

Is Bitcoin a Blessing or a Curse?

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Abstract : *This paper discusses the phenomenon of Bitcoin and its implications since its inception until recent years. It seeks to holistically evaluate whether or not Bitcoin and cryptocurrency networks are, as a whole, a blessing or a curse. This paper touches on both the benefits and threats posed by these new internet-based currency systems, and ultimately recommends that more research be completed on its lasting impacts before concluding whether the boons outweigh the banes or vice versa.*

Keywords: *Bitcoin, cryptocurrency, finance, decentralization, networks*

I. INTRODUCTION

First invented in 2009, the Bitcoin is widely regarded as the world's first cryptocurrency (Likos et al., 2022). Free from much legal regulation, cryptocurrencies in general have the potential to decentralize the way financial transfers are made and challenge traditional infrastructures. While Bitcoin and cryptocurrency are relatively recent inventions, they have only grown in popularity since their inception, with currently over 19 million Bitcoins in existence (Kraterou and Solomons, 2022). Bitcoin is becoming widely accepted as a valid currency by many organizations, with a 2020 survey revealing that 36% of small-medium sized businesses in the U.S. accept Bitcoin payments (Constantino, 2021). As it is still early on in the history of internet-based currency systems, many long-term effects of cryptocurrency have not been uncovered yet. At the moment, Bitcoin has been shown to have both advantages and disadvantages for its users, oftentimes in direct correlation with one another. This essay seeks to holistically evaluate both the benefits and threats posed by cryptocurrency; ultimately, I will prove that this innovative, game-changing technology should be met with both caution and enthusiasm for all the new risks and possibilities it can create at this point in time, until there is more definitive research completed on its lasting impacts.

II. DECENTRALIZATION AND ITS IMPLICATIONS

Primarily, third-party intermediaries, like banks, are typically used to process financial transactions. Compared to conventional means of payments, one of the most significant differences about Bitcoin is its ability to bypass centralized banks, as it is currently not subjected to any regulatory authority. As such, an individual can partake in financial systems with no intermediaries, making Bitcoin a very fast means of transacting even across international borders (Chiney, 2022). Crypto not only provides more autonomy to users than fiat currencies do, but it is also arguably more accessible, as cryptocurrency users can pay from anywhere in the world with Internet access and a mobile phone. Thus, a lack of interference of a third party means crypto assets are never frozen according to market timing or other factors and can essentially be accessed around-the-clock (Onies et al., 2010). Additionally, since there is no need for central bank systems or the government to initiate crypto transfers, transaction fees are low, and there exists no bank account maintenance fees or overdraft charges – therefore providing seemingly more freedom to its users versus other currency systems. However, as much as there are benefits of decentralized issuance, it also comes with its fair share of cons. For example, with the removal of a third party like a bank, buyers risk not having protection when goods are purchased using Bitcoin. If the seller does not send the goods as promised, the buyer is unfortunately unable to cancel or reverse the transaction, and the process to reimburse stolen funds can oftentimes be difficult (Onies et al., 2010). As money frauds and misuse exist in even centrally-controlled systems, purely decentralized systems harbor a whole new level of risk. The FTC shows that cryptocurrencies are highly prone to cyber-attacks, and there exists many hacking and phishing efforts to gain control of crypto assets by malicious means. New cryptocurrency investors are constantly vulnerable to these types of security risks, and the risks are only growing as

cryptocurrencies become more mainstream. Since the beginning of 2021, a reported 46,000 people have lost \$1B due to cryptocurrency scams, with the top cryptocurrency people have said used to pay scammers being Bitcoin at 70% (Fletcher, 2022). Thus, as the decentralization of cryptocurrency has proven to have some boons, the absence of regulating third-parties has also paved the way for new forms of financial damage to emerge, which prompts discussion of proper mitigation and management.

