

A STUDY ON GROWTH AND IMPACT OF CRYPTOCURRENCY

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Abstract: The rise of crypto currency from 15 in 2013 to 22,904 in 2023 has been impeccable, especially during and after COVID-19. It has set a standard for being one of the top three investing or trading opportunities in the world. This decentralized investment process provides a much more secure and smoother flow of transactions across the world. Cryptography has been making a huge impact on the finance and investing fields. Block chain acts as a distributed ledger and helps crypto-transactions have a secure process. The details of such transactions that are stored in these blocks are much safer. This research briefs on the information regarding the rise of crypto currencies, what makes investing in crypto currency different from investing in stocks, land, and gold, and the process involved in investing and transferring a bit coin. The top crypto currencies in the world (Bit coin, Lit coin, and Ethereum) and their rise into the market, the cryptography techniques followed by them, and similarities and differences between them will also be covered in this research.

Key words: Crypto currency, bit coin, investment & finance, cryptography and block chain.

INTRODUCTION:

Currency evolved from the traditional barter system, which was used as a medium for exchanging goods. It was taken by over-metal coins representing exchangeable goods, precious metal coins, notes redeemable only for silver or gold, and then by printed notes with a monetary value. But are these notes totally preferable to date? Until the day when the transactions were limited to a certain amount, the exchange was smooth. With time, the monetary limit of transactions exceeded, due to which safety and security came into play. Modern-day technologies for the transfer of money include electronic and online payments. These started to play a very important role in every individual's life as the transfer of money became quicker and easier. But security for the same has always been a problem. It is a fact that every new technology leaves behind a drawback. One of the most secure but not regulated mediums is "crypto currency". It provides safety to its users in financing through the involvement of cryptographic techniques. But crypto currency did not limit itself as a financing tool; the prices never remained stable. Crypto currency has now become one of the most popular investment tools of this era.

OBJECTIVES:

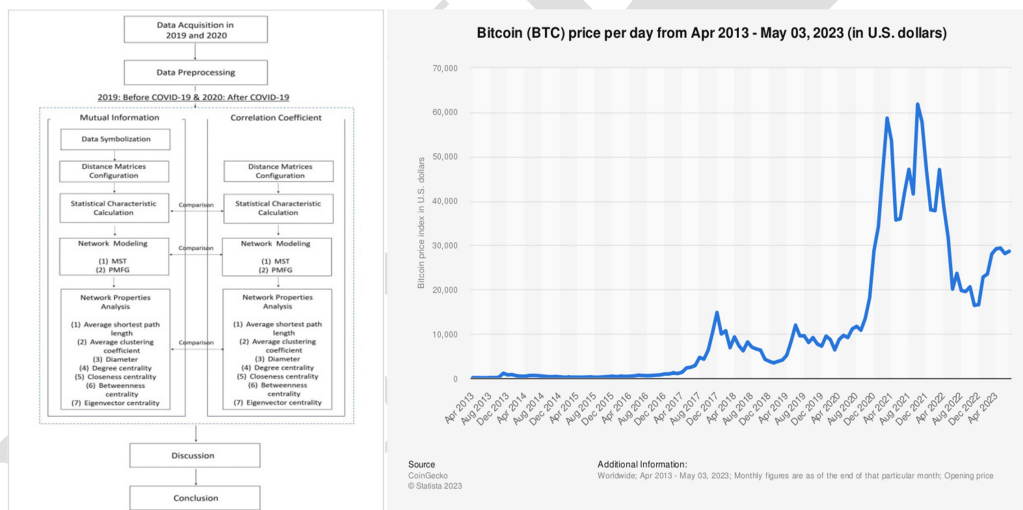
- To assess the rise and sustenance of crypto currency and its variations in the market.
- To understand the market speculation between investing in crypto currency and stocks
- To identify barriers related to crypto currency.
- To focus on the cryptography patterns followed by the leading crypto currencies.
- To understand and analyze the market value fluctuations of the crypto currencies.

Crypto currency

Crypto currency is a decentralized form of money transfer between various users. The word 'crypt' in crypto currency creates a sense of encryption and decryption of money. It does not have any third parties between the two parties involved in a transaction. The traditional methods of payment, ranging from the barter system to current-day e-payments, all involve various limitations and imply their own disadvantages. The rise of crypto currency gave birth way long ago, in the 1990s. Various people tried on creating bit coin (the first-ever named crypto currency) and launching it with names such as bit gold, B-Money, etc. They could not succeed in making it available. A crypto currency named BITCOIN came into life on January 3, 2009. That is when the Genesis Block was launched on the Block chain of the Bit coin. It is traditionally the ancestor of every block in the block chain process of a bit coin.

A doubt of who has begun this is still a mystery. Satoshi Nakamoto was the name given behind the introduction of Bit coin. After the rise of crypto currency, this name had completely disappeared. Nakamoto might be he, she, or even a group of people.

Bit coin did not have any monetary value initially. The computer software with which Bit Coin was associated was free online. Miners used to trade bits of coin back and forth for fun. Bit coin had its first-ever monetary transaction on May 22nd, 2010. The bit coin then had a value of a quarter of a penny. Since then, the bit coin has emerged as a means of payment.



