An Islamic Approach towards the Nature & Problems of Cryptocurrency

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Abstract
In an Islamic framework, the scholars need to verify all aspects of the emerging phenomenon known as cryptocurrency. It works as an agent for the prevailing forms of currencies and substitutes the need to carry it everywhere in its physical form which may become a security threat. The theologians have always disapproved what seem to them innovative, alien and working as an agent of change. However, whatever may be their stance about previous innovations, the society had to act otherwise due to the compelling needs that had to be fulfilled. The difference of opinion between the Muslim Scholars about the cryptocurrency has once again divided the *Ummah* about its acceptance, substituting other forms of currency like fiat currency, plastic currency etc. No doubt these forms of currency have heavily damaged the financial markets due to their speculative nature. It seems that Muslim *Ummah* is again standing on the cross roads where it is unable to decide its fate. This article presents the basic concept of cryptocurrency & virtual money, its pros & cons, its status regarding Pakistani & Islamic Perspective. At the end, various conclusions and suggestions have been drawn.

**Keywords:** Cryptocurrency, Plastic Currency, Theologians, Financial Markets.

Introduction
The financial recessions that hit the global markets over the past two decades has surely let the financial specialist think over about the fact that the medium of transaction like paper money or fiat money has certain flaws that are responsible of cause. Surely, the attributes of the money that promises the stability must inculcate value like it must have a stable value; it must be durable to the extant it couldn’t be easily destroyed; its acceptability must not be challenged; its divisibility maybe helpful for trade purpose and so on and so forth. In pursuit of attainment of such medium of exchange, the financial world must seek lessons from the past incidents of financial recessions as mentioned earlier. Take a look at the current expected recession that is going to hit the economy of the world due to the pandemic corona; IMF reports that the financial market would shrink by 3% of the total in the year of 2020. The lost money clearly indicates that the current mediums of exchange are not fit to call as Islamic money because of the fact that it does not fulfils the objectives of *Shari'ah* especially when it comes to glorious principal of preservation of money (Meera, 2018).

This whole innovation has been bestowed upon the world by the Research and Development departments dealing with the IT based financial transactions. The R & D Departments are mostly active in the Western World worthy to call themselves as trendsetters. Their basic goal is to centralize the financial information in a manner that the markets may connect with each other globally.
Cryptocurrency
The very concept of oneness in thinking and integration of thoughts and actions which are based on the usage of technology is also used in the concept of cryptocurrencies. Dr Robby Houben in his article defines the term of cryptocurrency by mainly affiliating it with the technology:

"Establishing a definition of cryptocurrencies is no easy task. Much like blockchain, cryptocurrencies has become a “buzzword” to refer to a wide array of technological developments that utilize a technique better known as cryptography. In simple terms, cryptography is the technique of protecting information by transforming it (i.e. encrypting it) into an unreadable format that can only be deciphered (or decrypted) by someone who possesses a secret key. Cryptocurrencies such as Bitcoin are secured via this technique using an ingenious system of public and private digital keys" (Houben, 2015).

Talking about the term itself is been defined in different ways associating it with the attributes most likely. Some define it with the attribute of its affiliation with the technology while others say the main feature is its affiliation with the internet and ease of doing business. Dr G.G.Banik who is senior research scholar however associates security of the currency as its core feature. He defines the term in these words:

"A cryptocurrency is a digital or virtual currency that uses cryptography for security purpose. A crypto currency is difficult to counterfeit because of its security feature. A defining feature of a cryptocurrency, and arguably its most endearing allure, is its organic nature; it is not issued by any central authority, rendering it theoretically immune to government interference or manipulation” (Banik, 2018).

