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# Tri Lingual Categorization of Opinions on Bitcoin and Crypto Currencies: An Islamic Perspective

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**Abstract:** Bitcoin and other Virtual currencies (which are called “crypto currencies”) have been very popular during the last few years. Specially, in case of Bitcoin which became a hot topic on media when its price surged to \$20,000 in 2017. People rushed towards it and tried to buy as much as they can. Muslim people started asking scholars about the Shariah guidance. That was a very new technology and scholars and legislators, both knew very little about them. Also there were many points which have to be considered before issuing Fatwa (Shariah guidance) like nature of money and its status according to Shariah, status of a money which have no guarantee or support from a government, possibility of fraud and hacking in these currencies and uncertainty if invested in them etc. Due to these points and difference of research results scholar have different opinions. The aim of this study is to collect popular opinions from Arabic, Urdu and English work and categorize their result so it can be easy to do more work on this topic.

**Keywords:** Bitcoin, Crypto Currencies, Islam, Investment.

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**Introduction:** Bitcoin and Block chain are two of the most modern technologies. Bitcoin is a peer to peer (computer to computer over the network) mod of payment. It works like currency or better to say: cash. Bitcoin uses Block chain for its record management. Block chain is a permanent alternative of data servers in which all data is distributed in blocks and saved in every nod (the computer which uses Bitcoin).

Bitcoin was invented in 2009 by a pseudonymous programmer “Satoshi Nakamoto”. It became popular after 2014-15 and since then it is discussed among experts of law and Shariah.

“Shariah” means the ruling of Islam. According to majority of Muslims, Islam is an up to date religion. It has its own regulation system which is called “Fiqh (Islamic Law or Jurisprudence)”. This “Fiqh” provides a number of basic principles which lead to Shariah rulings about any modern thing and solution of every new situation.

When Bitcoin started becoming famous, a lot of Muslim people tried to get guidance about it in the light of Islam. They asked “Darul Iftas” and scholars started research on it. But unfortunately, they couldn’t agree on a single principle or ruling yet. So, it is being discussed till now. We will study their different opinions in this article.

## Bitcoin and Block Chain:

**Bitcoin:** According to Nakamoto (2008), the programmer who invented Bitcoin and its whole system, Bitcoin is an electronic cash which transfers over the internet with the help of peer-to-peer model. The peer-to-peer networking model consists of a network of computers which are connected to each other directly and exchange information and files without any central server (Oram, 2001). Bitcoin works the same way. It transfers from computer to computer and fulfils payment needs.

In simple words, Bitcoin is a Virtual Currency which can be achieved, stored and used for various purposes through the internet (IMF, 2016). IMF calls it “representation of value” as it is the basic purpose of any currency or better to say: any money (we will discuss it later). A unit of Bitcoin is noted by “BTC”.

**What is Block Chain?** As we know that Bitcoin uses P2P model which means that there is no central server between sender and receiver. When a sender sends a BTC to a receiver, a record of this transaction generated (like normal bank servers) and saved in both computers. It is very simple in theory but in practical there is a big problem: Any programmer can create his own copy of BTC and send it to others. Thus, the value of currency can collapse. Also, there is a chance of double spending where a sender sends a copy of his BTC to another receiver. On contrary, in transactions of fiat currencies there is a bank, authority or government which verifies every transaction and mitigates chances of counterfeit and double spending. As Bitcoin is an independent currency, the solution of a verification authority is not possible. Nakamoto (2008) recognized this problem and gave the idea of “Block chain” system. Gupta (2017) and Antonopoulos (2014) noted that Block chain is a ledger in which all transactions are distributed in methodically arranged blocks. Every block is linked with and referring to the previous one and all blocks create a chain. If anyone tries to change any block, the whole chain will be destroyed. This chain is saved in every node (computer which uses Bitcoin directly). With the help of Block chain system we can mitigate the chances of fraud and double spending as long as the majority of verifying nodes are honest (Nakamoto, 2008).

