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A Study on Market Capitalization of Bitcoin

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Eshan Agarwal*MBA Class of 2017-19 Amity Business School Amity University Uttar Pradesh***ABSTRACT**

Bitcoin is the first cryptocurrency that came into existence in 2009 by Satoshi Nakamoto. In the following years various others cryptocurrencies were introduced. Bitcoin and the other digital currencies are in decentralized systems, i.e., have no central authority to validate and settle transactions. They use only cryptography to control transactions, manage the supply, and to prevent fraud. Hence, they often are referred to as cryptocurrencies. Once confirmed, all transactions are stored digitally and recorded in a “blockchain”, which can be thought of like an accounting system ledger. Payments are validated by a decentralized network. The rise in the value of bitcoin against US dollar has led to increased popularity and interest for cryptocurrencies. For instance, there are currently over 1700 different cryptocurrencies. This Paper lays down the foundation on studying market capitalization of cryptocurrencies from 2013 to 2018. As of today, the cryptocurrency market cap is high as compared to 2013 but it has also seen a major decline in the past two years..

Key Words- *Cryptocurrency, Bitcoin, Market Capitalization*

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INTRODUCTION

People are using physical money like printed bills, coins, metals for trading since earlier times. These currencies are backed by a centralized authority which is central/federal government together managed by financial institution. In Year 2009 Satoshi Nakamoto, a Japanese national launched an idea that would change how people think about money in a complete different way. He founded Bitcoin which is a virtual peer to peer cryptocurrency with no government regulation.

Cryptocurrencies are a virtual money that works on a totally new money system, one that is not at all regulated by central government or tracked by any legal or financial institution. There are many types of cryptocurrency available in the market and with many uses. Smart Contract and crypto loan being the most popular of all. Bitcoin is supported by a decentralized peer-to-peer network called the blockchain technology. Blockchain technology uses ledgers just as ledgers in accounting to maintain the record of all transactions. This Ledgers contains record of all cryptocurrency created or transferred.

Such system however requires an high level and effective infrastructure so that frauds don't happen. Digital signatures are used for signing the payment agreement by parties. This system was first ever used in Bitcoin. Both the parties have a private encryption key, which makes trading possible using Bitcoins. Every transaction is verified for its accuracy, and the system is totally anonymous and transparent. The gist of cryptocurrencies, however, is that law and policymakers often lag behind in technological developments and don't know how to regulate beginning phenomena at their early stages. This is reflected within cryptocurrency market so far that different approaches for regulating cryptocurrencies are taken around the globe. For instance in India as ruled by RBI, Cryptocurrency is illegal but there is no law to state its illegality. The exact rules and regulations, therefore, differ across the globe. Additionally, the difference is reflected within the different legality classifications around the globe as some nation classify cryptocurrencies as legal whereas others classify them as illegal or restrict their usage.

Our present actions will decide whether the Cryptocurrency turns out to be a 21st century unicorn or not. Based on block-chain technology, Bitcoin (BTC) is the most famous of all the Cryptocurrencies. Similar decentralized digital cash systems, such as Ethereum and Ripple have flooded the market. Through a comparative analysis of the various types of Cryptocurrencies, it can be concluded that the newer variants such as Ethereum and Ripple will wipe out Bitcoin (BTC). However, due to its growing acceptance by major companies and governments across the world, the Cryptocurrency is here to stay.

LITERATURE REVIEW

Blockchain is a shared public ledger on which entire Bitcoin server works. As described in (Nakamoto, 2008) Bitcoin is a peer to peer network which allows users to send and receive payments in form of crypto coins without going through any financial institution. The network, stamps the transaction by encrypting them into a hash based proof of work forming a record called as ledger which cannot be undone. Bitcoin contains several Incentives for miners as mentioned in (Rainer Böhme, 2015). Miners get reward for verifying the block chain to encourage useful behavior. At first miners used to receive 50 bitcoins but now it is less than 0.1 percent of transaction value. After 21 million BTC have been mined the reward will fall to zero as that is the limit.