Concept Of Virtual Money
The concept of virtual money was successfully started on 12th of January, 2009 by its inventor named Satoshi Nakamoto who exercised first cryptocurrency transaction from the company name Bitcoin Treatment (BTC). They sent 10 BTC to the coder named Hal Finney. It was year 2011 in which the first ever transaction took place for acquiring a pizza worth 30 US dollars. Satoshi Nakamoto died in 2013 and what he left behind was the world’s first encrypted currency based transaction. In the later times to come Bitcoin became more popular among its users who saw how important it was for the purpose of daily routine financial transactions (Brito, 2013). In the year 2007, the value of one Bitcoin currency was equivalent to the value of one US dollars which later in 2011 rose up to 7,576.24 US dollars. After the success of the Company, Bitcoin, many other followed the trend and jumped into this block chain based technology. Companies like Litecoin, Pakcoin, OneCoin, DasCoin, Pay Diamond or Initial Coin Offerings (ICO) tokens are well integrated into the market of the virtual money/ cryptocurrency.

Features Of Cryptocurrency
This technology has achieved an ease in the financial transaction to the extent that it may substitute the ongoing transaction system, if yes, then we seriously don’t need any interdependency tools like banking based transactions; plastic cards, paper currency etc. that actually play the role of the third party known in the Islamic Financial Jurisprudence as a hawala transaction. It uses the concept of peer to peer transaction which is based on the
connection of a person directly to another person. This means that the system will itself take place of being a guarantor as a third party without any manual interference generating multiple copies of the undergone transaction at several encrypted destinations which works as a proof of that particular transaction.

Another feature of the cryptocurrency is that it is digitally encrypted that means it works and passes information in the shape of binary codes to its user which is nearly impossible to hack. This is why this currency is impossible to be hacked or stolen by making it available instantly to its users.

Moreover, the first ever technology that uses the above characteristics was named Block Chain Technology. Under the Block Chain Technology, the information of the transaction is recorded under the distributive ledger technology (DLT). So what actually block chain does is that it records the data of a transaction that if once recorded can never be changed or forgotten and at the same time everyone can retrieve it and it is open for the public access.

**Drawbacks Of Cryptocurrency**

As it is said that there is always for improvement; the concept is rather new and possess some uncontrollable features that maybe question from the shari’ah point of view. However, without going into detailed discussion about its mechanism of working, there seems to be many related drawbacks in this transaction which at least make it fall into the transaction based on the effects of gharar (Uncertainty) and other impermissible acts of Shari’ah rules in it:

- No third accredited party intervention makes the transaction guarantee less. In contrast with the paper money which is a device of payment that is backed by its corresponding federal reserve and could be easily documented through the banking transaction, receipt system, stamp paper and so on and so forth; the transaction carried out through cryptocurrency is said to be less complicated. However, Qur’an is strictly against this freewill as humans must go for a proper/ legal documentation of the transaction for which it’s performed. Even a non-trade based transaction like giving some loan on debt to someone; Qur’an makes humans realize the importance of documentation in these words: “O you, who have believed, when you contract a debt for a specified term, write it down. And let a scribe write [it] between you in justice”(Al Quran).

- The privacy in the money matter is a core concern of any person; the issue must be properly dealt with, which is totally compromised as the technology is open for the access of information to everyone from anywhere.

- The basis of the cryptocurrencies is to lessen the dependency of human on the corporate sectors and government sector; so that the unnecessary taxation and other duties that are always hindering the smooth transaction must be stopped as they are the cause of inefficiency and extra burdensome. So, it is important to get rid of this colonial approach where it is just like feeding a bear who always asks for more.

- Islam only recognizes those transactions that are well asset backed. Cryptocurrency
doesn’t bother about it as its buyer doesn’t buy any physical asset. These crypto currencies are a form of virtual money that exists only in the virtual world. Hence concept or the basis of sale and purchase is missing from the whole idea. The currency may become a medium of exchange but it can’t be treated like a commodity which could be sold or purchased.

- The law of inherence isn’t applicable on the current cryptocurrency structure. This means that if the buyer of the cryptocurrency dies, the shares of the cryptocurrency will also forfeit with it or transferred to another person who’s name maybe mentioned as either or survivor. Hence the responsiveness of this virtual money is also limited in this specific problem and many other alike extreme cases which can’t be handled and sorted out without his/her (owner of the cryptocurrency) intervention for the sake of transferring it to other person or entity. The point what is made here that if we accept cryptocurrency as a medium of exchange we need to sort out the answers of the problem within the framework that shari’ah provides us.

