

# Survey Paper on Cryptocurrency

Sunil Kumar Sharma, Krishma, Nahida Nisar, Er. C. K. Raina

Department of Computer Science, Adesh Institute of Technology, Mohali, Gharuan, Punjab, India

## ABSTRACT

We all buy/sell stuff using various currencies like dollar, euro, rupee etc. Do you remember, we used to exchange services with wheat and rice grains, which then interpolated the value provided by us in terms of the grains, and the services provided by the seller for grains. These conventional methods were a fail as the seller could just fool around the customer with the price/value of both wheat and the service. As of now, we use Printed currency. So we know the set value of both the wheat and the services, now the customer can buy the services for exchanging the currency notes. Notes reduced many of the problems faced by a person who used wheat and rice. As of near future we see digitization of the modern currency. If the currency of Utopia Declines against the currency of Atlantis There can be an advantage for Utopia and a disadvantage for Atlantis and vice versa. Depends on certain factors. If Utopia has products or goods that is in in high demand by Atlantis then by the simple laws of demand and supply, Utopia would stand to earn more money or revenue provided Atlantis can cough up the money to pay for its imports from Atlantis. But since there is not an unlimited supply of money available to pay for imports from Atlantis, there will come a point where imports have to be decreased and the people of Atlantis will be living below what they consider their normal standard of living. Utopia will also suffer from not earning the amounts of revenue they are used to earn from exports to Atlantis. To Remedy this Atlantis might decide to devalue their currency to make their export to Utopia more attractive at least in the short term. This would be good if Atlanta has unlimited quantities of good or natural resources such as oil or bauxite for sale . If all things remain normal in Utopia then there should be resurgence in imports from Atlantis. Once again the citizens of utopia might feel that they are again enjoying a higher standard of living .Economists call this state of affairs the equilibrium or satiation point. So one disadvantage of currency appreciation might be to reduce the amount of money from exports from the revaluing country in that, countries importing might reduce imports. The revaluing country will reduce the value of their product will only get the advantage if their products are unlimited.. The advantage to buying country is that they can resume the quantities of their exports an thus increase their standard of living. Fluctuation in the values of currencies encourages short term trading in the currencies and might further complicate things in the trading countries also might have political implications.

**Keywords :** Principal, Block Chain, Mining, Keys, Advantages of Cryptocurrency of using Alt coin, Disadvantages of using Cryptocurrency Alt coin

## I. INTRODUCTION

A digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.

So it was a standard definition of cryptocurrencyalt coin. It does not really specify a lot of things. So here's a couple of the key points.

A cryptocurrencyalt coin is a digital code for which people have collectively agreed upon that it has some value. It has all the components of an actual currency but 1 i.e. it doesn't actually hold any value to itself (crypto currencies have no real value) but, are considered as an asset to a person.

## History

In 1998, Wei Dai published a description of "b-money", an anonymous, distributed electronic cash system. Shortly thereafter, Nick Szabo created "Bit Gold". Like bitcoin and other crypto currencies that would follow it, Bit Gold was an electronic currency system which required users to complete a proof of work function with solutions being cryptographically put together and published. A currency system based on a reusable proof of work was later created by Hal Finney who followed the work of Dai and Szabo.

The first decentralized cryptocurrency coin, bitcoin, was created in 2009 by pseudonymous developer Satoshi Nakamoto. It used SHA-256, a cryptographic hash function, as its proof-of-work scheme. In April 2011, Name coin was created as an attempt at forming a decentralized DNS, which would make internet censorship very difficult. Soon after, in October 2011, Litecoin was released. It was the first successful cryptocurrency coin to use scripts as its hash function instead of SHA-256. Another notable cryptocurrency coin, Peer coin was the first to use a proof-of-work/proof-of-stake hybrid. Many other crypto currencies have been created though few have been successful, as they have brought little in the way of technical innovation. On 6 August 2014, the UK announced its Treasury had been commissioned to do a study of crypto currencies, and what role, if any, they can play in the UK economy. The study was also to report on whether regulation should be considered.

Now even the conventional banking systems have started accepting crypto currencies as a money or asset

## II. FEATURES

The system is self-regulating, meaning that no government or institution controls it. For the user that means that their holdings cannot be used as a policy instrument. Conventional fiat currencies are owned by a government, which means that they can be used to e.g. stimulate economic growth by printing extra money, which lessens the value of individual's holdings.

Users control their own holdings on their own computer, which eliminates the need for a bank. This brings the advantage that users are not dependent on open hours, waiting lines, or e-banking websites, it also

means no fees. Additionally a user's holdings cannot be wiped out by his or her bank bankrupting after speculative investing or something of that sort.

Transactions are as easy, instant, and costless as sending an email. Bitcoin exists online digitally, which means that there is no physical counterpart that needs to be moved, such as with gold, or paper money. Additionally, it is equally valid across countries, which means that there is no need to exchange it. This makes Bitcoin an ideal mechanism for transfers, which nowadays can cost as much as 10 percent. Additionally no government can apply capital restrictions on these remittances.

The instant nature of transactions means it is well suited for online retailing. Credit card transactions seem instant, but in fact are not. A significant percentage is in fact reversed after initial clearance. This is very costly for retailers, this often occurs after packaging of shipping has started.

## PRINCIPAL

All Crypto currencies work on the 3 basic principles of mining-for the proof of transaction. All such mining related data is saved in an open ledger called block chain, this act is called book keeping. It stores every transaction ever made as a chain of transaction data. And finally, it works on principle of keys which are used to authenticate a real person from a fake as all keys are unique and use two step verification methods.

