] of your wives unto whom you have gone in. But if you have not gone in unto them, there is no sin upon you. And [also prohibited are] the wives of your sons who are from your [own] loins, and that you take [in marriage] two sisters simultaneously, except for what has already occurred. Indeed, Allah is ever Forgiving and Merciful» [An-Nisaa: 23]

What does it mean to say, "Your mothers are prohibited to you"? It means that certain acts with respect to them is prohibited. In particular, marriage to them is prohibited. In reality, "things" in and of themselves are not forbidden. The issue is how one interacts or uses those things. One could take alcohol and analyze its content from a chemical perspective, perhaps to discover what in it makes it so harmful. No one could say that that interaction with alcohol is forbidden. On the other hand, one could take grapes, universally recognized as permissible, and make wine out of them, universally recognized as forbidden. It is not that grapes are forbidden, and, in the previous example, it is not that alcohol is permissible, but the prohibition or permissibility has been determined by the nature of the interaction not just the essence of the item itself. It was found that there is nothing essentially prohibited in Bitcoin/cryptocurrency. However, that does not mean that all the various ways in which Bitcoin/cryptocurrency have been used are permissible.

In this author's view, Bitcoin/cryptocurrency needs to be discussed in this light. Currently, there are varied uses for cryptocurrency and varied reasons why people buy cryptocurrency. The different uses are examined below. However, before going any further, it is important to note that this author is not trying to imply that Muslims should go out and buy Bitcoin or other cryptocurrencies. At the present time, that is definitely risky (even for the so-called "stable coins"). This, though, is not an advice column. It is just a study to determine from a fiqh aspect whether the technology, mechanics, and workings of cryptocurrency, such as Bitcoin, should be considered halaal.

9.0.1 Using Bitcoin/Cryptocurrency as a Payment Rail

Suppose somebody in the United States needs to send money to someone in Europe. No matter how one chooses to send the money, there is going to be a fee and it will take some time. After looking into different payment rails, one may determine that one's best option is

cryptocurrency. Given that it has been concluded that the nature of cryptocurrencies is permissible, this kind of transaction should be permissible.²¹⁴

9.0.2 When Bitcoin/Cryptocurrency is More Reliable than the Domestic Currency

As mentioned earlier, this happened in the past in Zambia. Under such circumstances, it also seems clear that Bitcoin/cryptocurrency would be permissible to use.

9.0.3 When Bitcoin/Cryptocurrency is Legal Tender

As mentioned earlier, this is the case currently in two countries in the world. Perhaps none of the Muslim scholars reviewed in this paper would object to using Bitcoin/cryptocurrency under this circumstance.

9.0.4 When Believing that Bitcoin/Cryptocurrency is the Currency of the Future

A Muslim may truly believe that Bitcoin/cryptocurrency is the money of the future and he expects that he will be using it regularly as money in the future. He may even wish to support this movement. In such a case, Allah willing, purchasing this currency should be permissible.

9.0.5 When One Believes that Current Monies are Ribawi (Interest-Based), Evil, and Corrupt

A Muslim could actually believe that Bitcoin/Cryptocurrency is more "halaal" than the current fiat money system. The individual may wish to have nothing to do with the current *ribawi* (interest-based system) and sees cryptocurrency as a halaal alternative. One should recall that Bitcoin was actually developed in response to the financial crisis of 2007, when it became clear that many financial institutions were essentially corrupt and could not be trusted. In this case, the purchase of cryptocurrencies should be permissible.

9.0.6 Purchasing Bitcoin/Cryptocurrency as a Curiosity

Although this may sound strange, when Bitcoin was in its infancy, this author had met some Muslim who bought Bitcoin simply as a curiosity. They thought it was interesting and the price was still relatively low, so they purchased it. In general, this kind of behavior is not approved of in the Shareeah. A hadith states,

إِنَّ اللَّهَ كَرِهَ لَكُمْ ثَلَاثًا قِيلَ وَقَالَ وَإِضَاعَةَ الْمَالِ وَكَثْرَةَ السُّؤَالِ

"Allah has hated for you three matters: (1) vain, useless talk, (2) to waste wealth, and (3) to ask too many questions." (Rewarded by al-Bukhari.) Buying something simply out of curiosity,

²¹⁴ One of the problems for Bitcoin is its transactions fees. The average fee for a transaction reached an all-time high of over \$62 in April 2021. It has fallen dramatically since then. In April 2022, the average fee for a transaction had fallen all the way to \$1.04. See <https://cointelegraph.com/news/bitcoin-average-transaction-fees-lowest-in-two-years-at-1-04>. Still, when transferring large sums of money, it could be much cheaper than what banks or others may charge.

without having any clear idea that that item has any value to it, would probably fall under the scope of this *hadith*.