**Mining and Hashing:** When talking about Bitcoin and Block chain it is necessary to discuss “Mining” process. When a sender sends a BTC to a receiver, there must be a third person who examines the whole chain and every block and finds out whether this transaction is ok or not. This verifier is called “Miner” and this process is called “Mining” (Antonopoulos, 2014). Mining is used in many other currencies too. Some of them use its sub process “Proof of Work” like Bitcoin (Nakamoto, 2008) while others use “Proof of Stake” which is called “Forging” (Paracha, 2018).

Now we can illustrate the whole process. Bob has 50 BTC’s and he wants to send some to Alice. In Bitcoin everyone has his own private key for every transaction which is used like a signature on a cheque. Every user has a public key too which is used as an address (Paracha, 2018). Bob enters Alice’s public key as address, his own private key as signature and sends 25 BTC’s. This transaction’s detail is shared to the whole network. Carol sees this transaction, examines the whole record and finds out that Bob had received 50

BTC's from someone a month ago and never spent them. He puts this transaction in a block, verifies it and shares it to whole network where it is saved in every node. This block is now added into the chain of blocks (in every node) and cannot be changed. If Chuck tries to change it in its own computer it will be rejected by others.

In Bitcoin every miner must find a proper and difficult hash to verify a block. Due to its difficulty every hash is found in ten minutes on average. This time is used to mitigate the chances of forks (two blocks verification at a time in different parts of the world due to slow internet or any reason) (Antonopoulos, 2014). The difficulty of new hashes increases (or theoretically decreases) as much as miners gain computing powers in whole network so the average verification time remains constant on 10 minutes.

**Wallet:** Now a days the term of "Wallet" is very popular in Bitcoin. Usually it is considered as a place in which all BTC's are saved (IMF, 2016). Antonopoulos (2014) and Paracha (2018) do not buy this idea and describe "Wallet" as a place in which all privet keys of transactions are stored rather than BTC's themselves. All BTC's are stored on network in the terms of "transactions" where every transaction consists of one, more than one or less than one BTC. When a hacker cracks a wallet, he gets these privet keys and transfers BTC's with the help of these keys. Also, the word "Wallet" is used to describe the address of a receiver in common people.

**Altcoins:** When Nakamoto invented Bitcoin in 2009, developers started making this idea better. Some helped him in making Bitcoin more efficient and free from errors while some started new currencies. These currencies are somehow different from Bitcoin but have one thing in common: the idea of distributed ledger and P2P transaction. These currencies are called "Altcoins". Some of them are Litecoin, Ether, Ripple and Bitcoin cash (Frankenfield, 2020).

### **Money and Bitcoin:**

**What is Money?:** For hundreds or thousands of years human being has been using one or another kind of money for their payment needs. It has always understood that if a person wants to take a thing from another person, he has to pay something in exchange. But what thing he will pay in exchange and why? This raises the question: What is money?

Crowther (1941) defines it as anything which is acceptable by common people in exchange of their assets, debts, goods or services. This thing must be able to measure value of goods as well as store the value. For example, if Bob has \$100 today, he has ability to purchase goods of \$100. This is storing of value. With the time passed the goods coming in exchange decrease but he is considered a holder of value of \$100 according to present time. Also, the same units of money are always equal. So the note of \$10 is considered equal to 10 dollars in any kind (coins, note, bank credit etc.).

Economists are almost agreed on this definition. Some put a condition that money should be backed by government but Crowther (1941) rejects it strictly. One of the most prominent economists of Islamic Era Miqreezi (1998), who died in 1441/42, noted things

which had used as money in history e.g. eggs, pieces of breads, leaves, cowries etc. These things were not backed by government but used as money. It appears from this detail that money can be anything which has three properties:

1. Must be accepted generally.
2. Has to be measure of value of things and services.
3. Must store the value.

In fact, when first condition is met, other two become true automatically. When something is accepted in exchange of things and services, people start measuring and storing value in it.

**Types of Money:** From legal perspective there are three types of money:

1. Legal tender
2. Non legal tender
3. Illegal tender

Paracha (2018) defines them. Legal tender is the money which is backed by a government order or guarantee e.g., Rupees, Dollars etc. Law compels the second party to accept it (Black, 1990). Non legal tender is the money which is used and accepted by people but government does not consider it the mod of payment and no one is legally bound to accept it e.g., cheques, bonds etc. An illegal tender is the money which is prohibited by government for any reason. Berkeley (1876) also discussed them in detail.

