

Issues and Risks of Cryptocurrencies – A Case of Bitcoin

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Abstract: *Bitcoin is electronic money that uses a public protocol to implement it in a completely decentralized fashion, eliminating the need for it to be managed by a central issuing institution. It has been demonstrated to be a modern payment system that has been utilized in some procedures frequently connected with money laundering or the trafficking of illegal substances of various kinds, although it is still under development. As a result, in this essay, we examine the characteristics that turn a cryptocurrency into a valuable tool for conducting any type of transaction outside of the supervision of any regulatory agency, as well as some of the domains in which its use can lead to new illegal activities.*

Keywords: Bitcoin – Cryptocurrency - Virtual Money – Blockchain

I. INTRODUCTION

The infrastructural design of digital currencies suggests a shift from traditional financial system architecture. Information systems and technology solutions such as peer-to-peer connection and cryptographic algorithms provide decentralized organization, operational security, and transparency, in contrast to the centrally controlled and less visible structures of traditional monetary systems. Against the backdrop of the current economic crisis, this new breed of currency is gaining traction. As public trust in the existing financial system erodes, alternative concepts for future currency systems become more significant, providing innovative ideas for future currency systems. (Glaser et al., 2014).

In 2008, Satoshi Nakamoto, the creator of the first blockchain database and Bitcoin, wrote a white paper on cryptocurrency. He has also continued to develop Bitcoin till 2010. After writing the first Bitcoin code in 2007, Nakamoto gained notoriety with the white paper that explained the Bitcoin protocol. Bitcoin is already widely recognized and utilized as a currency, but it is more than that (Www, 2020). Because Bitcoin is a technology, it may also be utilized as a distributed consensus mechanism for things like notarization, fair voting, stock ownership, and asset registration. Most people utilize the internet and e-commerce to meet their demands, thanks to developing technologies. People no longer want to carry cash or credit cards as a result of all of these changes in their lives. As a result, Bitcoin allows anyone to buy or pay for anything, at any time and from any location. Making a payment with Bitcoin also ensures a secure transaction. Bitcoin is neutral in the sense that it does not differ depending on the country, sender, or recipient, therefore removing all foreign exchange rate complexities and costs (Avula, 2021).

Bitcoins are created as a result of transaction processing efforts. Users contribute their processing resources to enter a transaction and its payment into a public ledger. Mining is the process by which users who give processing power receive a fractional amount of bitcoins, which is charged to the payment's initiator as a transaction fee, as well as some freshly minted bitcoins. A transaction is broadcast to the network, but it is not stored in the shared ledger until it is confirmed and logged. Every ten minutes, transactions are grouped into blocks. It takes a lot of computing power to show the authenticity of transactions in a block, but just a little computing power to verify them. Mining is competitively done on the network, and it builds trust by guaranteeing that transactions are confirmed visibly. For each block, the mining process generates new bitcoins. The number of bitcoins in each block is fixed and decreases with time (Fahmy, 2018; Liew et al., 2019; Naware, 2016; Phillip et al., 2018; Tasatanattakool & Techapanupreeda, 2018).

II. PROBLEMS OF CRYPTOCURRENCY

2.1 High Speculation

Bitcoins, like most economic aspects, are susceptible to speculative price swings. The trade of bitcoins for euros, dollars, pounds, or any other cryptocurrency is particularly vulnerable to speculative fluctuations and subjective valuation. Bitcoin will progress toward becoming an economy, with the possibility of eventually becoming a deflationary system. Bitcoin has already solved the major operational problem associated with money divisibility.

2.2 Illegal Trafficking and Money Laundering

Money laundering is at the heart of every cryptocurrency crime, as it allows criminals to move monies obtained through other means onto the blockchain. Cryptocurrency gains can't be held or changed to fiat cash without being detected by law authorities because they can't be laundered. To combat criminals and terrorists who launder money and thwart crypto crime, law enforcement and security organizations need an advanced blockchain analytics solution. Money laundering is a recurring motif in many crypto crimes. Criminals exploit the anonymity of the blockchain to launder money from both off-chain and on-chain crimes, hiding the origins of illicit payments and converting them to cash for bank deposits.