- The speculative nature of the cryptocurrency shows the defect in its financial engineering which doesn’t sit in the parameters of the values of the principles of shari’ah. The proof of the argument is self-evident. On April 06, 2018 Bitcoin was traded at a value 6464.26 US dollars, this is significant record of about 66% drop in the value of the unit price. The drop is in the comparison of its highest value which is 19,780 US dollars which is recorded in December 2017. The current market value is of the unit as today (May 28, 2020) is 9,140.40 (approximately) US Dollars. If the speculation is at that rapid rate, the economy of the world will stagger panic and impossible to retrieve the losses incurred in an event of crash of the market due to the destabilization of the virtual currency.

- The crypto currency isn’t easily accessible and an expensive tool to buy. Say for example how many of us even afford to buy a single unit of cryptocurrency that as expensive as seven thousand plus US dollars? How will one be able to introduce the virtual currency to the illiterate class of our society which is more than 50% of the whole population? Moreover as discussed earlier the variation of the rate is so rigorous that won’t be considered a good idea to make it a medium of exchange because one need to a stability in it for the sake of transaction purpose.

**Pakistan’s Stance On Cryptocurrency**

Pakistan is one of the countries who have initially banned this sort of virtual concept of money. It had banned all sorts of activities regarding this currency like its advertisement, its trade and other related activities to it. The local newspaper records:

“In a major development, the State Bank of Pakistan (SBP) has banned cryptocurrencies in the country. While the volume of trading remains on the lower side in Pakistan, Bitcoin’s phenomenal rise in value during 2017 has tempted many to open accounts with various exchanges and trade...... However, in a circular issued on its website, the central bank said that virtual currencies like Bitcoin, Litecoin, Pakcoin, OneCoin, DasCoin, Pay Diamond or Initial Coin Offerings (ICO) tokens are not legal tender, issued or guaranteed by the Pakistan government. “The SBP has not authorized or licensed any individual or entity for the issuance, sale, purchase, exchange or investment in any such virtual currencies/coins/tokens in Pakistan”, it said in the statement “All banks, development financial institutions, microfinance banks and payment system operators, payment service
providers are advised to refrain from processing, using, trading, holding, transferring value, promoting and investing in virtual currencies/tokens (The Express Tribune 2018). The decision of the State Bank of Pakistan is a right one at least in my opinion. We shouldn’t jump into the pool without any preparation. Before initiating any idea one must cater all sorts of questions that arise from launching it and must provide all possible logical conclusions of all the outcomes from it. One must cross verify the idea and pave it on some very strong footings. However, having said that, we can’t just forego the idea of virtual currency because it carries some very influencing features in it and also because we fear from it and the change that will occur from it. Cryptocurrency is now a reality and ever-increasing pressure over the countries that are hesitant to adopt the idea from financial committees is also a matter of concern. The economy of the world has to be synchronizing one way or the other whether we are ready or not. A news agency covers the story of such kind:

Pakistan is implementing new cryptocurrency regulations in an effort to improve its track record fighting financial crime. These regulations will help combating money laundering and terrorism financing while it will also help regulation of digital currency throughout the country. According to the sources, the move was in part a reaction to demands from international monitoring body the Finance Action Task Force (FATF), which has repeatedly voiced concerns about cryptocurrencies’ role in (controlling) terrorist financing” (Suberg, 2019).