**History of Money and What we Acquire from it:** Diving deep in history, we can find many things which people used as money. It is not clear that when idea of money or medium of exchange for everything appeared in societies. But as far as we know the evidence of a medium of exchange always exist in societies.

Before using anything as money, did people use barter system for their needs? Crowther (1941), Lewis (2007) and a large number of economists has this opinion. Graeber (2011) believes that barter system before money is an imaginary and fabricated story and there is no evidence that people rely on barter system only in any point in history. It also manifests from statements of Ibn Khaldun (1988) that any medium of exchange has been used always.

Things which used as money are many. People used cowries over large part of the world (Davies, 2002), salt and cattle in Roman empires (Hollander, 2007; Allen, 2009), notes in China (Allen, 2009) and pieces of bread in Baghdad (Miqreezi T. U., 2007). There are many other things like stone and rice which were used as medium of exchange. Normally these things were not backed by any government but people started using them for one reason or another. They used them in some parts of the world (so these were money there) while in other parts these were common goods or commodities. People also used currencies of different countries in areas outside of their legal boundary (Ibn Abideen).

**Bitcoin's Status:** Now we have known that money can be anything which is accepted generally. There is no condition such that it must be backed by government or any authority or it must be made from some precious metal etc. If our ancestors had been using different precious and non-precious things and consider them their medium of exchange than we can do so too. The only thing is that it must be accepted at least in a market, community, cast or region (Paracha, 2018).

Bitcoin, though it is not accepted everywhere, but is considered a form of money. It is like "community currencies" of United States of America (Collom, 2005) or better to say "Computerized Virtual Currencies" of England (Lee, 1996). These currencies have been used in UK and USA where these are accepted among one community or some people. Bitcoin is used in a community but in this case this community does not live in a single geographical location. They live in the whole world and use it over the internet.

The legal status of Bitcoin or any virtual currency is not the same in all over the world. Some countries have imposed (implicit or absolute) ban on them, some consider them financial assets and tax them, countries like Switzerland gave them the status of foreign currency and many are doing research for making regulations. China, Venezuela and some other countries are thinking about issuing their own crypto currencies (Global Legal Research Directorate, 2018).

#### **Shariah Opinions about Bitcoin and Virtual Currencies:**

Due to Bitcoin's complicity, its independent nature, high volatility in its price, incidents of losing it by hacking and overspread false information scholars are not agreed on a single opinion. Some scholars have different views on nature of money and existence of a virtual thing. Some consider it against objectives of Shariah. Here we discuss their opinions with categorizing them:

##### **Prohibition:**

**Mufti Muhammad Salman Mazahiri:** M. M. S. Mazahiri has opinion that Bitcoin is Haraam (strictly prohibited by Shariah). He also mentioned in favor of his opinion Fatwas (Shariah opinions) of India's prominent Islamic Academy, Darul Uloom Deoband (Mazahiri, 2018).

**Yousuf Al-Shareef:** Al-Shareef says that Bitcoin does not fulfil all conditions which are necessary to be allowed by Shariah. Thus it is prohibited (Al-Shareef, 2020).

**Abdul Sattar Abu-Ghuddah:** Abu-Ghuddah has the opinion that Bitcoin is not permissible (Paracha, 2018; Muhammad & Muhammad, 2017).

**Darulifta, Binori Town:** Darulifta is the place where Shariah guidance is issued for different matters on people's queries. Darulifta of Jamia Uloom-ul-Islamia Binori Town, Karachi has issued a detailed fatwa on Bitcoin. This fatwa states that it is prohibited according to Shariah (Hayderi, 2017).



**Darulifta, Deoband:** According to an issued fatwa from Darulifta of Dar-ul-Uloom Deoband, India, Bitcoin is an imaginary currency and not allowed in the light of Shariah (Deoband).

