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BITCOIN AS A CURRENCY

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ABSTRACT

The new and emerging technology of cryptocurrencies took the world by storm when Bitcoin gained an enormous amount of popularity and monetary value in a very expeditious and unexpected way in the recent past years. At the peak, the value of one Bitcoin **around 19000 USD in 2018**. Though the craze for this wore off from people's mind over course of time, but the impact it created on the market left an inevitable question of whether it could be adopted as the modern medium for exchange of goods and services i.e. **Could Bitcoin replace Currency?**

I. INTRODUCTION

Bitcoin is a Cryptocurrency introduction around the year 2009 by a Japanese professor Satoshi Nakamoto. Since its introduction, Bitcoin has emerged as one of the most popular cryptocurrencies in the world as compared to other types of Cryptocurrencies like Litecoin, Ethereum, Zcash etc. among other 6000 cryptocurrencies. The main reason for this can be attributed to the fact that Bitcoin was the first ever de-centralized open-source cryptocurrency introduced and also at the time when the world was coping with from an economic recession in 2008.

A Bitcoin is a computer file which is kept in a Digital wallet. Every Transaction is recorded in a public list called a Blockchain. This Blockchain is constantly updated thoroughly by high-performance Computers called Miners. There are special devices which enhance the performance of a CPU in the aspects required in Blockchain Processing known as ASIC Devices, for this specific purpose.

These Miners are occasionally awarded with some amount of Bitcoin for all the effort and money invested in these processing rigs. This is the method of a new Bitcoin generation.

Bitcoin as a Currency –

Bitcoin is already being used as a mode of transaction in many online exchanges but for Bitcoin to be used as the mainstream Currency by a large Demography has certain other aspects which become a dominating factor in its feasibility and practicality.

The forms of Currency have been evolving with the changing economies through the history. But in the essentials characteristics expected of an ideal Currency remain consistent. The Bitcoin has its own ways of attaining these parameters as discussed below:

Durability: Bitcoin being a piece of Software is probably the most durable form of Currency as it is practically impossible to lose or destroy your Bitcoin because of the numerous Miners maintaining the record of the transaction which can anytime be used to restore the balances at these places.

Portable: A Bitcoin is stored in an Online Digital Wallet unlike a physical form of Currencies so it is very easy to carry it around and transfer it to others. Also, the Blockchain is constantly updated by the Miners so that the transactions are secure and consistent while dealing with any scales of transaction.

Divisible: Bitcoin in its recent monetary values is a very big amount of money. But the transactions dealing with Bitcoin, however small, are in no way restricted by the issue of Divisibility as a Bitcoin a can divided into 100 million parts owing to the fact that the smallest unit of Bitcoin is a "Satoshi", also referred to as a bit, which is obtained by dividing a Bitcoin by 8 decimal places.

Hard to Counterfeit: Bitcoin is a decentralized open-source currency monitored and recorded by server nodes through cryptography on a distributed ledger called Blockchain. The generation of a new Bitcoin is very different than the generation of government regulated currencies such that it is not simply brought into

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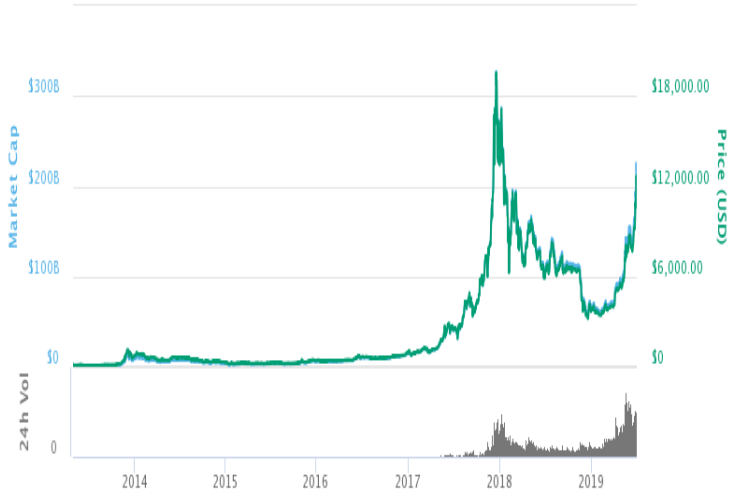
existence by the regulating organization it is controlled by. A new Bitcoin is generated by the process of mining as a reward for the processing nodes which are constantly performing extremely hard calculation on their own expenses and efforts to keep the trails updated. Also, when any transfer is performed, the sender is not actually 'handing over' the Bitcoins to the receiver. Instead, a transaction is submitted to the network which is verified by the server nodes for proper address and values. So, basically there is nothing to counterfeit.

