

Crypto currency-Reshaping the financial landscape around the world

Geetha.K

Assistant Professor, PG Department of Commerce, N.S.S. College Manjeri

Email:geethanambiar39@gmail.com

Abstract:

A crypto currency is a medium of exchange like normal currencies such as USD, but designed for the purpose of exchanging digital information through a process made possible by certain coins principles of cryptography. Cryptography is used to secure the transactions and to control the creation of new. The first crypto currency to be created was Bit coin back in 2009. Today there are hundreds of other crypto currencies, often referred to as Altcoins. Put another way, crypto currency is electricity converted into lines of code with monetary value. In the simplest of forms, crypto currency is digital currency. Unlike centralized banking, like the Federal Reserve System, where governments control the value of a currency like USD through the process of printing fiat money, government has no control over crypto currencies as they are fully decentralized. Most crypto currencies are designed to decrease in production over time like Bitcoin, which creates a market cap on them. While hundreds of different crypto currency specifications exist, most are derived from one of two protocols; Proof-of-work or Proof-of-stake. All crypto currencies are maintained by a community of crypto currency miners who are members of the general public that have set up their computers or ASIC machines to participate in the validation and processing of transactions. The block chain technology used by crypto currency, such as Bit coin, is an open distributed ledger that records transactions. This solves the double-spending problem and does not require a trusted third party. Decentralization allows the block chain technology to have increased capacity, better security, and faster settlement. Some of these features are at the top of the list of shortcomings of traditional financial systems. In this article, the author has been mainly focused to understand the basics relating to crypto currencies.

Keywords: crypto currency, Bitcoin, Altcoin,virtual currency

Introduction

A crypto currency is a digital currency designed to work as a medium of exchange. It uses cryptography to protect and verify connections as well as to control the creation of new units of a specific crypto currency. Mainly, crypto currencies are limited entries in a database that no one can vary unless certain conditions are fulfilled. The first crypto currency to be established was Bit coin back in the year 2009. Currently there are hundreds of other crypto currencies, often referred to as Altcoins. Crypto currency is electricity altered into lines of code with monetary value. Unlike centralized banking, like the Federal Reserve System, where governments manage the value of a currency like USD through the process of printing fiat money, government has no control over crypto currencies as they are fully decentralized. Most crypto currencies are planned to low in production over time like Bitcoin, which creates a market check on them. While hundreds of diverse crypto currency stipulation exist, most are derived from one of regulation ; Proof-of-work or Proof-of-stake. All crypto currencies are managed by a community of crypto currency miners who are members of the general public that have set up their computers or ASIC machines to

participate in the validation and processing of transactions. The block chain technology used by crypto currency, such as Bit coin, is an open served ledger that records transactions. This tackles the double-spending problem and does not require a trusted third party. Delegation allows the block chain technology to have raised capacity, better security, and faster settlement.

Objectives of the study

- To understand the concept of crypto currency
- To examine the various types of crypto currencies and their market cap

Research Methodology

Types of research: Conceptual research

Sources of Data: Secondary sources, various websites are the main source of information

History

There have been ample of attempt at formulating a digital currency during the 90s tech boom, with systems like DigiCash emerging on the market but inevitably

failing. There were more reasons for their failures, such as fraud, financial problems and even frictions between companies' employees and their bosses.

Notably, all of those systems utilized a Trusted Third Party approach, meaning that the companies behind them established and facilitate the transactions. Due to the failure of these companies, the creation of a digital cash system was seen as a lost cause for a long while. Then in 2009, an unidentified programmer or a group of programmers under an alias Satoshi Nakamoto introduced Bitcoin. It is wholly decentralized, meaning there are no servers included and no central controlling authority. The concept closely resemble peer-to-peer networks for file sharing.

One of the most vital problems that any payment network has to tackle is double-spending. It is a falsified technique of spending the same amount twice. The traditional solution was a trusted third party - a central server – that records of the balances and transactions. However, this method always entail an authority basically in control of your funds and with all your personal details on hand. In a decentralized network like Bitcoin, every solo participant needs to do this job. This is done by the

Block chain - a public ledger of all transaction that ever happened within the network, available to everyone.

Every transaction is a file that consists of the sender's and recipient's public keys and the amount of coins transferred. All of this is just basic cryptography. The transaction is broadcast in the network, but it needs to be confirmed first.

