



Classification of Cryptocurrencies

Mrs. A.Nagalakshmi^a, Mrs. K.D.Sireesha^b, A.Sai Vyshnavi^c, CH.Reshma^d, M.Srikanth^e, R.Mukesh^f

^{a,b}Assistant Professor, Department Of CSE, Pragati Engineering College, Surampalem, Andhra Pradesh, India.

^{c,d,e,f}Department Of CSE, Pragati Engineering College, Surampalem, Andhra Pradesh, India.

ABSTRACT

Cryptocurrency is a form of digital or virtual currency designed to be used as a medium of exchange. They have evolved into important financial software systems. Cryptocurrencies are created through a process called mining. Mining is an integrated process that not only creates a currency, but also adds ining a record of past transactions to a distributed ledger called a blockchain. The use of blockchain and cryptography provides security to the environment. Cryptocurrencies are designed using peer to peer system. For mining of such digital currencies ,we should have miners to validate the currency and its creation. There are almost 1600 cryptocurrencies in the market right now, and many more are created daily. The most popular cryptocurrencies are Bitcoin, Ethereum, Litecoin, and Ripple.

Keywords: Cryptocurrency, Bitcoin, Ethereum, Litecoin, Ripple, Cardano






1.Introduction

Since the immemorial, currency has been an integral part of our lives. In 110BC, an official currency was minted, and 1250 AD, gold plated florins were introduced and 1600 AD-1900AD paper currency gained widespread popularity. In modern currency, it included paper currency and coins, credit cards and digital wallets, all of these were controlled by banks and government. The cryptocurrency is a digital currency that is secured transaction using cryptography. By using cryptocurrency, the users are able to exchange the value digitally without any third party segments. It works on the blockchain technology. The first cryptocurrency was introduced in 2008 by the person name "Satoshi Nakamoto". And this is begin and use in 2009 and it's implementation was released as open source software. The cryptocurrency was works on the theory of solving the encryption algorithm to create the unique hashes that are finite in number. The cryptocurrency received it's name because it uses encryption to verify transaction and provide security and safety. The cryptography usually requires a computational algorithm (SHA256), a public key(that the user shares with everyone) and a private key(which acts like a digit signature of the user). In September 2021, estimate of the different types of cryptocurrency can trade range from nearly 6000 coins to over 10,000.

1.1Types of Cryptocurrencies

Since cryptocurrency was introduction in 2009, Bitcoin (CRYPTO:BTC) has turn out to be a innovative virtual currency. Because it allows peer-to-peer bills without a 3rd celebration like a bank, it has activate a tidal wave of different cryptocurrencies and virtual belongings using blockchain technology. Blockchain is a virtual public ledger in which data on every transaction gets a unique "hash" (or identity) and is brought to the give up of the ledger. Top5 cryptocurrencies.

Table 1 – Top 5 Cryptocurrency

NAME	SYMBOL	MARKET CAP
Bitcoin(BTC)		\$36,482.24
Ethereum(ETH)		\$2,442.61
Litecoin (LTC)		\$107.92
Ripple		\$0.6081
Cardano(ADA)		\$1.05

1.2. BITCOIN

Bitcoin is regarded as decentralized cryptocurrency using peer-peer technology to facilitate payments and digital transaction. It is a digital currency created in January 2009. It is a type of cryptocurrency because it uses cryptography to keep it secure. It describes as virtual and anonymous currency that is backed by other legal entity and it can't be exchanged into gold or other commodity.

Bitcoin price started at zero when it was introduced in 2009. In July 17, 2010 the price is \$.09 and in June April 13, 2011 the price has jumped to \$1. The price touched \$315.21 in 2015. The price increased to \$900 at the end of the 2016 year. In 2017 the price is around \$1,000 at starting and in mid may month the price is \$2,000 and at the ending price is \$19,345.49 in December. In 2019 due to COVID-19 pandemic the price burst down with \$6,965.72 and in November the price has open up with \$19,157.16 due to government policies by investors. In 2020 December it reached \$29,000. In 2021 January bitcoin was trading \$40,000 and in April \$60,000 and in December it has fallen to \$47,128.47 due to COVID-19 new variant omicron. In 2022 January the price is \$36,547.60.

1.3. ETHEREUM

Ethereum is the second largest cryptocurrency. It was introduced by "Vitalik Buterin" in 2013. In online public crowd sale vitalik buterin secured funding for project with co-founders in 2014. Ethereum is a decentralized blockchain technology with peer-peer network and it is a open source. Ethereum programming language called solidity and being coding. It is the infrastructure for running Dapps(decentralized apps) worldwide. Ether is the currency that incentivizes the network.

Ethereum price has started with the price \$0.3 in 2014. In 2015 price is upto \$1.33 and in 2016 it reached \$2.48. In 2017 January the price is \$10.51 and at the end of 2017 December price jumped to \$719.83. In 2018 mid-may price is \$562.18. In 2019 due to COVID-19 pandemic it burst down with \$132.07. The Ethereum (ETH) rate soared to new heights in November 2021, accomplishing over 4,800 U.S. dollars. In 2022 January the price is \$2,463.7.

