University of London

MSc Data Science and Artificial Intelligence

DSM070 Blockchain Programming Coursework

The Future of Cryptocurrencies: Store of Value, Means of Exchange, or Flash in The Pan

Program: 50% - Essay: 50%

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1. Introduction:

Cryptocurrency is considered one of the world's greatest inventions since the internet (Koenig, 2015). Cryptocurrency is a decentralised digital currency used in electronic payment systems, which does not depend on a third party like a central bank, and utilises blockchain data structure techniques.

Recently, digital currencies have been considered a global phenomenon. While some people support cryptocurrency, others are concerned about this technology because it does not rely on central authorities, which makes it vulnerable to fraud. However, cryptocurrencies are not trust-less. There is a global agreement between the monetary authorities that cryptocurrencies do not endanger the financial system (Karahan, 2021).

Cryptocurrencies have failed to be in a position as actual money. However, there are three main characteristics that give an advantage to cryptocurrencies over traditional money: anonymity (which attracts users who value the privacy of their identities and transaction), loss of trust (in the traditional systems in particular during the global financial crisis in 2008) and geo-political uncertainties (as cryptocurrencies serve as a tool in the times of uncertainty affecting the demand for bitcoin) (Karahan, 2021).

In terms of cryptocurrency's value, in 2021, there was a significant decline in cryptocurrencies like Bitcoin and Ethereum, which is considered a breakthrough, as mentioned by the head of global development at Gemini, Dave Abner. Although Bitcoin's prices have had plenty of spikes and pullbacks since 2011, the value has decreased by more than two-thirds since the end of 2021. However, according to Kiana Danial, the author of Cryptocurrency Investing for Dummies, the expectation is that the unpredictable change in Bitcoin's values will remain the same for the short term while it will experience growth in the long term.

On the other hand, Ethereum, recognised as the second most popular cryptocurrency after Bitcoin, experienced a tremendous leap from $0.311 to $4,800 between 2015 and 2021, respectively, before it dropped again. However, experts are forecasting there will be a resurgence, and again, it will hit $4,000 and possibly go beyond that value to reach $12,000 by the end of 2022 with the upcoming Ethereum upgrade (Eth2) in September 2022 (Haar & Gailey, 2022).

Two main features of money that distinguish it from other commodities will be discussed in this essay, which are a store of value and a means of exchange; when a particular group of people agree on a kind of resource as money, it can be referred to as a currency (Mattke et al., 2020).

2. Means of Exchange:

It is defined as the ability of a resource to be accepted as a tool for product and service exchange among users (Korpes & Dilek, 2021).

Money is recognised as a means of exchange when purchasing or selling goods. However, when there are economic barriers, individuals have to look for a partner with the same interest in exchange. Accordingly, that will simplify the process and reduce the transaction cost.

Cryptocurrencies have shown indications that they can be a means of exchange, supported by the fact that many merchants accepted the cryptocurrencies like Bitcoin and Ethereum as money, in addition to the significant number of transactions that have been successfully done.

This is evident in the US; for example, with the increased use of digital services, prominent vendors accept cryptocurrencies as a payment medium, such as Microsoft and Wikipedia. Moreover, large retailers like Starbucks and Amazon accept cryptocurrency payments through third-party applications. In addition, small and medium-sized businesses benefit from the low transaction cost that cryptocurrencies offer by accepting them as a medium of exchange (Mattke et al., 2020).

Furthermore, countries like Argentina and Venezuela, with collapsed financial systems and rapid local-currency deterioration, adopted cryptocurrency as a means of exchange, as ranked and stated in the cryptocurrency adoption reports. This adoption was helped by the fact that cryptocurrency value in these countries is more stable compared to the volatile national economy. Therefore, those countries' citizens have started using cryptocurrency, particularly as a store of value with fluctuations in the fiat currency (Cifuentes, 2019).

Recently, Venezuela has achieved high acceptance in e-commerce as a way of transaction and accessing goods abroad that was not achievable before. Covid-19 is considered one of the catalysts of the cryptocurrency ecosystem growth in Venezuela, leading to a growth of 2,300% from 2019 to 2021. This report also revealed that 15 of 20 developing countries adopted the use of cryptocurrency due to some economic challenges, which in turn swing their currency (Goschenko, 2022).

Since November 2020, Pizza Hut in Venezuela can be purchased using bitcoin. Moreover, Burger King has partnered with Cryptobuyer to accept cryptocurrencies such as Bitcoin, Ethereum, and Tether as a way of payment.

As a result of these limitations in cryptocurrencies, there is a significantly lower volume of transactions compared to conventional payment systems like PayPal and Visa cards. Thus, only a subset of the world's population accepts and utilises it (Mattke et al., 2020).