They take transactions, mark them as lawful and spread them across the network. Every node of the network adds it to its database. Once the transaction is confirmed it becomes enforceable and irrevocable and a miner receives a reward, plus the transaction fees.

Essentially, any crypto currency network is based on the absolute harmony of all the participants regarding the legitimacy of balances and transactions. However, there are a ample of regulations pre-built and programmed into the network that prevents this from happening.. This, along with a factors, makes third parties and blind trust as a concept completely surplus.

What we can do with Crypto currency?

1) Buy

These days, however, the situation is fully different. There are many of merchants - both online and offline - that accept Bitcoin as the form of payment. They series from enormous online retailers like Overstock and Newegg to small local shops, bars and restaurants. Bitcoins can be utilized to pay for hotels, and public places and even a college degree.

Other digital currencies like Litecoin, etc.and so on were not accepted as widely just yet. Things are changing for the better though, with Apple having authorized at least 10 various crypto currencies as a viable form of payment on App Store of course, users of crypto currencies while comparing to Bitcoin can at all times exchange their coins for BTCs. Finally, there are marketplaces like Bitify and Open Bazaar that only accept crypto currencies.

2) Invest

Many people trust that crypto currencies are the hottest investment opportunity currently available. There are many stories of people becoming rich through their investments. BC is the most recognizable digital currency to date, and just last year one BTC was valued at \$800. The second most valued crypto currency, has recorded the fastest rise a digital currency ever demonstrated. Since May 2016, its value raised by at least 2,700 percent. When it comes to all crypto currencies combined, their market cap soar by more than 10,000 percent since mid-2013.

However, the crypto currencies are high-risk investments. Their market value deviates. Moreover, it is partly unfettered, there is always a risk of them getting illegal in certain jurisdictions and any crypto currency exchange can potentially get hacked.

While it's very easy to buy Bitcoins - there are numerous exchanges in existence that trade in BTC - other crypto currencies aren't as easy to acquire. Although, this situation is gradually civilizing with major exchanges like Kraken, BitFinex, BitStamp and many others starting to sell Litecoin, Ethereum, and so on. There are also a small number

of other various ways of being coin, you can trade face-to-face with a seller .

- 3) As with any other investment, you need to pay close concentration in the direction of the crypto currencies' market value and to any news related to them. Coin market cap is a one-stop solution for tracking the price, volume, and circulation supply and market cap of most existing crypto currencies. Depending on a jurisdiction you live in, once you've made a profit or a loss investing in crypto currencies, you might need to include it in your tax report. In taxation, crypto currencies are treated differently from country to country. In the US, the Internal Revenue Service ruled and other digital currencies are to be taxed as property, not currency. For investors, this means that accrued long-term gains and losses from crypto currency trading are taxed at each investor's applicable capital gains rate, which stands at a maximum of 15 percent.

4) Mine

Miners are the solitary most vital part of any crypto currency network, and much like trading, mining is an investment. Mainly, miners are providing a bookkeeping service for their respective communities. They contribute their compute power to tackle complicated cryptographic puzzles, which is necessary to confirm a transaction and record it in a distributed public ledger called the Block chain.

One of the interesting things about mining is that the complexity of the puzzles is constantly increasing, correlating with the number of people trying to solve it.

Ample of people have made fortunes by mining Bitcoins. Currently, Litecoins, and Feather coins are said to be the best crypto currencies in terms of being cost-effective for beginners. At the recent value of Litecoins, you force to earn anything from 50 cents to 10 dollars a day using only consumer-grade hardware.

As a crypto currency attract keen interest, mining becomes harder and the amount of coins received as a reward become low. when Bitcoin was first established, the reward for winning mining was 50 BTC. Now, the recompense stands at 12.5

Bitcoins. This happen because the Bitcoin network is intended so that there can only be a total of 21 million coins in circulation. As of November 2017, almost 17 million Bitcoins have been mined and allocated. However, as rewards are going to become smaller and smaller, every single Bitcoin mined will become exponentially more and more valuable.

All of those factors make mining crypto currencies an extremely competitive arms race that rewards early adopters. Depending on where you live, surplus made from mining can be theme to taxation and Money Transmitting protocols. In the US, the FinCEN has issued a guidance, according to which mining of crypto currencies and exchanging them for fiat currencies may be considered money transmitting. This means that miners might need to obey with special laws and set of rules dealing with this activities.