9.0.7 Using Bitcoin/Cryptocurrency Out of Need and Necessity

There have been cases where mosques were hacked and they could not re-enter their computer system without paying a Bitcoin ransom. Obviously, paying ransoms is not a good thing but this could be a case of need or necessity. In that case, purchasing Bitcoin for this reason should be permissible.

9.0.8 Purchasing Bitcoin/Cryptocurrency to Engage in the Dark Web and Illicit Activities

Perhaps this needs little comment. If one buys bitcoin simply as a conduit to do something which is forbidden in itself, then this is clearly an evil intent behind the purchase of bitcoin and render its purchase sinful.

9.0.9 Using Bitcoin/Cryptocurrency as a Speculatory Investment Asset

This is perhaps the biggest question that needs to be addressed. Using cryptocurrency as a speculatory investment asset—trying to make a lot of money by virtually doing nothing—is what has attracted many people, including Muslims, to purchase cryptocurrency. In fact, Adam wrote, “The data presented by Baur et al. (2015) shows that Bitcoins are mainly used as a speculative investment.”²¹⁵ This, though, does not define what Bitcoin is, only how people have abused it.

It has been argued in this paper that Bitcoin and other cryptocurrencies are currencies from a Shareeah perspective. One of the tragedies in today’s world is that in the name of profit-maximization—or excessive greed—people’s wealth is not respected. Indeed, people’s livelihoods are often being played with and gambled upon. When the stock market takes a tumble, for example, people’s retirement savings are often at risk. However, those who are out to make easy money do not seem to be bothered with what havoc they wreak. The situation is even more problematic when people start speculating in a specific currency. Imagine someone working hard for a month to earn enough money to support his family for the upcoming month and then due to profit-driven speculation, the value of his currency dramatically falls and he can no longer support his family.

The essence of what al-Ghazaali, ibn Taimiyyah, and other Muslim scholars have stated is that money is supposed to be a medium of exchange, not a good to be purchased for its own sake nor speculated on. Whether one is speaking about cryptocurrency, dollars, or any monies, from a Shareeah perspective, these are not meant to be used as a source of speculation or gambling. This type of dealing in currencies is akin to *riba* or interest. A key aspect related to *riba* is that one receives payments completely divorced from any real economic activities. For example, if someone lends another person \$100, then if the borrower was not able to use that money in any way, the lender is going to expect the \$100 back plus interest, even with no real economic activity. Furthermore, the lender did not put forth any effort but still wishes to make money simply off of money. Hence, when one buys cryptocurrency like a day trader simply with intent and hope that its

215 Mufti Faraz Adam, “Bitcoin: Shariah Compliant?” (Amanah Finance Consultancy), p. 45.

value will go up and one can profit off of that, one is truly combining the essence of *riba* (interest) and gambling in one.

Izhar and Gundogdu also expressed this view concerning gambling, saying, "What about trading in cryptocurrencies with a main objective of solely taking advantage of their price differences? It is clearly tantamount to speculation, hence gambling."²¹⁶

9.0.10 Spot Transaction

The Prophet (peace and blessings of Allah be upon him) said,

الذَّهَبُ بِالذَّهَبِ، وَالْفِضَّةُ بِالْفِضَّةِ، وَالْبُرُّ بِالْبُرِّ، وَالشَّعِيرُ بِالشَّعِيرِ، وَالتَّمْرُ بِالتَّمْرِ، وَالْمِلْحُ بِالْمِلْحِ، مِثْلًا بِمِثْلٍ، سَوَاءً بِسَوَاءٍ،
يَدًا بِيَدٍ، فَإِذَا اخْتَلَفَتْ هَذِهِ الْأَصْنَافُ، فَيُعَوَّضُ كَيْفَ شِئْتُمْ، إِذَا كَانَ يَدًا بِيَدٍ

"Gold is to be paid for by gold, silver by silver, wheat by wheat, barley by barley, dates by dates, and salt by salt, like for like and equal for equal, payment being made hand to hand. If the specie differs, then sell as you wish if payment is made hand to hand." (Recorded by Muslim.) Ibn al-Mundhir stated, "Everyone that we know of from the people of knowledge say that if the two who are exchanging money depart from each other before exchanging possession, the exchange is void."²¹⁷

Being currencies, cryptocurrencies can only be exchanged for other currencies in a spot transaction, hand to hand. If this is not possible with respect to cryptocurrencies, then the very manner in which the currency has been purchased involves an element of interest.