1.4. LITECOIN

Litecoin is one of the type of cryptocurrency that was founded in October 2011 after bitcoin by Charlie Lee. Litecoin is an open source can be used by anyone under the MIT/X11 license. Litecoin is different from bitcoin in faster block generation rate. Litecoin is not generated by any government they are created by cryptocurrency procedure called mining. Litecoin can be used for payment in worldwide it doesn't require an intermediary to process transactions. Only 84 million Litecoins can be in circulation more than 84 million will not be exceeded.

Litecoin is also known as sound money. Litecoin is faster, cheaper and more decentralized compared to bitcoin. Litecoin has block time of 2.5 minutes which is 4 times faster than bitcoin and it completes 54 transactions in one second. Litecoin is the first network to adopt in use Lightning Network. Lightning Network is a layer 2 solution that allows users to make transaction in seconds and makes payments simpler. In Litecoin every miner will be awarded with 12.5 Litecoins at present as the time passes it will be halved. At first 50 Litecoins are awarded on august 25, 2015 it is reduced to 25 Litecoins after that on august 5, 2019 it is reduced to 12.5 Litecoins, on august 23, 2023 it is expected to be reduced to 6.25 Litecoin.

1.4 RIPPLE

Ripple was created in 2012 by Chris Larsen and Jed McCaleb. Ripple or XRP was formed in the year 2012 as a system designed to seamlessly transfer fiat currencies. Financial institutions can use XRP to complete cross-border Ripple was created in 2012 by Chris Larsen and Jed McCaleb Ripple was created in 2012 by Chris Larsen and Jed McCaleb monetary transfers. XRP can be converted from fiat currencies to XRP in one country, which is then transferred to another person and then converted back into fiat currencies in one's home country. As a result, it is faster, less expensive, and potentially more secure than managing fiat currencies in any other way. Ripple only allows founding validators access to its blockchain. Unique nodes that receive permission to validate activities on the chain can access the blockchain. Banks and other financial service providers can access the Ripple blockchain. Its simplicity in managing monetary transfers is ensured by making sure only those who are regulated to handle money can use it.

Ripple price in 2013 August to 2017 April the price flipped from \$0.1 to \$0.5. In 2017 June, the price reached \$0.26. The price went to highest peak in 2017 December with price \$2.28. In 2018 April, price jumped to \$0.87. In 2019 due to COVID -19 pandemic the price shut down to \$0.43. In 2020 November it reached to price \$0.61. In 2021 April, it increased to \$1.4. In 2021 January the price is \$0.8.

1.5 Cardano(ADA)

Cardano became based in 2015 by Ethereum co-founder Charles Hoskinson. In 2017, Danao or ADA began operation. As Cardano developers can create dApps powered by the ADA token, it has similarities with Ethereum. But the difference between Cardano and Ethereum is that it uses an academic paper-driven approach to iteration. Based on peer-reviewed academic reports, Cardano uses peer-reviewed data to determine how Cardano can be adjusted and changed for future success.

Cardano also uses the Ouroboros consensus system for operation. Slot leaders are rewarded with ADA for verifying transactions through this proof-of-stake mechanism. Leaders are able to mine for the currency, and the mining process does not require as many people to be online as it does for other currencies. Cardano's production becomes easier with this reduction in the barrier of entry. Cardano became funded through a preliminary coin offering (ICO). By the give up of 2017, it had a marketplace cap of \$10 billion, and reached a cost of \$33 billion in short in 2018 earlier than a popular tightening of the crypto marketplace dropped its cost again to \$10 billion. In 2020, IOHK donated \$500,000 in ADA to the University of Wyoming to help the improvement of blockchain technology. In 2022 January the price is \$1.04.

CONCLUSION

The cryptocurrency is decentralized, there are permission less. The cryptocurrency is very limited acceptance for B2B purpose and the price of cryptocurrencies are experience in large fluctuations. And also the speed and efficiency of the existing digital payment systems are not matched by the cryptocurrencies. The cryptocurrency seems to have past early adoption phase that new technologies experience. The cryptocurrency is a major currency solution for the possible that the future holds a place, and in cryptocurrency the bitcoin will be the passing way for those currencies flourish. In addition to being able to perform microtransactions, cryptocurrency may be able to bridge an economic gap that traditional state-sponsored currencies would not be able to resolve, but this must be determined using a much thorough market and economic analysis. And finally, the cryptocurrency is a product of using cryptography to create a digital property. The cryptology, root science beneath bitcoin and all cryptocurrencies may be mechanism behind the frontier for new and exciting digital inventions.

REFERENCES

<https://www.investopedia.com/terms/c/cryptocurrency.asp>
<https://www.bankrate.com/investing/types-of-cryptocurrency/>
<https://www.investopedia.com/terms/b/bitcoin.asp>
<https://www.investopedia.com/terms/e/ethereum.asp>
[https://www.investopedia.com/terms/l/litecoin.asp#:~:text=Litecoin%20is%20a%20peer%2Dto%2Dpeer%20\(P2P\)%20virtual,or%20institutions%20across%20the%20globe](https://www.investopedia.com/terms/l/litecoin.asp#:~:text=Litecoin%20is%20a%20peer%2Dto%2Dpeer%20(P2P)%20virtual,or%20institutions%20across%20the%20globe)
<https://www.investopedia.com/terms/r/ripple-cryptocurrency.asp#:~:text=Ripple%20is%20a%20technology%20that,payment%20network%20for%20financial%20transactions.&text=The%20token%20used%20for%20the,XRP%20is%20the%20cryptocurrency%20token>