Bitcoin is the most traded cryptocurrency. In the journal (Gandal, September 2014) they researched about how the network affects the competition in the crypto market by analyzing the exchange rate data of cryptocurrencies. Two aspects were taken into consideration. First being the competition among different cryptocurrencies and Second being the platform or exchange market on which it is being traded. The result being that winner take all is prevailing in the market.

The cryptocurrency market is very volatile and sensitive. In research work done by (Wei, July 2018) the return on cryptocurrency diminishes as the liquidity in market increases. Through his research he concluded that liquidity plays a significant role in determining market efficiency and return.

In the research work of (Jenny Asplund, 2018) the highest uncertainty is related to high growth and volatility of cryptocurrency without any medium of exchange. The findings imply that size of cryptocurrency market, trade volume and news articles all have effects on price development of cryptocurrency while the macroeconomic factors play a very insignificant role in determining price of cryptocurrency.

Cryptocurrency is a decentralized system which means there is no financial institution acting as a intermediary for any transaction. As researched by (David Vidal-Tomás, December 2018)

Bitcoin is not affected by any measures taken by central banks. The value of Bitcoin is affected by news in Mt. Gox market and Bitstamp market. But any laws passed by central government against Cryptocurrency is definitely going to affect its market capitalization as seen in China and Venezuela.

OBJECTIVE OF THE STUDY

The aim of the study is to study the Bitcoin market capitalization and contribute theoretical and practical implications of Bitcoin so as to why it has become the most preferred cryptocurrency.

RESEARCH METHODOLOGY

For the purpose of this study i have used secondary data from reports, websites, Journals, previously published papers and articles duly mentioned in the bibliography (reference) in order to provide insights into the research study. Charts and Graphs used have been duly cited. Time frame of 2013 to 2018 was chosen as it was major analytical period for cryptocurrency. The market experienced quite a bit of ups and down mostly in last quarter of 2017 and first quarter of 2018.

DATA ANALYSIS AND INTERPRETATION:

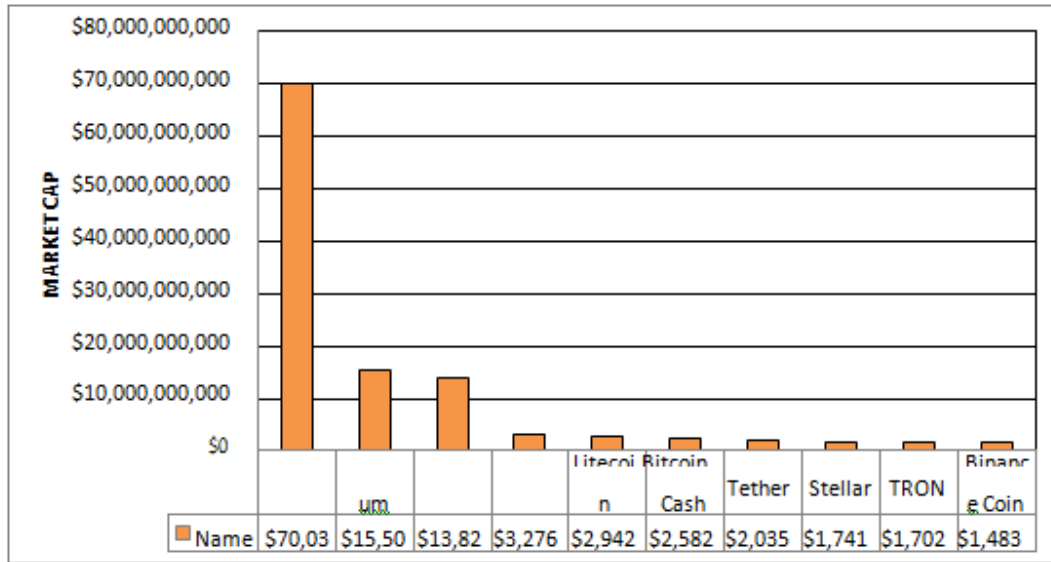
In stock market, market capitalization of shares is calculated by multiplying number of shares with current price prevailing in the market therefore Same method is adopted for calculating market capitalization of cryptocurrency. It is Circulating supply of any crypto coin multiplied by current price of the same in market. The market of cryptocurrency is very volatile and is dominated by factors such as:

- Technological progress – emergence of new ,secure trading and cheap platforms, growing interest of investors have a positive consequences on the long-term appreciation of crypto assets.
- Political factor- South Korean government's disclosure for the shutdown of crypto exchanges led to a slump in the market. It should be kept in mind that news is often reckless and does not always follow true accord. Political modulation can give a edgy blow to the market, tormenting a global outflow of funds. An example of such an event is the ban on mining of cryptocurrency in China. It is also important to understand that regulation may have a positive impact on crypto market.
- News- Media is the most effective source of manipulating public. Media can create any situation in mass manner. Any news on cryptocurrency affects its market just as share markets.

There could be more factors impacting cryptocurrency market like fear among users, mutual influence etc. Market Capitalization is somewhat an crypto investor focusses upon as it gives them as a base to make decisions.

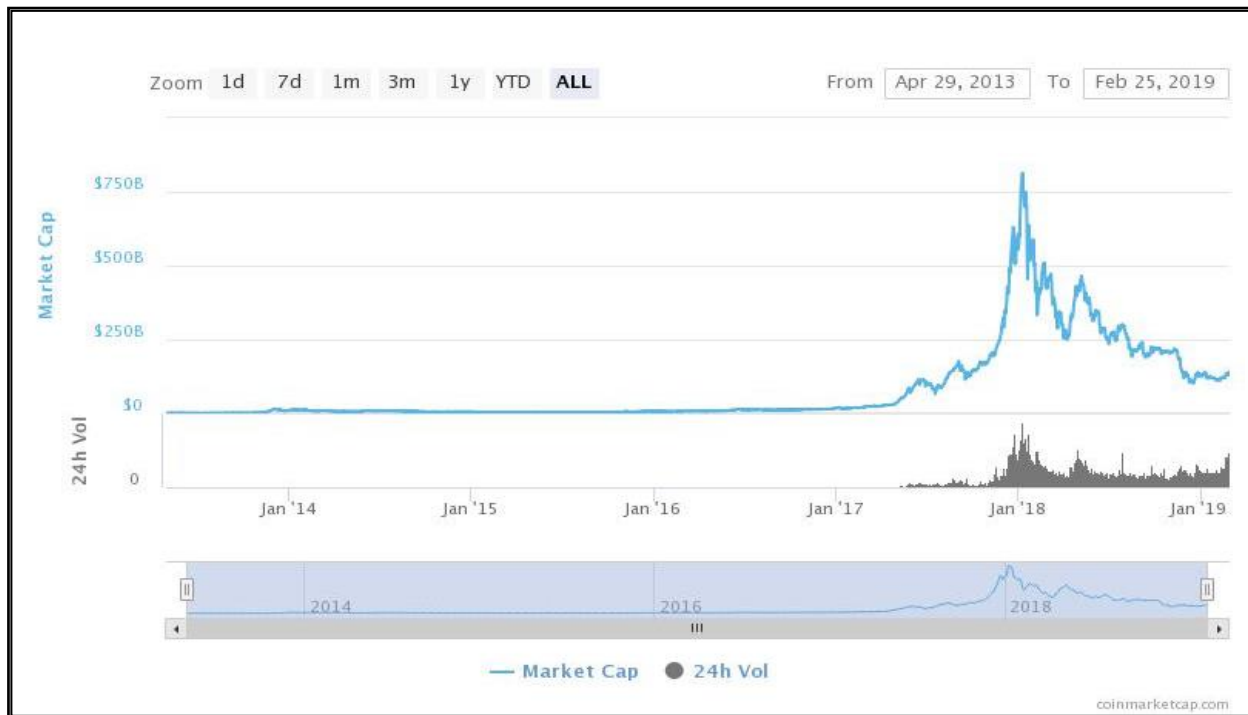
This paper focusses on market capitalization of Bitcoin and Total Market Capitalization of cryptocurrency which have high market cap. The below figure shows market cap of top 10 cryptocurrencies including Bitcoin where Bitcoin is dominating the market.