**Khalid Saifullah Rehmani:** K. S. Rehmani, a prominent Shariah scholar of India, believes that Bitcoin is an imaginary currency and prohibited according to Shariah (Rehmani, 2018).

General authority of Islamic affairs and endowments (UAE): The authority states that using digital currency is not permissible by Shariah (General authority of Islamic affairs and endowment, 2018).

**Darulifta, Egypt:** Egyptian Darulifta states that Bitcoin is prohibited (Darulifta Al-Misriyah, 2017).

**Can be Permissible but Prohibited due to External Reasons:** Mufti Faraz Adam: M. F. Adam thinks Bitcoin has ability to become asset but it can not be money. Also it goes against “Maqasid Al Shariah (objectives of Shariah)” (Adam, 2017).

**Ahmed Khazan:** Khazan believes that Bitcoin is money but its use is prohibited according to Shariah and this prohibition is due to problems and risks associated to it (Khazan, 2018).

*Opinion not clear, Waiting for a Condition to be met or differentiate among areas:*

**K. M. Meera:** Meera is not clear in his opinion but he believes that Bitcoin will promote socio-economic problems (Meera, 2018).

**Mufti Muhammad Abu-Bakar:** Abu-Bakar believes that using Bitcoin or any cryptocurrency in areas where it is prohibited by legal authorities, is not allowed. In areas where legislators are silent or accepted it, it is permissible according to Shariah too. Due to objective of Hifz-ul-Mal (preservation of wealth) users should know the risks associated to it (Abu-Bakar, 2018).

**Mufti Ibrahim Desai:** M. I. Desai thinks that cryptocurrencies can be permissible if they are accepted commonly (Desai, 2018).

**Mufti Abdul Qayyum Hazarvi:** M. A. Q. Hazarvi thinks that Bitcoin is only acceptable in areas where it is accepted by government (Hazarvi, 2017).

**Permissible:**

**Dr. Abdullah Al-Aqeel:** Al-Aqeel thinks that bitcoin is quite permissible according to Shariah and can be used in daily transactions. All rulings of “Al-Sarf” (sale of currencies) can be applied on it (Al-Aqeel, 2018).

**Owais Paracha:** In his thesis on virtual currencies for specializing in Fiqh, Paracha discusses in detail that Bitcoin is permissible and any other virtual currency can be

allowed if it fulfils some conditions. All other problems are external which must be avoided in transactions (Paracha, 2018).

### Concluding Discussion:

- Bitcoin is P2P (peer-to-peer) cash and payment system. It transfers over the internet and uses Block chain system for its record. In Block chain system every transaction is included in some blocks and they are arranged as a chain. Every block has reference of previous block which makes the chain immune to any change. Whole network saves this chain of blocks and if anyone tries to make any change, the majority of nodes rejects its counterfeit block.
- For verification of every transaction the process of mining is done. In mining someone examines the whole record and verifies two things:
- The BTC, which was sent, was original and not counterfeit.
- It was not spent before.
- This process is done in seconds but for the sake of security another process of seeking a hash is added. This hash is so difficult that it takes 10 minutes average to be found. In these 10 minutes the record of last block has spread in the whole network and the majority has saved it. This makes block chain and Bitcoin secure from hackers. In other virtual currencies the process used can be somehow different.
- Every Bitcoin's user has a private key which is used like a signature and saved in a wallet. This wallet can be anything from a hard disk to a physical notebook. The aim is to save the private key where no hacker can get it.
- Bitcoin is called a form of money but it is different from fiat currencies. It is not backed by any government nor is it in physical state. So we have to discuss the reality of money for it. As we can get from economics' literature and history, there are three properties which every form of money has:
  - It is accepted generally.
  - Measure of value.
  - It stores value.

Above, we have discussed that the first one means it should be accepted by at least one market, region or community. Bitcoin is accepted in its community and now has started to be accepted by many countries as a financial asset.

The opinions of Shariah scholars about Bitcoin and other currencies are different. Some believe that they are strictly prohibited by Shariah due to uncertainty or no guarantee of any government. Some have the opinion that they have ability to be permissible but due to risks and not fulfilling objectives of Shariah, they are prohibited. Others think that they are permissible and the problems are external which can be different in every contract as well as can be mitigate. Many scholars are not clear about them and give no opinions.