5) Accept as payment for business

The interest in crypto currencies has never been increased and it's only going to rise. Along with the development of interest, also grows the number of crypto-ATMs located around the world. The payments can then be done using hardware terminals, touch screen

apps or simple wallet addresses through QR codes.

There are many various services that you can use to be able to accept payments in crypto currencies. Coin Payments recently accepts over 75 different digital currencies, charging just 0.5 percent commissions per transaction. Other popular services include Cryptonator, CoinGate etc, with the concluding only accepting Bitcoins.

In the US, the crypto currencies have been documented as a changeable practical currency, which means accepting them as a form of payment is exactly the same as accepting cash, gold or gift cards.

For tax purposes, US-based businesses receiving crypto currencies need to record a reference of sales, amount received in a specified currency and the date of transaction. If sales taxes are payable, the amount is deliberate based on the average exchange rate at the time of sale.

Legality of crypto currencies

As crypto currencies are becoming more and more mainstream, regulatory enforcement agencies, tax authorities and legal regulators worldwide are trying to understand the very concept of crypto coins and where exactly

do they able-bodied in existing regulations and legal frameworks.

With the introduction of Bitcoin, the first ever crypto currency, a completely new paradigm was created. Decentralized, self-sustained digital currencies that don't exist in any physical shape or form and are not controlled by any singular entity were always set to cause uproar among the regulators.

A more concerns have been increased regarding crypto currencies decentralized nature and their traits to be used almost completely anonymously. The authorities all over the world are worried about the crypto currencies appeal to the traders of illegal goods and services. Moreover, they are worried about their use in money launder and tax evasion schemes.

The legal status of crypto currencies varies substantially from country to country and is still undefined or changing in many of them. While some countries have openly allowed their use and trade, others have banned or restricted it. According to the Library of Congress, an "absolute ban" on trading or using crypto currencies applies in eight countries: Algeria, Bolivia, Egypt, Iraq, Morocco, Nepal, Pakistan, and the United

Arab Emirates. An "implicit ban" applies in another 15 countries, which include Bahrain, Bangladesh, China, Colombia, the Dominican Republic, Indonesia, Iran, Kuwait, Lesotho, Lithuania, Macau, Oman, Qatar, Saudi Arabia and Taiwan.^[54] In the United States and Canada, state and provincial securities regulators, coordinated through the North American Securities Administrators Association, are investigating "bitcoin scams" and ICOs in 40 jurisdictions. Different government agencies, departments, and courts have classified bitcoin in various ways. In the year 2014 China Central Bank prohibited the handling of bitcoins by financial institutions in China .

In Russia, though crypto currencies are legal, it is illegal to actually obtain goods with any currency other than the Russian ruble. Rules and bans that forward to bitcoin probably enlarge to similar crypto currency systems.

Crypto currencies are a potential tool to evade economic sanctions for example against Russia, Iran, or Venezuela. In April 2018, Russian and Iranian economic representatives met to discuss how to bypass the global SWIFT system through decentralized blockchain technologyRussia

also secretly supported Venezuela with the creation of the petro national crypto currency initiate by the Maduro government to obtain valuable oil revenues by circumventing US sanctions.

In August 2018, the Bank of Thailand announced its plans to create its own crypto currency, the Central Bank Digital Currency (CBDC). Other jurisdictions, however, do not make the usage of crypto currencies illegal as of yet, but the laws and regulations can vary drastically depending on the country

Most common crypto currencies

- 1) **Bitcoin** — The first ever crypto currency that started it all.
- 2) **Ethereum** — A Turing-complete programmable currency that lets developers build different distributed apps and technologies that wouldn't work with Bitcoin.
- 3) **Ripple** — Unlike most crypto currencies, it doesn't use a Blockchain in order to reach a network-wide consensus for transactions.
- 4) **Bitcoin Cash** — A fork of Bitcoin that is supported by the biggest Bitcoin mining company and a manufacturer of ASICs Bitcoin mining chips. It has only existed for a couple of months but has already soared to the top five crypto currencies in terms of market cap.
- 5) **NEM** — Unlike most other crypto currencies that utilize a Proof of Work algorithm, it uses Proof of Importance, which requires users to already **possess** certain amounts of coins in order to be able to get new ones.
- 6) **Litecoin** — A crypto currency that was created with an intention to be the 'digital silver' compared to Bitcoin's 'digital gold.' It is also a fork of Bitcoin,
- 7) **IOTA** — This crypt currency's breakthrough ledger technology is called 'Tangle' and it requires the sender in a transaction to do a Proof of Work that approves two transactions.
- 8) **NEO** — It's a smart contract network that allows for all kinds of financial contracts and third-party distributed apps to be developed on top of it.
- 9) **Dash** — It's a two-tier network. The first tier is miners that secure