The market value of BitCoin kept increasing thereafter, as shown in the diagram. The first mobile transaction of BitCoin occurred in 2010. After the rise of the market value of BitCoin, it was no longer used only for financing but for various other purposes. Bitcoin then emerged with more importance for investing. People started making money by investing in BitCoin and selling them on exchanges with a hike in its price. People took advantage of the anonymity of crypto currency. Many businesses started accepting crypto currency as a monetary medium of exchange. And then many other crypto currencies started emerging with various other advantages.

The Downfall and Upswing of Bit coin

Bitcoin had a steady rise in its market value to US\$1000 in 2013. The market capital of BitCoin had then exceeded 1 billion US dollars. The platforms with the Bitcoin exchange enjoyed a large number of gains, as did the investors too. But security was always a concern for online financing or trading platforms. The largest cryptocurrency exchange, Mount Gox, was hacked in February 2013, because of which the entire world, which

believed in reaping profits by investing in crypto currency, came to a halt. This scam resulted in the loss of millions of bitcoins owned by many people. Bitcoin went through lots of legal obstacles during this period. Many legal actions of banning or the threat of regulation were imposed in many countries. And as a result, the market value of BitCoin started deteriorating.

The downfall of BitCoin fell in as an advantage to a few others. While there were already other crypto currencies introduced with the rise of BitCoin, none of them could gain as much popularity as BitCoin did. The Ethereum Platform came up with a coin named Ether in the same process of block chaining, with some changes and similarities that would be further discussed. This platform also covered the disadvantages the Bitcoin system faced. But the consequences created by BitCoin made the SEC warn investors against investing in ICOs. But soon after, in 2017, there was growth in the market for crypto currencies. With a huge development in the block chain process, investment in crypto currencies took over the price of gold. Bitcoin, Ether, and other such crypto currencies had an upswing in the market. The price of each bit coin began at US\$1000 in 2017 and experienced enormous growth. New investors started investing in BitCoin and other crypto currencies.

Bitcoin's price moved sideways in 2018 and 2019, with small bursts of activity. For example, there was resurgence in price and trading volume in June 2019, with the price surpassing \$10,000. However, it fell to \$6,635.84 by mid-December.

In 2020, the economy will shut down due to the COVID-19 pandemic. Bitcoin's price burst into action once again. The crypto currency started the year at \$6,966. The pandemic shutdown and subsequent government policies fed investors' fears about the global economy and accelerated Bitcoin's rise. At the close of November, BitCoin was trading for \$19,157. Bit coin's price reached just under \$29,000 in December 2020, increasing 416% from the start of that year.

By the summer of 2021, prices were down by 50%, hitting \$29,796 on July 19. On November 10, 2021, Bitcoin again reached an all-time high of \$68,789 before closing at \$64,995. In mid-December 2021, Bitcoin fell to \$46,164. The price started fluctuating more as uncertainty about inflation and the emergence of a new variant of COVID-19, Omicron, continued to spook investors.



Crypto currency Then & Now – 2009 vs. 2023

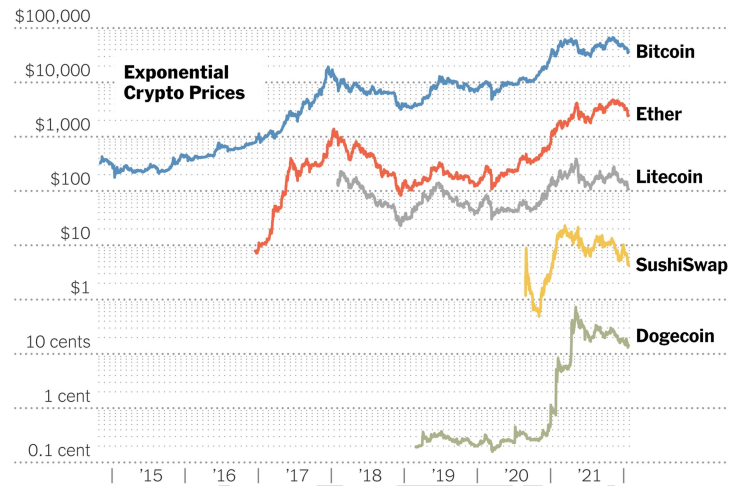
2009: Cryptocurrencies had much less priority than in the days when they began. It all started when the bit coins were traded back and forth for fun. The importance of encryption and decryption, which held prior value, was not given great importance at the start. Soon, trading through Bit Coin took place when a man bought a pizza for

10,000 Bit Coins, with 0.25 cents worth each. The rise of crypto currency then came up and touched US\$1 per bitcoin and had much more hikes, as mentioned earlier.

2023- Other crypto currencies that emerged with the latest technology for trading and investing other than bitcoin are:

Crypto currency	Market Capital
Ethereum	US \$ 229 Billion
Tether	US \$ 82 Billion
Cardano	US \$ 14 Billion
Binance Coin	US \$ 51 Billion

These top crypto currencies faced a steady incline and decline in their prices. The following data shows the fluctuations in the market value of the top crypto currencies as of 2021.