**Appendix:** We created a questionnaire consisting 14 questions and sent it to 30 Shariah Scholars in which 9 answered. They were Mufti Nauman Asghar (Khateeb, doing PhD on Bitcoin), Mufti Hamza Sulaiman Jojara (Working in Faisal Bank, Ex-Shariah Auditor in EnY), Mufti Abdul Wahab (Religious Motivational Officer in Pakistan Navy), Mufti Jalal Ahmed Makki (Pak Qatar Takaful), Mufti Anas Sheikh (Shariah Officer at Summit Bank), Mufti Ammar Meer (Faisal Bank), Mufti Naseer Ahmed Yousufzai (RMO in Pakistan Navy), Mufti Umair Ahmed (RMO in Pakistan Navy) and Mufti Kamran (Faisal Bank). All of them have deep knowledge in Islamic Commercial Jurisprudence (Fiqh-Ul-Muamlat) and gave different answers. Questions and their short answers are given below:

**Q.1: Should a currency necessarily be issued by a central authority (to protect its value) from Islamic perspective, or can anything which is independent of central authority be also used as a currency in Islam?**

Answer: Mufti Nauman Asghar and Mufti Abdul Wahab have the opinion that every currency must be backed by any government. Others do not think so and give example of bonds, ancient coins and other things which were used as money but were not backed by any government.

**Q.2: Do you think Bitcoin has acceptability?**

Answer: All of them are agreed that Bitcoin has acceptability. Mufti Jalal Ahmed Makki thinks that this acceptability is increasing day by day, not for Bitcoin only but every currency. He says that when a user starts to use Bitcoin he usually accepts others too.

**Q.3: Can anything which has limited acceptability by the general public be a valid money in Sharia?**

Answer: All, except Mufti Yousufzai, are agreed that with limited acceptability anything can be a valid money. Yousufzai has opinion that the acceptance of general public means they all accept it in a geographic location like fiat money.

**Q.4: Can anything which creates difficulties or confusion for both merchants and buyers, and needs another currency to value it, be a valid money in Sharia?**

Answer: They answered affirmatively. Mufti Jalal Makki says that the difficulty or confusion is not in Bitcoin, it is due to myths associated to crypto currencies.

**Q.5: What is the property of “store of value” in the context of currencies?**

Answer: They agree on “It means all the goods and services could be measured by currency.”

**Q.6: Can cryptocurrencies store the value? If not then what will be its effect on permissibility?**

Answer: They all answered that they store the value. Mufti Ammar Meer added that anything which has equal units can store the value. He thinks that this is not the property of money to store value.

**Q.7: How does Islam view using a currency for speculative investment purposes?**

Answer: They all see this permissible. Mufti Nauman Asghar described it in detail and wrote: “Islam does not encourage this type of investment in which only currency is involved rather than goods, but as far as paper currency is concerned investment is permissible.”

**Q.8: If a currency has a highly volatile value, and is mostly used as a speculative investment rather than means of payment, does that currency show an element of maysir (“gambling”)?**

Answer: Mufti Nauman Asghar has opinion that any currency which has properties mentioned in question, has element of gambling. Others are not agreed with this idea.

**Q.9: What do you think about the statement: “Any currency can have an element of gharar fahish (“excessive uncertainty”, which is prohibited in Sharia) if:**

1. It is invented by an unknown person or group
2. It has no central authority to control, validate and monitor its transaction system
3. Its price is highly volatile
4. It has no physical form (exists only digitally) and no intrinsic value
5. Its system is vulnerable to hacking activities
6. Its currency account holder is unknown. It is difficult to track the real account holder if a suspicious activity occurs?”

Answer: Mufti Abdul Wahab and Mufti Yousufzai stated that first two options create uncertainty. Mufti Jalal Ahmed Makki and Mufti Nauman Asghar think that all options create this. Others didn’t answer this question.

**Q.10: What will be the effect of volatility of value in the light of Shariah?**

Answer: Mufti Nauman Asghar says that volatility of value makes the sale prohibited. Other scholars do not think so and Mufti Umair Ahmed and Anas Sheikh clearly say that the value of every thing is volatile, more or less.