the network and record transactions, while the second one consists of ‘masternodes’ that relay transactions and enable InstantSend and PrivateSend type of transaction.

10) **Qtum** — The network boasts Bitcoin’s reliability, while allowing for the use of smart contracts and distributed applications, much how it works within the Ethereum network.

11) **Monero** — A crypto currency with private transactions capabilities and one of the most active communities, which is due to its open and privacy-focused ideals.

12) **Ethereum Classic** — An original version of Ethereum. The split happened after a decentralized independent organization built on top of the original Ethereum was hacked.

Cryptocurrency market cap

Name	Market Cap	Price	Volume	Circulating Supply	Change (24hrs)
Bitcoin	\$112,735,453,936	\$6760.98	\$5,136,770,000	16,674,425 BTC	-5.43%
Ethereum	\$29,227,540,706	\$305.58	\$894,988,000	95,647,370 ETH	-4.84%
Bitcoin Cash	\$15,121,119,942	\$901.17	\$4,500,640,000	16,779,413 BCH	37.68%
Ripple	\$8,088,155,335	\$0.209910	\$140,243,000	38,531,538,922 XRP	-3.47%
Litecoin	\$3,297,343,825	\$61.33	\$294,950,000	53,767,732 LTC	-5.75%
Dash	\$2,601,563,986	\$338.71	\$115,739,000	7,680,801 DASH	3.18%
NEO	\$1,893,495,500	\$29.13	\$59,589,000	65,000,000 NEO	-8.16%
NEM	\$1,804,086,000	\$0.200454	\$10,806,300	8,999,999,999 XEM	-6.32%
Monero	\$1,675,861,201	\$109.28	\$87,656,500	15,335,901 XMR	-8.11%
Ethereum Classic	\$1,457,787,439	\$14.98	\$299,410,000	97,318,182 ETC	5.69%
IOTA	\$1,441,775,712	\$0.518712	\$48,539,100	2,779,530,283 MIOTA	-5.46%
Qtum	\$862,271,130	\$11.71	\$132,988,000	73,651,804 QTUM	-1.85%

(Source: www.cointelegraph.com)

How to store

Unlike most traditional currencies, crypto currencies are being digitalized, which entail an entirely various approach, particularly when it comes to storing it. Technically, you don't store your units of crypto currency; instead it's the private key that you use to sign for transactions that need to be securely stored.

There are several different types of crypto currency wallets that cater for different needs. If your priority is privacy, you might want to choose for a paper or a hardware wallet. Those are the most safe ways of storing your crypto funds. There are also 'cold' (offline) wallets that are stored on your hard drive and online wallets, which can either be allied with exchanges or with self-regulating platforms.

How to buy

There are ample of different options when it comes to buying Bitcoins. There are recently almost 1,800 Bitcoin ATMs in 58 countries. Moreover, you can buy BTC using gift cards, crypto currency exchanges, investment belief and you can even trade face-to-face.

When it comes to other, less popular crypto currencies, the buying options aren't as diverse. However, there are still frequent exchanges where you can acquire various crypto-coins for fiat currencies or Bitcoins. Confronting each other method is adopted in trading is also a popular way of acquiring coins. Buying options depend on particular crypto currencies, their popularity as well as your location.

Conclusion

As they are virtual currencies, their control and regulation is a big constraint so as to enhance the scope for financial scams. In the global financial market it has wide acceptance but the national status is very poor. The future growth of crypto currencies and their acceptance in the hands of the layman depends on the supporting infrastructure, especially country like India. In the developing countries, crypto currencies have scope to grow as an investment avenue. Those who are interested to invest in crypto currencies all risks are on their shoulder and the investors can enjoy for all benefits derived. In spite of all, crypto currencies have a bright future growth and will spread as an investment opportunity, globally.

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