Fig : 1 MARKET CAPITALIZATION



As it can be seen from fig:1 that Bitcoin being the most dominant in terms of market capitalization followed by Ethereum and Xrp.This shows that Bitcoin is still trusted for decentralized peer to peer crypto exchange.

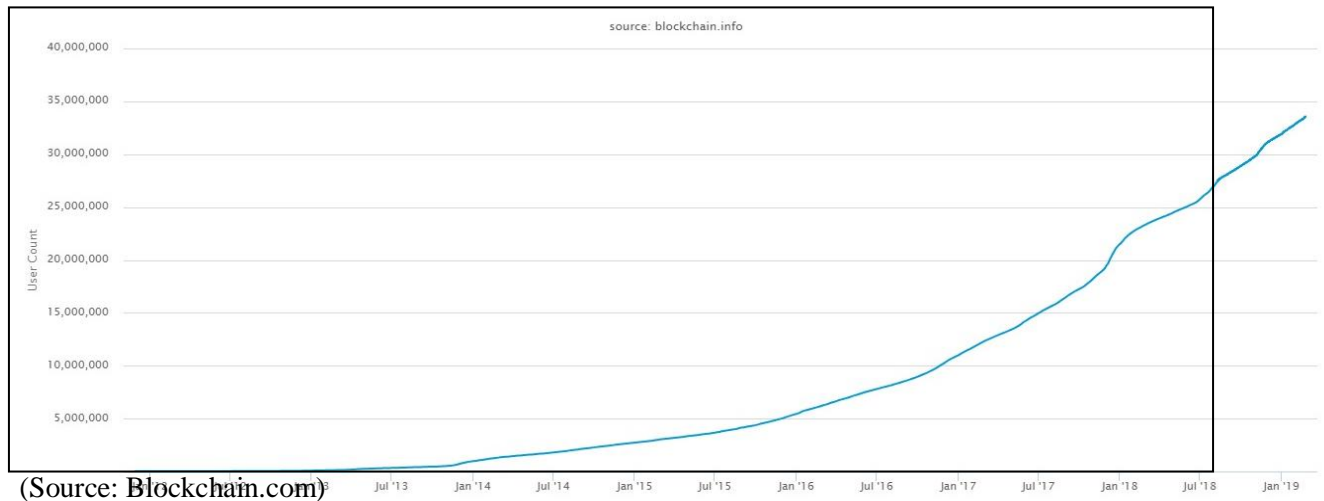
FIG: 2 TOTAL MARKET CAPITALIZATION



(source: <https://coinmarketcap.com/charts>)

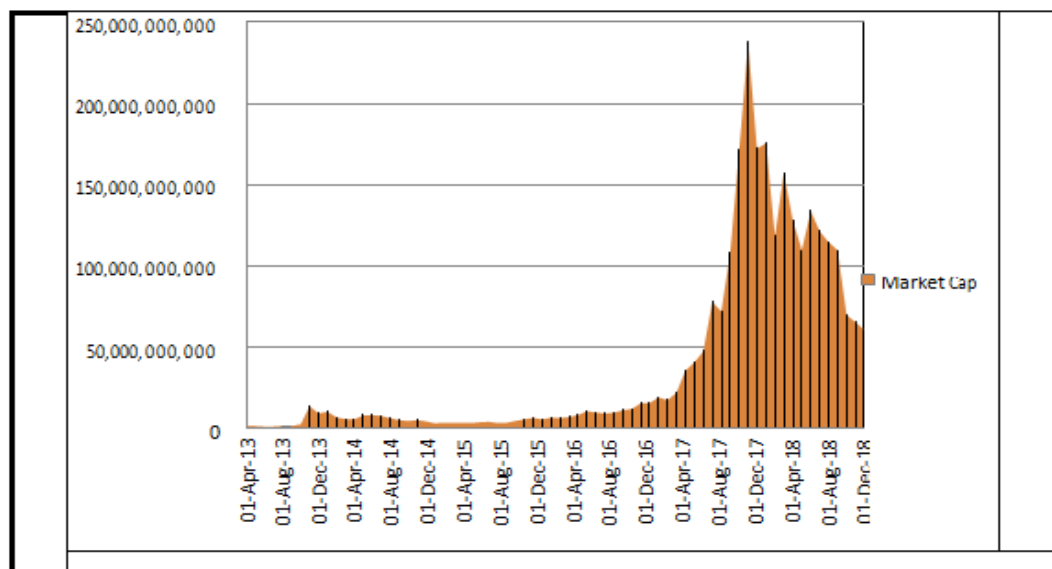
Since the beginning of 2018, cryptocurrency market capitalization has varied by around \$485 billion, from a maximum at the start on January 7, 2018 \$835.5 billion to \$348 billion on February 2, 2018. Meanwhile from January 29 to February 4, 2018 cryptocurrency market capitalization decreased steadily from \$600 billion to \$350-\$450 billion, which led to a decrease in the prices of nearly all the crypto coins (top 100 cryptocurrencies) in terms of market capitalization.