**Q.11: Can any currency which is highly vulnerable to hacking activities be a valid currency in Sharia?**

Answer: Only Mufti Nauman Asghar answered: “If highly vulnerable to hacking and it is proved then not.”

**Q.12: Is the identity of the creator of a currency important from Sharia perspective?**

Answer: All are agreed that the identity of the creator is not so much important according to Shariah.

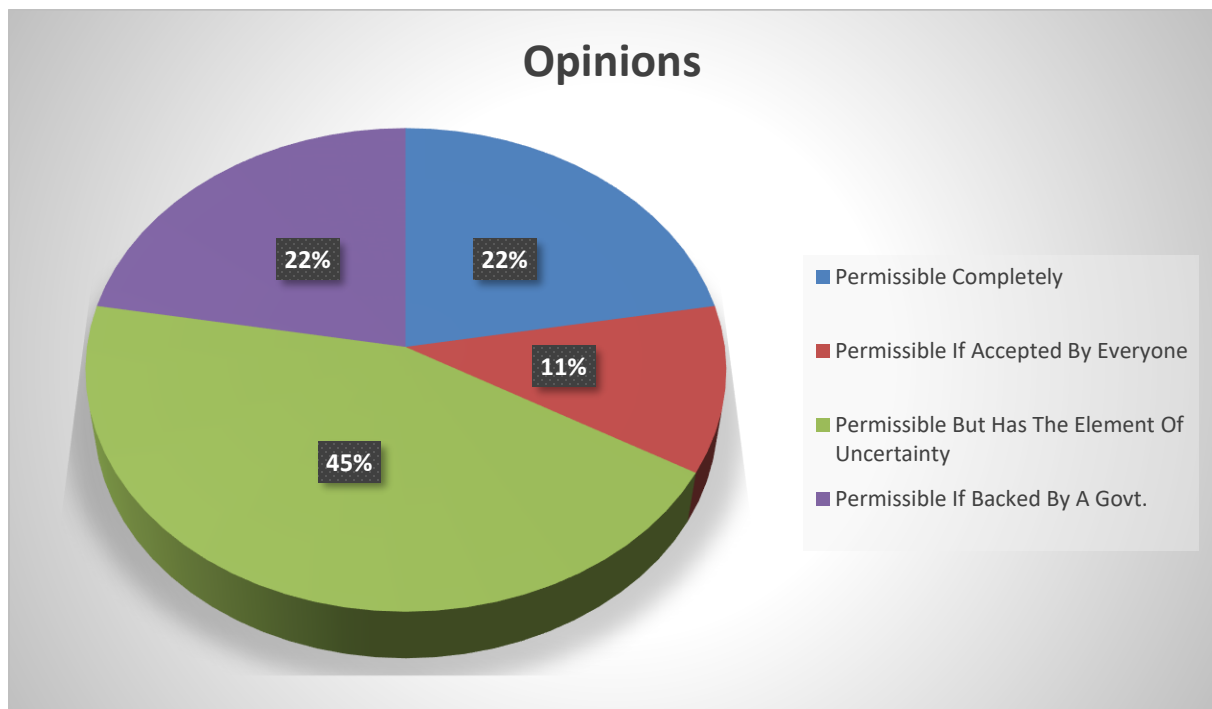
**Q.13: If the anonymity of a currency's user promotes illegal transactions, does it make that currency invalid from Sharia perspective?**

Answer: All, except Mufti Hamza Sulaiman, think that this has not any effect on validity of currency. Mufti Hamza Sulaiman Jojara has the opinion that this makes currency not only invalid but against the rule of common goodness (Masalih A'ammah) in the light of Shariah.

**Q.14: In the case of a totally computerized currency, the whole financial system may collapse if there is a major power or Internet shutdown in a country or if the country bans the currency. Does Sharia allow such a currency?**

Answer: They think that it is an impossible situation and rulings can not be issued on such probabilities.

Below, the result of survey is summarized, categorized and presented in the form of pie chart:



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