The bulk of cryptocurrencies are purchased via the Internet. A relevant fatwa from islamqa.info, referencing the Majma al-Fiqhi (Fiqh Academy) of the OIC, highlights the difficulty here:

Firstly: As the exchange of wealth may be done physically in a hand-to-hand transaction, or by measure or weight in the case of food, or by transfer of the purchased goods to the possession of the purchaser, it may also be achieved in other ways, by giving it up and putting it at the disposal of the purchaser, even if the exchange does

²¹⁶ Hylmun Izhar and Ahmet Suayb Gudogdu, "Characterizing Cryptocurrencies and Why it Matters," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 115. At the same time, it should be noted that Adam does not accept the idea that this is a type of gambling. He writes, "Undeniably, trading, investments and gambling are all regarded as speculative risks. However, there are clear differences between gambling, trade and investments which highlight the difference in risk. Trading and investing are positive-sum games while gambling is a zero-sum game. Positive-sum games are where the parties gain together or lose together. In a partnership, partners mutually gain or mutually lose if the venture fails. In zero-sum games, one party gains at the expense of another. Considering Bitcoin transactions, Bitcoin is exchanged for a counter-exchange where both parties anticipate gain from their acquired asset. It is never guaranteed that one party will surely lose. Thus, Bitcoin transactions are positive-sum games as both transacting parties anticipate gain. Therefore, Bitcoin exchanges cannot be likened to *Maysir* and *Qimar* (gambling) due to the inherent difference between positive-sum and zero-sum games." [Faraz Adam, "Fatawa Analysis of Bitcoin," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 145.] What Adam wrote is true from the perspective of the industry as a whole. However, it is a form of gambling from the perspective of the one individual putting his money into something and the profit or loss not being the result of real economic activity but simply animal spirits of fellow speculators. In this way it is similar to the stock market. As Back wrote many years ago about the stock market, "The market price of stocks is determined by thousands of other people who are all guessing at the same imponderables are you are. Many of them are in the market as speculators, looking for a quick dollar on the price rise rather than for a long-pull investment . . . The actual market price will reflect what all those people think is going to happen. So you are betting on what other people will bet on and they in turn are betting on what you and others will bet on." [George Leland Bach, *Economics: An Introduction to Analysis and Policy* (Englewood Cliffs, New Jersey: Prentice-Hall, 1971), p. 519.]

²¹⁷ Quoted in Muwafaq al-Deen ibn Qudaamah, *al-Mughni* (Cairo, Egypt: Maktabah al-Qaahirah, 1968), vol. 4, p. 41.

not take place physically. The way in which the exchange takes place may vary according to the situation and customs with regard to receiving the value.

Secondly: Among the non-physical forms of receiving the value that are permissible are the following:

1. Transferring money into the agent's account in the following ways:

- a. When it is deposited into the agent's account, directly or via wire transfer
- b. When the agent makes arrangements between himself and the bank to receive the money in the case of buying one currency for another, so that the money will automatically be transferred to the agent's account
- c. When the bank – on the instructions of the agent – deducts money from one account to another account of his in a different currency, whether it is in the same bank or a different one, in the interests of the beneficiary or another agent. The banks should pay attention to ensuring that these arrangements are in accordance with the principles of Islamic banking. The delay in transferring the money before the beneficiary is actually able to take possession of it may be overlooked for the usual amount of time that such transfers take in the banking system, but it is not permissible for the beneficiary to dispose of the currency during this grace period, until after the money has been transferred and actually received.

2. Receiving a cheque, provided it is covered and withdrawable in the currency written on it when it has been received and deposited into the account.

Majallat al-Majma' (issue no. 6, 1/453), Qiraaraat wa Tawsiyaat Majma' al-Fiqh al-Islami (p. 113, 114).

Scholars who specialize in contemporary financial dealings have pointed out that selling currencies via the internet is not a transaction in which hand-to-hand exchange can take place, so it is haraam according to sharee'ah.²¹⁸

In that fatwaa, there may be something of a loophole, when the Fiqh Academy stated, "The delay in transferring the money before the beneficiary is actually able to take possession of it may be overlooked for the usual amount of time that such transfers take in the banking system."²¹⁹ What are the parameters of an acceptable delay? Is this based on logistics, necessity, or custom? What is that "usual amount of time?"

Traditionally, the Malikis have been very strict on this question of currency exchange. Ibn Rushd stated, "Delaying the exchange of currencies invalidates the transactions, even if the 'contractual meeting' was still in session."²²⁰ The other schools are a little more flexible, as they say

²¹⁸ <https://islamqa.info/en/answers/93334/dealing-with-a-company-that-buys-and-sells-currencies>

²¹⁹ A similar fatwaa quoting the same loophole from the Fiqh Academy is found here: <https://www.islamweb.net/ar/fatwa/416803/%D9%8A%D8%BA%D8%AA%D9%81%D8%B1-%D8%AA%D8%A3%D8%AE%D9%8A%D8%B1-%D8%A7%D9%84%D9%82%D9%8A%D8%AF-%D8%A7%D9%84%D9%85%D8%B5%D8%B1%D9%81%D9%8A-%D9%84%D9%84%D9%85%D8%AF%D8%AF-%D8%A7%D9%84%D9%85%D8%AA%D8%B9%D8%A7%D8%B1%D9%81-%D8%B9%D9%84%D9%8A%D9%87%D8%A7>