Block chain

A block chain can be normally termed a chain of blocks, but as per its use, it is defined as a distributed ledger that is completely open to every user in the chain. The mechanism involved in blocks is unique, and once the information is entered, it cannot be changed easily. These blocks work on the basis of a hash (a unique cryptographic code made out of the information). Each block also contains the hash of the previous block, so as to create a network of chains among the blocks. Although the continuous creation of blocks may cause a lot of information in a block network, this centralized network can slow down the creation of blocks by using the “proof-of-work” mechanism. BitCoin also uses this mechanism for the transfer of BitCoins and for its trading. This mechanism doesn’t let anyone tamper with the data stored.

Block chain also creates a decentralized way of exchanging information. This can be formulated by the peer-to-peer mechanism of the block chain. Block chains use this mechanism to create a network where everyone is allowed to join and share information. When a new block gets added, a copy of that block is sent to everyone in that network.

The anonymity maintained by the block chain mechanism is very well utilized by most crypto currencies. This provides a safer and faster exchange of money between any numbers of parties. Cryptography through the block chain played a very important role in the trading of Bitcoin and Ethereum. People who invested in these two crypto currencies have a much faster and more reliable source of financing.

Bit coin or Ethereum?

We know that the top two leading crypto currencies in the world are Bitcoin and Ethereum. But what are the differences and similarities these possess? Let's have a look at the similarities first. Both Bitcoin and Ethereum are widely used and are the most valuable crypto currencies in the world. Both of them use blockchain technology. Both of them use the "proof-of-work" mechanism for their block chain. Bitcoin and Ether are both unique in their own way; the following can be listed as the differences between them:

Bit coin: Bit coin is used for transactions that are related to goods and services. These transactions are manual. Money can be sent to anyone through BitCoin. The transfer speed involved in Bitcoin is slower. Its block chain mechanism takes 10 minutes to transfer the money from one party to another.

Ether: Ether is used for creating a ledger of conditional transactions. These transactions can be manual or programmed. Although it can be used for real-life transactions, in Ethereum, money can be sent only within the Ethereum Network. The transfer speed involved in Ethereum is faster. Its block chain mechanism takes 20 seconds to transfer the money from one party to another.

The debate between BitCoin and Ethereum as investments comes down to an investor's risk profile. Both have the potential to perform well over time as the world continues its shift to digital and crypto currency acceptance grows. Bitcoin is the more established and mainstream of the two, which makes ETH just a touch riskier.

As with most investments, it is possible that Ethereum's higher risk brings with it the potential for higher rewards. In either case, it's not 2009 anymore. Both currencies have sprinted past the proof-of-concept phase, and it's time for risk-tolerant investors who haven't considered this asset class in the past to start taking both BTC and ETH seriously.

What makes Crypto currency different from investing in stocks, land, and gold?

The birth of crypto currency took place with a guarantee that it would not be regulated. Hence, the market conditions imply a lot of risk in investing in crypto currencies as they are not regulated. But along with the development of crypto currency, the exchange mediums of these crypto currencies offer some safety norms that help a user invest in crypto currency.

But the most beneficial factor of crypto currency is its short-term use. The technology involved in investing through crypto currency, as covered earlier, is nowhere found in investing in stocks, gold, or land. Though the crypto market has lots of risks and limitations, it stands out as one of the best sources to invest and finance in this century.

FINDINGS:

- It is observed that crypto currencies act as a safer tool of money transfer on a lump sum amount but are subject to risks.
- Cryptocurrencies like Bitcoin had much impact after their downfall but rose back soon.
- Ethereum picked up the right time to enter the market with features that took over BitCoin's drawbacks and still continue to sustain considerably well in the market.
- Bitcoin and Ethereum both have steady fluctuations in their prices.
- The block chain mechanism acts as the backbone of most crypto currencies and is different for different currencies.

- It is evident that investing in crypto currency makes it equally profitable or more profitable than investing in stocks.

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SUGGESTIONS:

- The downfall of Bitcoin damaged the collateral of crypto currencies. If such cybercrime were taken care of in the beginning, crypto currencies could be aided with some legal support.
- Cryptocurrencies should try to cover the drawbacks that existed in the past and apply a sustainable approach.
- Cryptocurrencies would have no difference to normal currency if regulated, but a steady increase in their market value or stability in their prices would be a beneficial factor to their users and would increase their reach out for others to invest in them.
- Consistency in functioning is required.

CONCLUSION:

The study provides a proper description of how crypto currency evolved as a monetary instrument over the years and during and after COVID-19. It focused on various setbacks, fought, and developed itself on every criterion. It can be concluded that these crypto currencies provide a safer medium for their users. The techniques used within the crypto currencies are something that cannot be tampered with, and it provides less access for hackers to think of anything mischief. With a rise in its importance in the market, it gave scope for many other entrepreneurs to come up with new crypto currencies.

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