## Block Chain

A block chain distributed ledger contains records command in 'blocks'. Once dealing gets logged, it's either valid or rejected by totally different nodes (members within the network). Once receiving verification, a cryptographically protected block gets value-added to the chain in a very linear, written record order.

New blocks are unit coupled to the older blocks, and therefore the chain is regularly updated thus each ledger is that the same, giving every node the flexibility to prove United Nations agency owns what at any given time. The decentralized and clear nature of blockchain builds it extremely secure and tamperproof. Any slight modification in one ledger causes a

discrepancy within the entire network. For instance, a distributed ledger with 5000 computers would need somebody to hack all 5000 computers at identical time, dynamical identical piece of knowledge.

Because block chain is non-refutable, secure, unbreakable and clear, it additionally ensures trust between parties that so far has needed a 3rd party or negotiate.

### Mining

Currency Mining could be a heap sort of a big lottery wherever you contend along with your mining hardware with everybody on the network to earn Coins. Quicker coin mining hardware is ready to aim additional tries per second to win this lottery whereas the cryptocurrency alt coin network itself adjusts roughly each fortnight to stay the speed of finding a winning block hash to each 10 minutes. Within the huge image, Bitcoin mining secures transactions that are recorded in and the currency's public ledger, the block chain. By conducting a random lottery wherever electricity and specialised instrumentation at the value of admission, the price to disrupt the Bitcoin network scales with the number of hashing power that's being spent by all mining participants.

### KEYS

Whenever a person transacts some money to a peer. He'll just not send the compiled data right away as a third person can alter the data in mid of the transaction. Firstly he encrypts the data using receiver's public key and, sends that encrypted data to everyone. Since every so slight change in the hash functions can alter the values as such that it is quite easy to know if a data is altered or not. As the data is received by the receiver, he decrypts the data using his private key and views the internal values.

### Advantages of using Cryptocurre Alt coincy

- ✓ A cryptocurrency alt coin can virtually be used in every kind of transaction.
- ✓ They are cheaper, safer and faster.
- ✓ Transactional charges are minimal.
- ✓ Most crypto currencies promote anonymous transactions.
- ✓ No false book keeping, Authenticity by 51% basis.

- ✓ Most currencies are not susceptible to inflation.
- ✓ Irreversible transactions
- ✓ Transparency
- ✓ Disadvantages of Cryptocurrencyf Alt coin
- ✓ Volatility (their prices fluctuate really quickly).
- ✓ Irreversible transactions.
- ✓ Still developing.
- ✓ Lack of supported platforms (Most AAA Businesses' don't provide support for crypto currencies e.g. Amazon).
- ✓ Still developing
- ✓ Too many to choose from.
- ✓ Is/can be used for unethical transaction methods (pornography, human trafficking, tax evasion, etc.)

### III. CONCLUSION

Crypto currencies will certainly play a major economic role in 25 years, and that role can reasonably be expected to be exponentially larger than it is now, with bit coin only beginning to be adopted after almost seven years of existence. The first fundamentally new form of money in thousands of years is understandably going to face a large resistance to adoption and use. But there is no reason to think that crypto currencies will replace or push out fiat currencies. Over time, we will use currencies for what they are best suited for. Fiat currencies will continue to be issued and used for the majority of commerce and taxation, and will continue to give governments some control over the money supply and inflation. Where bit coin provides a dramatically better payment method, over time it will be used in those instances.

The future of crypto currencies in India seems veritably bright. Things have changed over the past few years and many leading companies in India are taking interest in the digital currency. As of now, more than 25 merchants in India are accepting bit coins. Some of these are travel Smart, in soft, Cyberls, Fashiondiva and People Place. As surprising as it sounds, India is slowly getting into picture with over 50,000 bit coin enthusiasts and with 30,000 of them actually owning the currency. The cryptocurrency altcoin industry is rapidly moving forward. It has shown itself to be resilient in the face of major thefts, including Mt. Gox, and government shutdowns. Further, the industry has expanded dramatically in the number of coins currently in circulation. The industry has also shown its creativity in implementing workable solutions to

deficiencies in the development of new coins. Bitcoin may not dominate the industry in the long run, but the industry owes its existence to the pioneering anarchic coin.

#### IV. REFERENCES

- [1]. Andy Greenberg (20 April 2011). "Crypto Currency". Forbes.com.
- [2]. "Digital Currencies: Principles, Trend Dogecoin Users Raise \$30,000 to Send Jamaican Bobsled Team to Winter Olympics, Digital Trends, 20 January 2014
- [3]. Dogecoin Community Raising \$30,000 for Children's Charity, International Business Times, 4 February 2014
- [4]. "The Big Picture Behind the News of China's Bitcoin Bans – Bitcoin Magazine". Bitcoin Magazine. Retrieved 24 February 2015.
- [5]. Bitcoin's Legality Around The World, Forbes, 31 January 2014
- [6]. Reasons The IRS Bitcoin Ruling Is Good For Bitcoin, Nasdaq, 24 March 2014
- [7]. n the Complexity and Behaviour of Cryptocurrencies Compared to Other Markets, 7 November 2014
- [8]. Infringement of Kayne West Mark and Other Violations, Pryor Cashman LLP, 6 January 2014
- [9]. Iwamura, Mitsuru and Kitamura, Yukinobu and Matsumoto, Tsutomu, Is Bitcoin the Only Cryptocurrency in the Town? Economics of Cryptocurrency And Friedrich A. Hayek (February 28, 2014). Available at SSRN: <http://ssrn.com/abstract=2405790> or doi:10.2139/ssrn.2405790