²²⁰ Al-al-Waleed ibn Rushd al-Hafeed, *Bidaayah al-Mujtahid wa Nihaayah al-Muqtasid* (Cairo, Egypt: Daar al-Hadith, 2004), vol. 3, p. 212.

that as long as the change in possession takes place during the same contractual meeting, the exchange is valid.²²¹ They base their opinion on this report found in *Sahih al-Bukhari*:

عَنْ مَالِكِ بْنِ أَوْسٍ أَخْبَرَهُ: «أَنَّهُ التَّمَسَّ صَرَفًا بِبِائَةِ دِينَارٍ، فَدَعَانِي طَلْحَةُ بْنُ عُبَيْدٍ اللَّهِ، فَتَرَاوَضْنَا حَتَّى اضْطَرَفَ مِنِّي، فَأَخَذَ الذَّهَبَ يُقَلِّبُهَا فِي يَدِهِ ثُمَّ قَالَ: حَتَّى يَأْتِيَ خَازِنِي مِنَ الْعَابَةِ، وَعُمَرُ يَسْمَعُ ذَلِكَ، فَقَالَ: وَاللَّهِ لَا تُفَارِقُهُ حَتَّى تَأْخُذَ مِنْهُ، قَالَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ: الذَّهَبُ بِالذَّهَبِ رِبًا إِلَّا هَاءَ وَهَاءَ، وَالْبُرُّ بِالْبُرِّ رِبًا إِلَّا هَاءَ وَهَاءَ، وَالشَّعِيرُ بِالشَّعِيرِ رِبًا إِلَّا هَاءَ وَهَاءَ، وَالتَّمْرُ بِالتَّمْرِ رِبًا إِلَّا هَاءَ وَهَاءَ.

Malik bin Aus said, "I was in need of change for one-hundred Dinars. Talha bin 'Ubaidullah called me and we discussed the matter, and he agreed to change (my Dinars). He took the gold pieces in his hands and fidgeted with them, and then said, 'Wait till my storekeeper comes from the forest.' `Umar was listening to that and said, 'By Allah! You should not separate from Talha till you get the money from him, for Allah's Messenger (ﷺ) said, "The selling of gold for gold is Riba (usury) except if the exchange is from hand to hand and equal in amount, and similarly, the selling of wheat for wheat is Riba (usury) unless it is from hand to hand and equal in amount, and the selling of barley for barley is usury unless it is from hand to hand and equal in amount, and dates for dates, is usury unless it is from hand to hand and equal in amount."'''

One of the challenges with e-commerce from the perspective of Islamic contract law is how a "contractual session" is defined. It is clear from the words of the Prophet (peace and blessings of Allah be upon him) that the goal of the Shareeah is that there should be no delay in the exchange of the two currencies. Any necessary delay must be as limited as possible and perhaps "custom" will determine if is too long. Thus, another fatwaa from islamqa states if the delay in exchange is within the contractual session, there is no harm in that. Similarly, there is no harm if the delay in exchange is "minor" and outside of the control of the two parties.²²²

One of the few articles to address this issue with respect to cryptocurrency was Hassan, et al. Given what was explained above, what Hassan, et al., wrote with respect to cryptocurrencies seems odd:

This currency exchange mode is important to be examined in view of the Shari'ah requirement of spot basis transaction in currency exchange (*bai' sarf*). The scholars have allowed 3 days (T+2) settlement period of foreign currency exchanges, recognizing that transaction as being "spot transaction". The T+2 is deemed as spot although the delivery and settlement is delayed from the day the contract is being concluded, because the 48-hour period is the time needed for transaction confirmation. The permissibility of the T+2 transactions can be seen in the resolution of Shari'ah Advisory Council (SAC) of Central Bank of Malaysia where it stated that:

221 Cf., Ali al-Qura Daaghi, "Al-Qabdh: Suwaruh wa Bikhaasah al-Mustajiddah Minhaa wa Ahkaamuhaa," *Majallah Majma al-Fiqhi*, vol. 6, p. 417.

222 <https://islamqa.info/ar/answers/283815/%D9%8A%D8%B4%D8%AA%D8%B1%D9%8A-%D8%A7%D9%84%D8%B9%D9%85%D9%84%D8%A9-%D8%A7%D9%84%D8%A7%D9%83%D8%AA%D8%B1%D9%88%D9%86%D9%8A%D8%A9-%D9%88%D9%8A%D8%AA%D8%A7%D8%AE%D8%B1-%D8%AF%D8%AE%D9%88%D9%84%D9%87%D8%A7-%D9%81%D9%8A-%D8%AD%D8%B3%D8%A7%D8%A8%D9%87-15-%D8%AF%D9%82%D9%8A%D9%82%D8%A9>