**Analysis of Cryptocurrency from Islamic Perspective**

The esteemed class of religious scholars in Pakistan is again referring their opinion about the issuance of the cryptocurrency in a mixed way. Maulana Mufti Muhammad Saeed Ahmad Khan and Dr Javaid Ahmad Ghamdi, renowned Islamic Scholars and publically affiliated figures, are highly in the favor of cryptocurrency. In fact the former one urges to accept this medium of exchange as soon as possible. Mufti saeed Ahmad Khan seems to be bold enough to accept the challenge but implementing it then and there is a big question mark as to how we can forgo all the shari’ah related issues with a single stroke of a pen. This again looks like an ignorant way of responding to an issue as a list of shari’ah related doubts which have been questioned from the Muslim scholarly audience who care for the future repercussions of the issues. However, their video of discussion is available at YouTube as well and it’s easily retrievable. While Maulana Mufti Taqi Usmani totally rejected the idea by saying that it doesn’t have the basic attribute for calling it as a medium of exchange as it doesn’t hold any intrinsic value and considered it as a speculative tool that will destabilize the economic system and its concrete values. Although Mulana Mufti Taqi usmani is a well renowned and an iconic personality but his response to the issue is far later than the time the issue evolved. Meaning thereby it seems like he was sorting the issue to be settled down and then he would be in a better position to pass his verdict and opinion on this diverse issue. His fatwa in the shape of an audio speech came to the market after the bitcoin crashed. This shows the inclination of the literate and experienced scholar towards the deriving forces market and not the merits of the issue itself. His audio is easily retrievable on the below link on the social media channel. However, whatever their response is, crypto currency is a real time product that will obsolete the former modes of currency and they can’t run away from
the real world developing situation. However, more moderate and practical approach in this regard is that of an eminent Islamic scholar Dr Muhammad ma,Sum Billah who not only welcomes the idea of this virtual currency but also accepts the challenge of neutralization of the issues that may look like a cause of shari’ah offence as discussed earlier. Moreover he says that the main issue is to synchronize the whole transaction in accordance with the Islamic Concept of general rules of Permissibility under the realm of Maqasid Al Shari’ah. His view about the resolution of the issue is more related to its compliance. He suggests that the product needs to be reformed in the Islamic perspective of acceptability which requires issues like operational mechanism, standard planning and strategies, legitimate objectives and manifesto, documentations and manuals, policies and guidelines to be resolved and financial engineering for the sake of compliance of the product at par with the real world view about its composition. (billah, 2019)

According to his thinking cryptocurrency should be introduced in the Muslim world and elsewhere through Shari’ah currency management. By acknowledging its effectiveness, he says that this may eventually lead to the fight against poverty, unemployment and the local economic crisis as well as global environmental disaster because of the fact that the corporate world itself is regulating the money issues for the enhancement of its business and finally having the lion's share of the market through the concentration of wealth. Shari’ah currency management, with its universal character will be more benefiting to the human race, regardless of religion, race, status, sex or color and even nationality.

The other point that Mohammad Ma’sum Billah suggests is that the Islamic cryptocurrency must cater the values related to the Islamic ideology. For the this reason he advocates to cut 2.5% of zakat over the total value of the share for the sake of seeking benefits for those who are the deprived sect of the society. This idea in a larger realm of thinking won't work because the very existence of the idea of the cryptocurrency is to stop regulating the money in any way possible and to up bring the real value of the money. The idea however may be workable if it thought and worked other way round by involving regulation for those who volunteer to give their zakat to the government or at least find him/ her self in lined with the ideology of the Islam related to money matters. After all Crypto currency is all about setting the humanity free from the unwanted and unethical influence over the wealth in any shape or form. We Muslims must stick to the idea with its core value, if we want to succeed in attaining the market grip on it so that we may be the one to derive the world’s order to our convenience.

Suggestions

Having said that, as a pure Islamic Ideological Thinker, the sensitivity will always be there to not let go the whole transaction fall into any aspect that may contain any ambiguity (Gharar). For this reason Islamic based halal cryptocurrency must carry some suggesting values or attributes and for this reason the Shari’ah currency model should be based on the following dimensions and Philosophy:

- The model must be run on the basis of Principles of Shari’ah approved modes of finance like Al-Bay-Wa-Al-Shir’ah (trading contracts), Musharaka (partnership) based contracts, Mudharaba (co-partnership) contracts, Hawala (exchange based) contracts, Bai’-al-Sarf (money exchange) contracts and likewise other secondary modes of finance. This
will need a good financial engineering keeping in view, the core values of these modes of finance.