In my opinion, cryptocurrencies are here to make transactions accessible and possible. Thus, sellers and buyers can consider it legal tender. However, the increase in accessibility is only achievable when the transaction's costs are significantly low and the currency's value can be maintained.

3. Store of Value:

A currency or an asset can be identified as a store of value when it can be retrieved without losing its value over time, such as gold, as it can be considered wealth storage. Therefore, people expect the same or more economic value for the money when it is earned.

Also, the more store of value you have, the less volatility is expected. In terms of cryptocurrencies, they are known to have high volatility over time compared to fiat currencies. On the other hand, due to the finite supply, by design, of cryptocurrencies, they are considered a strong option as a long-term store of value and a safety net against inflation (Mattke et al., 2020).

The supply for cryptocurrencies is limited; for instance, 21 million coins are the supply for Bitcoin, leading to a forecast that the last coin is estimated to be mined in 2140. This limited supply, coupled with the high demand for cryptocurrencies, led to an increase in Bitcoin's value in the past, for example. However, bitcoin's value sharply declined when Tesla stopped using Bitcoin when selling its cars (Zimmerman, 2020).

Moreover, due to the lack of control from third parties and government interferences, cryptocurrencies have an advantage over the traditional currencies in the store of the value function (Korpes & Dilek, 2021).

The main driver for a currency is the belief in its future, which has intrinsic value. Although cryptocurrency values are not stable. Some people believe and continue to invest in various cryptocurrencies. In my opinion, the more acceptance of cryptocurrencies as a medium of exchange, the more demand and stability in their value which plays a significant role in considering them to be stored as a secure asset. In addition, developing countries with economic crises and volatile pricing in their currencies can benefit from the cryptocurrency system.

Ethereum cryptocurrency is evolved to go beyond the exchange of value to adopt the smart contract. A smart contract is a program stored and run on Ethereum blockchain to convert regular contracts to digital ones. The digital agreement will automatically be executed once the terms are met. However, smart contracts have shown that they are vulnerable to attacks due to security issues.

4. Cryptocurrencies Limitations:

There are limitations with cryptocurrency, such as scalability, security and lack of inherent value. In scalability, visa cards, for example, their daily transactions reach over 150 million, equivalent to 1700 transactions in a second. In comparison, Bitcoin's transactions are around 4.6 per second (Gracy & Rebecca Jeyavadhanam, 2021). Therefore, the lack of scalability restricts the spread of cryptocurrencies as a means of payment and consequently will directly impact the cryptocurrency's demand. On the other hand, traditional currencies have built that trust over many decades.

Security has always been a concern among the crypto community. In addition, with the spike in Bitcoin value in 2021 (Goschenko, 2022), the number of fraud cases and the level of attacks increased significantly to take advantage of the flaws in the ecosystem. Currently, bitcoin adopts a consensus mechanism in which the majority of the nodes decide. From my perspective, this poses a risk whenever the majority of nodes are controlled by someone cooperating to attack the bitcoin network.

In the lack of inheritance, taking gold as an example, in my opinion, gold has a high store of value as it is not limited to being used as jewellery, but gold also has a high demand in electronics companies. In contrast, Bitcoin is only recognised as a way of transaction, which makes it vulnerable to collapse in the future.

Furthermore, people cannot save all their wealth and trust the cryptocurrency ecosystem because they feel less secure as the crypto market has high volatility as a single Twitter message can affect the price stability. Unlike traditional currencies, cryptocurrencies are not a secure asset with their fluctuated and instability feature, which affect how they will be accepted as a store of value.

5. Conclusion:

It is too early to draw a conclusion as the future of cryptocurrencies is still a very much debated topic and highly uncertain. However, I believe cryptocurrencies have a place in developing countries due to their traditional financial system's failure that helps in keeping their cryptocurrency's value above zero. On the other hand, due to the scalability limitation mentioned above, cryptocurrency adoption is limited in developed countries.

Furthermore, cryptocurrency's price stability plays a role in accepting it as a store of value primarily due to the supply and demand structure of the cryptocurrency ecosystem.

I would say that the widespread adoption of cryptocurrency along with the regulatory environment, such as allowing payments and trading in crypto, will heavily contribute to cryptocurrency's value and its stability.

I am of the opinion that cryptocurrency is not a flash in the pan; the growth and transition may seem slow and might not completely replace fiat money. However, the increase in adoption is inevitable and will revolutionise many industries' operations, and it needs more acceptance from major companies.

Another striking fact is that Covid contributed to the growing value of cryptocurrencies. Thus, a substantial loss is expected by the end of this pandemic.

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7. Number of Words:

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