The SAC, in its 38th meeting dated 28 August 2003, has resolved that the delivery and settlement of a spot foreign exchange transaction based on T+2 is permissible. In the case of cryptocurrency, it would take less than three days so it bears no issue as far as the spot transaction requirement is concerned.²²³

This author is not aware of others who share such an interpretation of a valid spot contract. Selcuk and Kaya definitely have a different take on this, essentially arguing that the condition of a spot transaction bars entrance into cryptocurrencies for Muslims. They wrote,

Transactions are recorded by miners on blocks which constitute the blockchain system every 10 minutes. This duration may increase due to the processing intensity. To the transaction take place in the earliest block, it can be said that the transaction fee should be kept high and the transaction should be accelerated. Bitcoin is subject to the *bay al-sarf* contract poses a significant problem here, because according to the *bay al-sarf*, the parties are obliged to making the exchange on the spot, with the amounts being of equal quality and quantity. As the number of transactions waiting for recording in blocks increases, the recording time will increase. Therefore, the rules of *bay al-sarf* Contract cannot be fulfilled. When the transaction fee be kept high, the transaction takes place in the next block. Once the transaction has been signed and submitted for approval, the transaction cannot be cancelled. In this regard, the transactions are submitted for approval may be considered sufficient to fulfil the requirements of the contract.²²⁴

The correct view is probably somewhere in between those two views just presented. There are a number of possibilities concerning this issue for cryptocurrencies. When it comes to purchasing Bitcoins—in other words, exchanging dollars for Bitcoins—it is now possible to do this with cash.²²⁵ There is actually a website that will connect people who wish to buy and sell Bitcoins with cash.²²⁶ Another option for a cash purchase is via Bitcoin ATMs. The individual has to have an online wallet, of course. He enters cash into the machine and for a service fee, Bitcoins will be entered into his account within minutes. Another service is LibertyX, that allows one to buy Bitcoins via local, well-known stores.²²⁷ There are also ways by which one can buy Bitcoins via a bank deposit at a bank. Moving the cryptocurrency from one wallet to another will always take some time, that is inevitable. When waiting for the transaction to be completed, one can remain at one's computer or on one's phone until the transaction is finished. In this way, it could be argued that the exchange is within the contractual session. None of this is meant to be a promotion for Bitcoin but it is simply meant to emphasize that one must do one's best to make the purchase of Bitcoin a spot transaction.

Another important aspect is that the purchaser of currency via cryptocurrency, which includes buying alternate cryptocurrencies or dollars, must make every attempt to make the currency

223 Rusni Hassan, Nadiyah Syahira Nordin and Rizal Mohd Nor, "Regulatory and *Shari'ah* Framework of Cryptocurrency," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 210. The Central Bank of Malaysia justified this position by saying, "Hence, the SAC resolved that the practice of the delivery of money at T+2 is construed to have taken place beyond the contract session. However, this practice may be allowed from Shariah perspective due to the established customary business practice arising from operational constraints. In addition, the delivery of money beyond the contract session may also be allowed in the event of unexpected operational disruptions."

https://www.bnm.gov.my/documents/20124/761682/Feedback+Statement_Sarf.pdf/6720e4d2-a5dd-94bb-34f8-d3048c40228a?t=1581910098482

224 Mervan Selcuk and Suleyman Kaya, "A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective," *TUJISE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 147.

225 For various options, go to <https://99bitcoins.com/buy-bitcoin/>.

226 See <https://paxful.com/?r=rg9drpAVBk1>

227 See <https://libertyx.com/>.

transaction as close to a spot transaction as possible. If this means paying higher mining fees in order to have the transaction done more quickly—especially much more quickly—he should do so.

9.1 Final Words

In his research on cryptocurrencies, and Bitcoin in particular, al-Azhari made an interesting remark at the conclusion of his work. He stated, “This topic is one of those issues that keeps changing. As such, *ijtihaads* (juristic conclusions) change with it every day. The person who says that it is permissible today may rule that it is impermissible tomorrow, or vice-versa.”²²⁸ This author greatly appreciates what al-Azhari stated. While preparing this research, this author literally scoured through tens of papers, blogs, and news reports on a daily basis. The reports, information, claims, and statements made about cryptocurrency are often contradictory and worrisome. Therefore, in conclusion, this researcher can say that these are his thoughts on this topic as of June 1, 2022.

والله المستعان

228 Abu Ahmad Aiman al-Azhari, *Hukum al-Nuqood al-Ilikturooni (al-bitkaween)*: Diraasah Fiqhiyyah Muqaaranah, p. 68.

10. APPENDICES: TOPICS FOR FURTHER RESEARCH

Due to time and space limitations, the focus of this paper has been rather narrow. This paper has been about the legality of purchasing and using Bitcoin and/or cryptocurrency from a Shareeah perspective.

There are a number of other topics related to cryptocurrency which Muslim scholars need to investigate thoroughly. Due to space limitations, these topics can simply be introduced and briefly commented upon here.