- The overall operation of the model should be facilitated with a hybrid structure compliant with the provisions of Islamic law. The implementation of such model can't be achieved until and unless it's purely asset backed.
- The company must be supported by an asset of Equal Value Display and must contain an initial currency value at least, while its products and services (Business operations) depend on assets (currencies / tokens). This will help to cope with the speculative nature of cryptocurrency which is highly unmanageable as the past events confirm the same. The problem, however, is that once you buy the virtual currency, you lose the real or unit value of the asset or service against which the unit of the virtual currency is generated. This means that now it is the trend of the market of the virtual currency that will determine the value of the asset or the service against it based on the principal of demand and supply.
- Total process must be facilitated through legitimate and divine principles keeping in view that the *maqasid al shari'ah* are fully complied. The very structure of the Islamic Theology is entangled with its own preferences that confirm that the ideology of the Muslim culture is intact. Otherwise we may be deeply deprived of the fortunes of what the Almighty has bestowed upon the Muslims and on the non-believers as well.

Here it's important to note that these ideas that are creating limitations due to the Islamic values which will only work for those who believe in it; others must be set free from it, transacting on the normal policy just like adopted by other makers of it. Hence an Islamic halal cryptocurrency will always serve as an optional tool for those who believe in it. The rationale is simple; for the non-believers living in an Islamic ideological state, they may consume pork or alcohol without fearing the state taking action against them and for those who claim to believe but still want to pursue the conventional way of life must be given a chance to have it because if we won’t entertain them, someone other than us, out of our periphery is offering it with the help of technology that facilitates online transactions.

Talking about the approach that seeks reality, UAE is one of the Progressive Islamic Countries that are thinking ahead of all the other Islamic countries in this regard and dreams to become one of the hubs of this technology. Not only it has established hubs for the cryptocurrencies but also made its local involve in this business. The idea is also to make the cryptocurrency more acceptable in the eye of *shari‘ah* law. A company named OneGram is known creating an idea of physically asset backed cryptocurrency which is backed by the commodity of gold. The company perceives that it will resolve the *shari‘ah* issues pertaining to the issuance of the idea of a cryptocurrency. The story says:

“A local start-up company founded last year, OneGram, is issuing a gold-backed cryptocurrency — part of efforts to convince Muslims that investing in cryptocurrencies complies with their faith... Each OneGram cryptocurrency unit is backed by at least a gram of physical gold stored in a vault. The idea is to limit speculation”(Daily Times, 2018).  

The effort clearly indicates that only a progressive thought can prevail in a society that is promising to move towards advancement and competitiveness for the sake of survival in this world that is surely based on the ideology of cut-throat-competition and according to
this rule only the initiators of the idea are in a better position and worthy to be followed as they will be considered to be the trendsetters.

Finally talking about its justification to adopt as a substation for the paper currency, it has more or less same logic that is working for the later. Although both the sides that are holding their remarks on the legality of the cryptocurrency are heavily equipped with the shari’ah based arguments but the concept of need and Dharurah always wins. Another Islamic way of thinking comes from the shari’ah maxim that states the idea to opt what’s less harmful between the two actions: حَفْظ الضررَان. Then another question arises that what would be the less harmful between the two ways or actions, the answer is again stated in one of the Hadith of the Prophet (may peace be upon him). The Hadith is narrated by Sayeda Aisha in these words:

“Whenver Allah’s Messenger (Peace Be Upon Him) was given the choice of one of the two matters, he would choose the easier of the two, as long as it was not sinful to do so, but if it was sinful to do so, he would not approach it. Allah’s Messenger never took revenge (over anybody) for his own sake but (he did) only when Allah’s Legal Bindings were outraged in which case he would take revenge for Allah’s Sake” (AL Bukhari,2017) 7

So, the tradition of the Prophet of the Almighty clears that He was never reluctant to opt new ways in handling situations and always led himself to the easier options to adopt. Until and unless we are not in a position to create independent financial markets, it is better to follow the way that’s at least in the favors of the ummah and for the sake of attainment of bigger good.

Muslims have always adopted trends whatever the world has offered them, regardless of the outcomes of the consequences. Same is the case with the cryptocurrency, it ought to work and establish itself and obsolete the older system of the paper currency. The eminent scholars are rightful to share their Shari’ah related observation on the upcoming more sophisticated and easier to adopt phenomena, but the world will only listen to what is more rational, facilitating and reasonable to adopt.