III. HIGH RISK, HIGH REWARDS (OR LOSSES)

Since Bitcoin's establishment in 2009, the world of crypto has exploded with other competitors, and around 10,000 cryptocurrencies exist on the market today (N26, 2022). As prices are typically driven by the supply from crypto coin miners and the demand by buyers, the prospect of hefty returns has been enticing for many investors. The price of cryptocurrency Ethereum, for example, has doubled from July 2021 to December 2021 (N26, 2022). Bitcoin, additionally, has multiplied by 10 in the last five years, giving those who got on board at the right time a nice return on their investment. Several investors including billionaire hedge fund manager Ray Dalio have even touted Bitcoin to be a "hedge against inflation," even placing it above gold in terms of monetary value (Kabir, 2021). Bitcoin and other cryptocurrencies have also gradually been gaining legitimacy around the world, with nations like El Salvador adopting Bitcoin as legal tender in September 2021 (Anthony, 2022). With these positive signs, and given the various ways that have been developed to get engaged with different cryptocurrencies – including popular trading services and venues like Coinbase, Kraken and Gemini – the public is eager to invest and trust in the respective new currencies (Esajian, 2022) However, as much as there exists the potential for high rewards, Bitcoin and other cryptocurrencies can ultimately still be an extremely volatile investment. As Bitcoin's valuation can fluctuate according to demand and create associated highs for investors, it can equally crash to lows just as quickly. For those looking to make stable returns, cryptocurrency is oftentimes not the most risk-averse bet, as the market at this point fundamentally thrives on speculation (N26, 2022). Crypto's relatively small market size compared to other types of investments makes it more vulnerable to price fluctuations. Since cryptocurrencies have only been around for a decade compared to stock markets that were founded in the 1800s, many investors and users of crypto have to brave these uncharted waters with market unpredictability and believe in its future value, at the risk of suffering catastrophic losses. In essence, the reason crypto is a blessing to some individuals is the very same reason others turn away from using and investing in crypto at this time.

IV. SECURE YET NON-SCALABLE

One of the most pervasive pro-Bitcoin arguments is the fact that the underlying technology that creates the cryptocurrency network is inherently robust (Onies et al., 2010). Bitcoins and cryptocurrencies in general are digital assets on a blockchain – a data-storage ledger that tracks each and each transaction ever undertaken on it. Once an individual makes an entry on the blockchain, it cannot be erased (N26). Backed by functionalities like cryptography and military-grade key access, these transactions are verified and secure. Additionally, the blockchain is decentralized and stored across many computer systems, making it exceptionally difficult for hackers to access the entire chain or system. This fundamental structure of cryptocurrencies, in contrast to currencies issued by central banks, makes it so that in theory, crypto does not have a single point of failure that could manipulate or endanger the currency. However, this exact feature of storing across multiple systems poses serious issues along with its advantages. At a certain level, cryptocurrencies are difficult to roll out on a large scale. The blockchain has already reached certain capacity limitations, which can potentially slow the rate of transaction-processing and cause financial losses for investors (N26). The founders behind the cryptocurrency Ethereum have also proposed a "hard cap" of 120 million on the number of coins issued and are actively working on consolidating mining operations, as it requires expensive systems with powerful CPUs to keep an otherwise unfixed supply (Sharma, 2020). These issues with scalability also tie into another primary downfall of crypto-mining: its large energy consumption. In 2018, Forbes dubbed crypto as "the nail in the coffin of climate change" due to its associated energy production (Morris, 2018). A Bitcoin transaction, for example, requires an energy consumption that is equivalent to 453,000 Visa card transactions (Blancher, 2021). And the more popular cryptocurrency becomes, the larger the requirements for data centers, computers and server farms, which all amount to generating large amounts of energy. Over the last decade, the total energy consumption of Bitcoin has reached novel epic proportions as the price of the currency continues to soar. Therefore, the Bitcoin

network has now been shown to consume more energy than some entire countries (Huang et al., 2021). Cryptocurrencies have been thrust into the limelight alongside the growing discourse on climate change, for their massive carbon footprint and creation of electronic waste. Although Bitcoin has been proven to be secure, there are a whole host of pitfalls that come with this secure system, and the processes of building crypto networks will need to be continually iterated upon as it is established to be more palatable to other sociopolitical and humanistic agendas.

V. CONCLUSION

Ultimately, as cryptocurrencies and Bitcoin gain popularity and begin to replace conventional physical currencies, they have been met with praise as well as criticisms. As new technologies, regulations and verification measures emerge alongside crypto's development, the implications for how these systems will impact us in the long-run will surface in parallel. Today's central banks will not only face new peers, but will also be thrown into competition that could transform the entire way we operate financially as a whole. As crypto proves itself to be an indispensable part of the financial market's future, exciting new solutions and daunting risks will continue to pose questions for crypto's status as either a curse or a blessing, or both, and should be approached as such as time comes.

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