10.1 Mining and Staking

10.1.1 Mining

Bitcoin uses a decentralized, blockchain technology and a Proof-of-Work (PoW) system. Instead of data being kept on a bank's server, for example, every computer on the system has a ledger of the same data, saved in blocks. A new block is added to the chain approximately every ten minutes. The protocol of Bitcoin protects the data by the process of mining. Mining is a process in which miners compete to win the right to verify and add the new block in the chain. The miner will earn this right by guessing the answer to a complicated puzzle, a random number. The guessing has been made difficult. Quintillions of guesses are sent out by numerous computers. The more computer power one has, the more likely one will guess the number first. Thus, mining pools, where individuals join their computer power together, have formed. An individual—even college students in their dorms²²⁹—can join a mining pool in which that person's computer power will be used by the pool. The one who solves the problem first will receive Bitcoins in return as a reward or payment. This validation is called Proof-of-Work (PoW) because it took a lot of computer "work" to come up with the correct answer.

The fact that this involves a "guessing" game has led some Muslim writers to question its legitimacy from a Shareeah perspective, likening it to gambling. Note what Billah and Amadu have written,

This categorical condemnation of gambling is the basis for which some scholars have ruled against the use of Cryptocurrency since the process of mining in order to create a transaction register in the blockchain involves a process akin to mining. The data mining process by the miners in the Cryptocurrency system invests a lot of money and resources in running computer programs that aim to solve as much cryptic code as possible in the transaction blocks in order to create a successful registry by creating Bitcoins and be paid a share of the Bitcoin value of the transaction completed. The process of creating the block-chain through mining is one of the most critical matters that need to be reviewed in order for Cryptocurrency to be to gain Shari'ah approval for the process clearly has characteristics of gambling and unfair business practice. There is no exact science to determine who can decipher the cryptic code, it is a clear game of chance by those who have invested in the resources to run the codes that attempt to decipher the cryptic code and thus succeed in solving the puzzle and be paid a commission of the value of the Bitcoin transaction. Solving by chance is an instance of gambling and this clearly is a case of the gambling that is condemned by the *Qur'an* as

229 See "The secret lives of students who mine cryptocurrency in their dorm rooms" <https://qz.com/1160667/the-secret-lives-of-students-who-mine-cryptocurrency-in-their-dorm-rooms/>

shown by the verses quoted above. Furthermore, this mining process also goes against other ethical considerations of Islam among these, the *Qur'an* states:

Give full measure and do not be of those who cause loss. And weigh with an even balance.

And give full measure when you measure, and weigh with an even balance. That is the best [way] and best in result.

Woe to those who give less [than due], Who, when they take a measure from people, take in full. But if they give by measure or by weight to them, they cause loss. Do they not think that they will be resurrected, For a tremendous Day - The Day when mankind will stand before the Lord of the worlds?

In light of the above verses and with regard to gambling which always leads to some losing while others gain, the mining that causes loss as people are encouraged to invest money and resources with the hope of making returns, but these returns are based on speculation and chance, thus in the end many investors in mining do not get rewarded for the effort and money they invested that facilitates the very survival of the system upon which the creation of Bitcoins is based, the peer-to-peer network. Now given the strong wording of the *Qur'an* as regards creating loss and not giving what is due, it is of a necessity that scholars would question the suitability of this aspect of Cryptocurrency while considering whether it is acceptable from an Islamic perspective. One may say that the miners acquiesced to participate knowing very well that they may not be successful, but then that is the essence of the *Qur'anic* injunction against gambling, to preserve wealth and not to risk it in a process through which one can unfairly lose that wealth.²³⁰

Izhar and Gundogdu agree, saying, "More importantly, the way money is created is quite speculative (*Maysir*) and uncertain (*Gharar*) in cryptocurrencies. It is deceitful to call such casino computer way of operating as mining to convince people as if it is gold mining, and it is akin to traditional money. Casino machines also work based on such powerful computers with high-capacity formula solving skills."²³¹ Habib and Adekunle noted that Dar al-Ifta, the Supreme Council of Palestine, concluding, "mining of bitcoins is also prohibited, because it consists of grave uncertainty (*gharar*) and entails the essence of gambling (*qimar*)."²³²

One of the most important aspects in the Fiqh of Finance is to correctly identify what type of contract pertains to a particular transaction. Mining does not have to be likened to simply gambling. It is possible that mining can be considered a type of *juaalah* (or *jaaalah*, جعالة) contract. Ayub has explained what this is,

Ju'alah is a contract in which one party (the *J`a'il*) undertakes to give a specific reward (the *Jua'l*) to anyone who may be able to realize a specific or uncertain required result, for example, finding a stolen car. *Ju'alah* is permissible on the authority of the Holy Qur'

230 Mohd Ma'Sum Billah and Mohammed Fawzi Aminu Amadu, "Shariah Code of Ethics in Cryptocurrency," Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), pp. 155-7.

