



CRYPTOCURRENCY: IS IT A FAD OR THE CURRENCY OF THE FUTURE?

¹Shivam Bansal, ²Rishav Raj, ³Amit Yadav, ⁴Ishan Kumar

¹Student, ²Student, ³Student, ⁴Assist. Professor

¹School of Computer Science and Engineering

¹Lovely Professional University, Phagwara, Punjab, India

Abstract: Innovation and technology have prepared the path for a futuristic term we could never have predicted. On the internet, cryptocurrency, the Metaverse, and Web 3.0 provide safe information. Cryptocurrencies have grown into a trillion-dollar sector in the last decade, with the potential to collapse the global financial system. Dealing in digital currency will soon be a part of our future. We have arrived at a point in history where we may solely own and manage our assets thanks to technologies such as blockchain, which helps to decentralize our virtual assets.

IndexTerms - Cryptocurrency, Blockchain, Metaverse, Web 3.0, Decentralize

1. INTRODUCTION

Over the last decade, the cryptocurrency sector has evolved at a tremendous pace. There are nearly over 10,000 cryptocurrencies as of Feb 2022 [1]. Due to how open the creation process of a cryptocurrency is, it is relatively easy to make one. Indeed, it is believed that the top 20 cryptocurrencies make up nearly 90 percent of the total market [1].

Bitcoin has risen from US\$0.08 in 2010 to more than US\$68,000 in 2021, making it one of the most valuable assets on the market [2]. Between 2012 and 2020, Bitcoin has increased by 193,639.36% [3].

2. WHAT IS CRYPTOCURRENCY?

Cryptocurrency is a digital currency that uses blockchain technology to operate. They enable secure online payments without the use of third-party payment channels. The term "crypto" refers to a variety of encryption methods and cryptographic approaches, such as elliptical curve encryption, public-private key pairs, and hashing functions.

Bitcoin and other crypto currencies are created by solving complex algorithms using powerful computers that use a significant amount of energy.

2.1. A BRIEF HISTORY

Cryptocurrencies were called "cyber currencies" in the 1980s [4]. Bitcoin, the first decentralized cryptocurrency, was created in 2009 by a pseudonymous (still unknown) developer or group of developers known as Satoshi Nakamoto. Satoshi Nakamoto published a paper titled "Bitcoin: A Peer-to-Peer Electronic Cash System" in October 2008 [5]. The popularity of cryptocurrencies has skyrocketed since then. On the 12th of January 2009, Hal Finney and Satoshi Nakamoto made the first Bitcoin transaction [6].

2.2. GOVERNMENT REGULATIONS

Because the market value of cryptocurrencies has exploded in recent years, it is vital to regulate virtual currencies in order to safeguard consumers from scams. Different countries have taken various approaches to cryptocurrency regulation. Rather than outright prohibiting cryptocurrency, many countries have recognised it and mandated that investors pay taxes on income generated from cryptocurrency trading.

In September 2021, El Salvador became the first country to make bitcoin legal tender [7]. Regulators have also criticized cryptocurrency for its potential for criminal activities such as terrorism and money laundering. Cryptocurrency will become more acknowledged over the world as a result of regulations.

3. WHAT IS BLOCKCHAIN?

Blockchain is, as its name implies, a collection of interconnected blocks or an online ledger. Each block comprises a collection of transactions that each network member has independently validated. Every new block must be validated by each node before being confirmed, making forging transaction histories nearly impossible. The contents of an online ledger must be agreed upon by the whole network of a single node, or computer, that keeps a copy of the ledger.

According to experts, blockchain technology can benefit a variety of sectors and activities, including supply chain management and online voting and crowdfunding.

JPMorgan Chase & Co. (JPM) and other financial institutions are experimenting with blockchain technology to reduce transaction costs by simplifying payment processing [8].

3.1. ADVANTAGE OF BLOCKCHAIN OVER DATABASE

3.1.1. DECENTRALIZED

Due to the decentralized nature of blockchain, there are no administrators or central authority to approve transactions.

3.1.2. UNCHANGEABLE TRANSACTIONS

Because blockchain only allows for the input of data, once a transaction is recorded, it cannot be modified.

3.1.3. SECURITY

The blockchain uses advanced cryptography to ensure that data remains secure within the chain. It uses distributed ledger technology, which gives each user in the network a copy of the original chain, ensuring that the stem remains operational even if a substantial number of nodes fail.

3.1.4. TRANSPARENCY

Without the need for a middleman, anybody may examine and verify the ledger. This improves the system's credibility.

4. ADVANTAGES OF CRYPTOCURRENCIES

Many investors and laymen are still unclear as to why they should use cryptocurrencies instead of their local money.

The following are some of the benefits of using crypto versus regular currency:

4.1. SECURITY

Transacting on blockchain technology does not require registration with any administration, bank, or government, ensuring privacy. Because of the powerful blockchain technology, crypto is extremely tough to hack.

4.2. TRANSPARENCY

Because crypto uses a distributed blockchain record, there are tools that allow anybody to check up all transactions, including the amount of crypto transferred, received, and kept on a specific wallet address.

4.3. PRIVACY

One of the primary benefits of using cryptocurrency to pay is that users remain anonymous. Customers' personal information cannot be tracked by merchants. Credit card information is often stored on servers that can be compromised. It's difficult to trust merchants since there have been several instances in the past where corporations sold or utilized consumer data. Crypto, on the other hand, is sent directly from your digital wallet to the merchant you're paying.

4.4. INFLATION PROTECTION

The total amount of coins that will ever be created in most cryptocurrencies, including Bitcoin, has a hard cap.