**Final Contentions and Conclusion**

The above reasoning may only be workable if Cryptocurrency can replace the prevailing financial tools of trading. Following may be the characteristics of the cryptocurrency that make it a step ahead from the Fiat/paper/traditional currency:

- Unlike Fiat/traditional paper currency, Crypto or virtual currency is issued by an independent source that can’t be regulated by the regional authority. This characteristic may have some drawbacks in its determination of value and acceptance related issues but in the long run this characteristic will be a major breakthrough in making a universal currency based on the idea of perfect competition.
- As the cryptocurrency based companies are basically providing a service to the market which will gradually takeover other form of currencies, it will side by side disturb other financial sectors as well. Take an example of the banking sector; the whole system is based on the paper currency. The physical movement of the money will no more be required which means that it is the click of the button that matters most.
- Cryptocurrency proponents argue that it is more reliable than paper money because it is resistant from the possibility of inflation that has been known to hurt paper currency...
for the sake of determination in its value. For example, with a maximum of $21 million to spend on Bitcoin, a lien is marked. Hence, there is only a limited supply of how much this currency is produced, making inflation impossible.

- The economy of the world is now documented in an unprofessional way where powerful is alleged to control the economies of the world by restricting the trade facilities just workable in their currencies like US dollars and Euros. The one who negates the idea is left alone in the world. It is also a form of slavery that the world faces now. The idea of equal opportunity on the basis of acknowledgement of other resources can only be fulfilled if the cryptocurrency is compulsory applied in a worldwide canvas of trade. If the technology can bring ease in other spheres of life than why it isn’t given way in the prevailing economic system. (Fintech, 2018)

- By negating the encryption industry, banks are clearly missing the opportunity to make more money in the future, other than their existing customers. While industries around the world are adopting Block chain for data transfer and logistical support purposes, the pressure is mounting on the banking systems to do the same. However, in the current scenario, banks continue to adhere tightly to outdated and rigid methods of financial transactions in which a lot of clerical job is involved.

- It is worthy to note that some of the companies that provide crypto currency consisting loan’s share, claim that it's providing the facility on the basis of the non-profit means:

Bitcoin is a grassroots nonprofit project that seeks to fashion a new currency out of little more than cryptography, networking and open-source software...... (Frobes, 2011).

This unique feature of the crypto currency makes it more practical and workable in the market. This will surely compensate the problem of trust deficit which is innate in the paper or traditional currency. This particular feature will enhance the acceptability of it in the prevailing financial system. Once the possession over the currency is lost by the governing bodies and crypto currency takes the administrative control over the circulation of the money, it will prove to be a step ahead towards the stability and acceptance between the deriving forces of the market. The very concept of this currency is clear from its stance and that is to provide a peer to peer service with no involvement of any sort of organization that can manipulate its position through the backing of the regulatory organizations for its price/ value determination and other legal liabilities for the sake of its stability and upholding, for which the client of the user of that particular money type has to pay in the form of inflation or on the basis other monetary policies which are most of the time speculative in nature. Why should the user pay for the wants and needs of the government organizations in the form of taxes, inflation and other sources related to it? The debate is on for the discussion in the whole world where crypto currency is ready to put a difference following its ideology of universality; cutting the effects of boundaries, justice; the banks are bailed out and the layman is left behind in the miseries and sorrows of life, and equality; where the opportunities must be open to all for earning in the projects that in the current scenario are considered to be the right of the corporate sector, who involve the banks in a smart way to organize cash on a very nominal price.

- If the cryptocurrency promisingly casts out the prevailing banking systems, the markets will be more practically near to its client that may have a full authority over the
investment plans working for them. The very justifiable concept of distribution of profit that will depict a true picture will be a win-win situation for both corporate customers and the clients. It is obvious that in a free market completion, only those companies will survive who offer decent and reasonable investment plans more suitable to the individual fund providers; rather more attractive profit ratios to its customers round the globe. If the world is real and the people living in this world are benefiting from having full excess to their resources then this exploitation of people's resources must stop this instant and if the cryptocurrency is the answer to the problem, so be it.

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