231 Hylmun Izhar and Ahmet Suayb Gudogdu, "Characterizing Cryptocurrencies and Why it Matters," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 110.

232 Farrukh Habib and Salami Saheed Adekunle, "A Case Study of Bitcoin and Its Halal Dimension," in Mohd Ma'Sum Billah, *Halal Cryptocurrency Management* (Cham, Switzerland: Palgrave MacMillan, 2019), p. 242.

an and the Sunnah. There is reference in Surah Yousuf to the announcement about the lost beaker of the King that the person who would find the beaker of the King would be given reward of a camel load grain. As regards the Sunnah, the holy Prophet (pbuh) approved a deal by some Companions who stipulated that if the Chief of the tribe was cured, they would be given compensation for that. Although some jurists [specifically the Hanafis] restrict *Ju'alah* to a reward for the return of a runaway slave, the majority of them consider it permissible for a number of activities.²³³

Another important aspect of *juaalah* is mentioned by Ayub, "It is not a condition of *Ju'alah* that the worker be specified and it is sufficient that an offer is issued to the general public, in response to which any person can undertake the work himself or with the help of others."²³⁴ Suwailem extends this further in ways very relevant here:

The Hanafi school considers *ja'alah* as *gharar* [unrestrained speculative], while the other three schools (Maliki, Shafi'i, and Hanbali) consider it permissible. The Hanafi scholars looked at the case when performance is not successful, whereby the agent loses, and, even worse, the principal might benefit from the agent's effort. Since this is a win-lose outcome, they therefore considered *ja'alah* as *gharar*. The majority looked at the cooperative outcome whereby both parties can win. Maliki scholars, however, were aware of the possibility of the win-lose outcome, and thus required that agent's work shall not benefit the principal if the final outcome is not achieved. An example is digging a water well, whereby the principal might benefit from digging even if water is not found (ابن رشد 2/180). The Shafi'is do not require the same, and allow *ja'alah* for such types of work (النووي 5/274), while Hanbalis appear neutral (البهوتي 2/468-469). Thus the three schools do not agree on excluding the win-lose outcome, but they all make it clear that *ja'alah* is acceptable because both parties can benefit from it, i.e. because of the win-win outcome.

Consequently, if the objective of the contract is the cooperative outcome, *ja'alah* shall be acceptable, as the majority of scholars believe. If, on the other hand, the win-lose outcome is more likely, so that the zero-sum part of the game dominates, the game becomes more of a *gharar* transaction, consistent with the Hanafi's position. The zero-sum measure therefore is rich enough to allow for different *fiqh* opinions, yet informative enough to discriminate among these positions.²³⁵

It is important to note that when al-Suwailem speaks about a cooperative outcome and it not being a zero-sum game, he must only be speaking about the "owner" and the "agent" who was successful. Otherwise, amongst the possible "agents" who compete to fulfill the contract, it is a zero-sum game. To illustrate, if a person puts up a \$1,000 reward for finding his lost camel, many people may decide to search for that camel. One among them may have more knowledge of camels and therefore he may have an advantage over the others. However, there is chance involved. That more knowledgeable may not necessarily find the camel. When one person finds the camel, he will receive his reward and the others will have simply lost their effort. This is very similar to bitcoin mining and the process of different computers guessing the solution—one will win, the

233 Muhammad Ayub, *Understanding Islamic Finance* (West Sussex, England: John Wiley & Sons, 2007), p. 351.

234 Ibid., p. 352.

235 Sami al-Suwailem, "Towards an Objective Measure of Gharar in Exchange," *Islamic Economic Studies* (Vol. 7, Nos. 1 & 2, Oct. 1999-Apr. 2000), pp. 76-77.

others will lose; those who more computer power have an advantage but they do not win every time.

If the Bitcoin “mining” contract does not fit into the *juaalah* mold, it would seem difficult to justify from a Shareeah perspective. However, although it does seem to fit that model, this requires a more detailed analysis.²³⁶

Finally, with respect to mining, there has been some unethical behavior taking place. In particular, people are either using computers to mine while not authorized to do so²³⁷ or hacking into computers for mining.²³⁸ Unethical behavior such as this would not be permitted in the Shareeah.

10.1.2 Staking

Proof-of-Work (P-o-W) mining is not the only method to verify and add to the blockchain. An alternative is what is known as Proof-of-Stake (P-o-S). This alternative is attractive because it cuts down on the amount of energy and computer power needed. However, from a security perspective, it is not as foolproof and much more vulnerable than P-o-W, being open to, what is known as, “the nothing-at-stake problem” and also attack. (Potential attackers, though, will have to had a large fraction of tokens in order to carry out an attack.) At present, most cryptocurrencies still use mining. Ethereum is planning on shifting everything to staking sometime during 2022. Cardano, Avalanche, and a few other cryptocurrencies do use P-o-S.