4.5. ACCESSIBILITY

Even a layman with very rudimentary computer skills may transact crypto. All you need is an internet connection and a computer or smartphone. It's far easier to open a crypto wallet than it is to create a bank account. No authorization from the government or a central authority is required. Transferring fiat currency from one nation to another is a time-consuming process for which we often have to pay high fees, but this is no longer the case with crypto. People may quickly conduct transactions or send money to anyone in the globe in a matter of seconds.

4.6. AFFORDABLE

Almost every digital payment that a merchant accepts is subject to a charge. Depending on the mode of payment, fees might range from 0.1 percent to 5 percent each transaction. When compared to conventional payment methods, crypto transactions are more cost effective.

In the long run, crypto transactions can save businesses billions of dollars in fees paid to banks and payment networks each year.

4.7. TRANSACTION SPEED

Sending money takes at least 24 hours in most parts of the nation. The United States, the world's richest economy, usually settles transactions in three to five days. In most cases, a wire transaction takes at least 24 hours.

However, this is not the case with crypto. When the network confirms the block containing your transaction, it is fully settled, and the money is accessible to spend within minutes. In a matter of minutes, you may send money to any region of the world. Because the blockchain does not require any authority or financial institution to pass the transaction, it is feasible.

5. CHALLENGES FACED TO ADOPT CRYPTO

5.1. SECURITY

Although blockchain technology is extremely secure, crypto exchanges and wallets may and have been hacked in the past.

You must keep a private key that allows you to access your currency. If a user's private key is lost, they will be unable to do transactions with their currency. Then there's hacking, phishing, and all the other nefarious attempts to acquire control. New investors, in particular, are more susceptible to fall into these traps.

Cyber-attacks on cryptocurrency exchanges are also possible, resulting in the loss of your money.

5.2. COMPLEXITY

Understanding what a cryptocurrency is might take some time. People have a hard time comprehending words like blockchain and crypto wallets. Trying to invest in something you don't understand is a risk in itself. As a result, individuals are hesitant to invest in cryptocurrency.

5.3. VOLATILITY

People do not choose to deposit their wealth in cryptocurrencies since they are volatile and might result in losses of millions of dollars. It is not suitable for those seeking a steady income.

People are speculating in the crypto market due to massive profits over the previous several years. If investors lose interest in a cryptocurrency, its value might plummet overnight.

5.4. CRIME

Crypto is being used by criminals to perform crimes such as money laundering and ransomware. It is not wrong to argue that it is the dark web's official currency for criminal operations such as the sale of narcotics and weapons.

5.5. ENVIRONMENT

Anyone with a computer and an Internet connection may mine crypto. However, mining a cryptocurrency requires a tremendous amount of energy. It can be more than a city's consumption in some circumstances. This is one of our most pressing problems.

Perhaps crypto is the new big thing, but it will harm our environment and create power outages in various areas throughout the world in the short term. As a result, several governments have made crypto mining illegal in their jurisdictions.

5.6. REGULATIONS

Most nations have yet to regulate cryptocurrencies, therefore there are no safeguards in place to protect your business. Investors can evade paying taxes on crypto since the government lacks a strong system to establish the precise revenue from it.

6. CONCLUSION

While cryptocurrencies have grown in popularity in recent years, they have only been around for a little over a decade. Nobody truly knows what the future holds for cryptocurrencies. No one can guarantee its minimum value because there is no central authority.

6.1. WILL CRYPTO REPLACE BANKS?

The cryptocurrency market is emerging, and it's only projected to grow in the coming years. Cryptocurrencies will undoubtedly play a significant part in our future money system as the digital economy continues to expand at an exponential rate.

Without a question, crypto has the ability to revolutionize our financial system, in which a central authority is in charge of making choices that influence whole countries' economies. There are several types of cryptos available today, some have shown to be more stable than others while still showing potential for future growth.

Digital money offers flexibility and economic progress by overcoming global borders. It would also be economical, simple, and quick, which would add to the overall picture. Digital currencies have the potential to increase commerce and provide a variety of chances for countries to improve their financial health.

Without a doubt, digital money is establishing its position as the preferred currency for future generations.

7. REFERENCES

- [1] R. d. Best, "Statista," 22 March 2022. [Online]. Available: <https://www.statista.com/statistics/863917/number-crypto-coins-tokens/>.
- [2] G. Williams, "Investing News Network," 15 February 2022. [Online]. Available: <https://investingnews.com/daily/tech-investing/blockchain-investing/bitcoin-price-history/>.
- [3] J. Bulao, "techjury," 14 March 2022. [Online]. Available: <https://techjury.net/blog/cryptocurrency-statistics/>.
- [4] G. Nigeria, "TheGuardian," 26 December 2021. [Online]. Available: <https://guardian.ng/technology/tech/the-idea-and-a-brief-history-of-cryptocurrencies/>.
- [5] S. Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," 2008.
- [6] J. FRANKENFIELD, "Investopedia," 11 January 2022. [Online]. Available: <https://www.investopedia.com/terms/c/cryptocurrency.asp>.
- [7] "mint," 9 September 2021. [Online]. Available: <https://www.livemint.com/news/world/el-salvador-becomes-first-country-to-use-bitcoin-as-legal-tender-11631144769412.html>.
- [8] JPMorgan Chase & Co., "J.P. Morgan," 14 April 2021. [Online]. Available: <https://www.jpmorgan.com/news/jpmorgan-uses-blockchain-technology-to-help-improve-money-transfers>.