Acceptance from the Population: The acceptance of Bitcoin by the People poses a very diversified picture because of the many factors. While Bitcoin is appealing to many enthusiasts and economists and general people because of its basic de-centralized nature, many others find it questionable for the very same reasons. People are generally inclined to have some verification or insurance from the ruling organization before accepting something as worthy of what they already know to be of value. However, the appeal of such types of assurances were severed after the global recession that occurred in the late 2000's and early 2010's, which further more inclined the people toward a store of value not regulated by the government. Besides that, many people see Bitcoin as a collectible or a resource due to its finiteness given the fact that there will only be a certain amount, about 21 million, of Bitcoin to ever be generated by the algorithm. Bitcoin also drew the attention of many investors as a trading opportunity which led many to buy shares of Bitcoin in addition to the Bitcoins themselves.

Valuable: Bitcoin like any other any currency is restricted to fulfill one fundamental condition in order to be achieve circulation. It has to hold some value to itself which depends solely on its demand in the market. The Bitcoin is no different in this aspect than its other counterparts and is its value immune to inflation or deflation. This has been depicted far too often in the case of Bitcoin. Since its introduction to the general public, the price of one Bitcoin has been highly inconsistent and unpredictable as show in the graph:

This change is a result of many factors. Bitcoin at its all-time high reached a peak value of $19,891 in December 2017 and in less than a year it fell below $4,000 in value. As of April 2020, its value is at about $7,000.



The increase in price of Bitcoin in the mid 2010's can be accounted for to an extent. As already discussed, Bitcoin was seen as more than just a trading entity. It was perceived as potentially valuable by many collectors and investor. And because of the refusal of the governments of many countries to provide legal tender or sufficient support to the Bitcoin, the owners of the Organization that developed Bitcoin agreed to sell Bitcoin's shares to private investors so as to provide some business security to them. After that, the Investors themselves bought these Bitcoins from themselves at high prices so as to give a fake impression that demand for Bitcoin was very high. This in turn motivated other Investors to buy the Bitcoins and hence the value skyrocketed in a very small-time gap eventually reaching its peak value in at the end of 2017. After that, a decline in the value was encountered just as unexpectedly as it had risen. This was because of the same reasons that Bitcoin had gained its popularity.

People who had Bitcoins started to accumulate it for either reserving it as a collectible item or to sell it at an even higher prices out of greed. So, lesser amounts of Bitcoins were left in the market circulation. Also, after reaching such a humongous value, Bitcoin finally achieved what it had failed to do in its early years. The

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governments started interfering in its functioning. However, this functioning was also of a very varied nature. While many places legalized Bitcoin as a Currency with time, a few banned it altogether from use. Where Bitcoin was legalized, Governments started demanding for records for transaction which contradicted the basic idea of Bitcoins being open source and unregulated by a central body. Also, as more and more people joined the Bitcoin circulation, the workload of server nodes, or Miners, became more and more power extensive to the point where the cost of Mining was more than the Bitcoin generated by these Miners.

Problems with Bitcoin –

Bitcoin, while serving quite effectively as a value store at the moment, is a faraway from replacing the established centralized economic system with a peer-to-peer value exchange system because of the fluctuation in its value and the time delay processing of any transaction. Currently, the average time required to complete one transaction is about 10 minutes. This is an issue of the Bitcoin's decade old algorithm's design, and not of the blockchain technology that it is based off of, which has many other flaws which may be dormant for now but are bound to crop up with time and certainly before the anticipated 21 million Bitcoin mark is reached. For instance, Bitcoin can only manage up to 7 Transactions per second. A benchmark surpassed by many of its newer contenders such as Ripple (1500 TPS). Furthermore, Bitcoin requires "proof of work", a mathematical expression, to validate transactions in its Blockchain, that requires very high computational power, another facet bettered by its counterparts that use a different algorithm for better power efficiency.

Once the breaking point is reached where cost of Mining Bitcoin exceeds the processing fee, the network is unlikely to have enough computing power to assure transactions at all grinding the network to a halt. After that point, Bitcoin will, most likely, cease to have any value for even in the present the whole value of Bitcoin is purely psychological, conceived by hype created from irrational exuberance and greed from speculations.

II. CONCLUSION

Bitcoin is unlikely to ever become an actual Currency because of its design limitations but it has a pioneer in illuminating the path of polymorphic Blockchain technology in the future. The idea that Blockchain can evolve as a digitized, distributed and secure ledger is as revolutionary as it was insurgent. Its implementation, which is likely to disrupt numerous industries with some profound implication, can guarantee immutable transactions that can solve trust problems when two parties exchange values. The possibilities here are limitless.

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