From a Shareeah perspective, this method can be described as more questionable than the mining described above. In this method, one stakes or locks one’s coins on the network, committed to maintain the network, almost like a loan. Your locked funds are now “at stake,” sometimes with heavy restrictions on when and how one can regain one’s funds. In this case, the validators are selected in proportion to the amount of that particular cryptocurrency they possess, how longed they have staked those funds, and some amount of randomization. In other words, those with the largest “bank account” will have a greater probability to be selected for the validation process. Each coin has its own regulations to determine who exactly will win the right to forge the next block.

It is important to note that some coins, not all, actually pay interest on the locked funds which are “at stake.” Daly noted, “The primary benefit of staking is that you earn more crypto, and interest rates can be very generous. In some cases, you can earn more than 10% or 20% per year. It's potentially a very profitable way to [invest your money](#).”²³⁹ Sandor described this a little differently, “Similarly, when you stake your digital assets, you lock up the coins in order to participate in running the blockchain and maintaining its [security](#). In exchange for that, you earn

236 For more details on *juaalah* and some of its contemporary applications, see Jamaal al-Farraa, “Al-Juaalah ala al-Amaal: Mafhoomuhaa wa Tatbeequhaa,” Ph.D. dissertation (University of Jordan, 2009), *passim*; Khaalid al-Jumaili, *Al-Juaalah wa Ahkaamuhaa fi al-Shareeah al-Islaamiyyah wa al-Qanoon: Nadhariyyah al-Wad bi-l-Mukafaah* (Beirut, Lebanon: Daar al-Nadwah al-Jadeedah, 1986), *passim*.

237 See, for example, Michael Angelo Asis, “LSU Student Nabbed Mining Cryptocurrency on 169 School Computers,” <https://thecollegepost.com/lsu-student-mining-cryptocurrency/>

238 See, for example, Virginia Corona, “4 Ways to Tell if Your Computer is Secretly Mining Cryptocurrency,” <https://scholarlyoa.com/computer-is-secretly-mining-cryptocurrency/>

239 Lyle Daly, “What is Staking in Crypto?” <https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/what-is-staking/#:~:text=The%20primary%20benefit%20of%20staking,way%20to%20invest%20your%20money.>

rewards calculated in percentage yields. These returns are typically much higher than any interest rate offered by banks.”²⁴⁰ This is unquestionably haram.

A few authors have commented on this method from a Shareeah perspective. For example, Selcuk and Kaya wrote,

In PoS, the block reward is given randomly depending on the stake of coins in the account. Therefore, every user of these cryptocurrencies is also a verifier. Users have a high stake of coins are more likely to be used as verifiers and thus receive more shares from each verification process and earn more money than lower coin holders (Faridi, 2018; Saleh, 2018). This will have the same effect as *riba* since it would mean making money from money. In this case, coins that are supplied employing PoS are not licit, according to *Fiqh* (Kaya, 2019).²⁴¹

At first glance, it definitely does sound possibly problematic. However, one is being chosen randomly, with a weighted distribution though, and then one will receive payment (new coins) after the work is done. In other words, it is not simply money for money, as in the case of *ribaa* (interest) but it is money for effort.

This definitely also should be studied in more detail.

10.2 Initial Coin Offerings

From a Shareeah perspective, initial coin offerings (ICOs) can also be problematic. An ICO is essentially seeking funding for a cryptocurrency project. As the time of requesting the funds, sometimes there is a just of team of people and a white paper. Other times, initial coins are present at the time of the ICO.

There are a number of important fiqh issues here. First, one has to be aware of what one is buying into. In exchange for one's funds, one may receive either a token or a coin. If it is a token, depending on the terms of the contract, it may entitle the individual to future coins. Since this paper has argued that cryptocurrencies are currency, this type of transaction is not permissible as currency exchanges must be spot transactions. If the coin already exists and the person receives coins delivered immediately in exchange for one's funds, then it should be permissible, since it is a spot transaction.

Incidentally, ICOs are also notorious for being scams. Reports came out showing that 80% of the ICOs in 2017 were scams.²⁴² Again, that is not related to the nature of the ICOs but is simply another way in which something is abused or misused.

And Allah alone knows best.

240 Krisztian Sandor, “Crypto Staking 101: What is Staking?” <https://www.coindesk.com/learn/crypto-staking-101-what-is-staking/>

241 Mervan Selcuk and Suleyman Kaya, “A Critical Analysis of Cryptocurrencies from an Islamic Jurisprudence Perspective,” *TUIJSE: Turkish Journal of Islamic Economics* (Vol. 8, No. 1, 2021), p. 145-6.

242 Ana Alexandre, “New Study Says 80 Percent of ICOs Conducted in 2017 Were Scams,” <https://cointelegraph.com/news/new-study-says-80-percent-of-icos-conducted-in-2017-were-scams>