2.3 Absence of Central Authority

One of the major issues with cryptocurrencies is that they are not owned by the government. It is not owned by any government. Because this is a cloud-based business, it makes no sense for them to take a position on whether it is legal or illegal. It's completely free. It's like the government coming in and telling you that you can't or can't utilize air. Because it is a completely free atmosphere, it is not conceivable. When we look at technologies like the internet and email, we can see that they are completely unregulated because they cannot be controlled by a central authority, and bitcoin and cryptocurrencies are no different.

2.4 Theft or Loss of Bitcoin

There have been several reports of bitcoin theft. As of December 2017, approximately 980,000 bitcoins had been lost on cryptocurrency exchanges, amounting to over 5% of all bitcoin in circulation. One type of theft is when a third party gains access to the private key of a victim's bitcoin address or online wallet. If the private key is taken, all bitcoins from the compromised address can be relocated. The network has no method of identifying the offender, blocking future transactions with the stolen bitcoins, or restoring them to their rightful owner in such a situation. Theft occurs on websites where bitcoins are used to purchase unlawful goods.

2.5 Malware Attacks

Ransomware is one of the most popular and dangerous cyber-attacks, in which a threat actor encrypts an organization's data until a ransom demand is paid. Not only are the number of attacks increasing, but so is the ferocity of the attacks. The average ransomware payment grew by 60% in the first half of 2020, with bitcoin accounting for the majority of payments. Approximately 98 percent of ransomware payments are made with Bitcoin (Liew et al., 2019; Monrat et al., 2019).

2.6 Scalability

The capacity of cryptocurrencies to perform several transactions at once is referred to as scalability. Bitcoin, for example, has a seven-transaction-per-second transaction pace. If there are more than seven transfers per second, all transactions are queued for replenishment. As a result of Bitcoin's zero-commission policy, this line has been formed. In other words, the person who paid the highest commission gets a better spot in line. Due to blockchain limitations, such an unfavorable circumstance arises.

III. THE WAY AHEAD

Electronic payment systems are becoming more popular. The growth in online payments and the simplicity with which Bitcoin may be used to make payments, particularly for inter-country transactions, may entice the general population to utilize bitcoin. The increased usage of smartphones, as well as public knowledge of virtual currency payment and its widespread acceptance, may help it gain popularity and vice versa. The power of blockchain technology was demonstrated

by Bitcoin. As a result of the power of blockchain technology, governments from several nations desired to implement it in financial systems as a less expensive option.

3.1 Economic Growth

The current economic prosperity is an important component in the growth of the cryptocurrency market. If we look at the history of cryptocurrencies, it is clear that when markets declined during the 2008 crisis, investors' appetite for risk returned to pre-recession levels. Blockchain and Bitcoin were created in 2009, and Bitcoin's subsequent exponential rise began in 2013.

3.2 Blockchain Technology

Blockchain is a distributed ledger technology. With the rise of Bitcoin, blockchain has taken the IT world by storm. Bitcoin and the rest of the cryptocurrency industry were almost worthless before the introduction of blockchain technology. Blockchain technology is a ledger that holds a series of transactions in the form of blocks that update automatically across a network of independent databases situated in several geographic places, and which serves as the foundation for a decentralized system.

3.3 Investor Needs

One of the main causes of the crypto market's rise has simply been an outsized surge of capitalist desire. Throughout 2017, cryptocurrencies attracted a lot of attention from financial and government institutions, which legitimized them as investment assets. Investors believe that this is only the beginning of the cryptocurrency surge. There are still a lot of apps that need to be started or investigated.

IV. CONCLUSION

With a large number of existing markets and the ability to easily exchange bitcoins for euros, pounds, or dollars, this new method is the ideal vehicle for running any type of transaction related to money laundering or illegal drug trafficking, with all of the legal implications that come with it, including the jurisdictional limitation of criminal acts committed in cyberspace. The incorporation of blockchain technology into business and international commerce increases the potential of widespread cryptocurrency adoption since firms will be able to use cryptocurrencies more efficiently, reducing the need for middlemen. Given the foregoing, the ultimate purpose of cryptocurrencies is to mimic modern electronic clearing in a globally linked society. As a result, they only serve as a bridge to the wider adoption of decentralized databases and private money.

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