Fig: 3 BLOCKCHAIN WALLET USERS



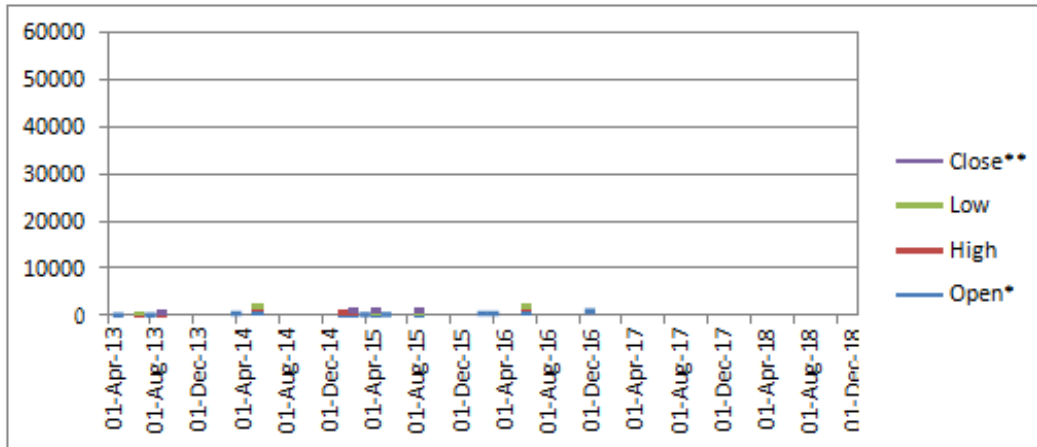
As it can be seen in above fig: 2 total blockchain wallet users have tremendously increased to approx 3.4 million users in 2019 from approx. 1.5 million users in 2017, which clearly shows that the hike in users is due to increase in market share of Bitcoins.

Fig:3 Market Cap of Bitcoin



Source: coinmarketcap.com/data

Fig:4 Price Variation of Bitcoin



Source: coinmarketcap.com/data

Success of Bitcoin has led other cryptocurrency turbulently emerged into the current of cryptocurrency market. There is a tremendous growth in overall cryptocurrency market as shown in fig 1. By February 2018 around 1600 crypto existed with their total market capitalization on an all-time high of 294,217,423,675 USD on 6 January 2018, and then crashing to 128,435,001,186 USD in the following month making a sensational fall, but only partially recovering next month. The value variation continued till January 2019 at a low of 60,553,903,928 USD. After going through about two year bear market, the bitcoin market started to grow again at the beginning of 2016.

Concluding the data it is clearly visible that Bitcoin is the most used cryptocurrency not just due to its initial occurrence but also due to market success and competition among different currencies. It has reached to a exchange price of \$19,783.06 on 17 December 2017 which is the highest in the history of 10 years since its launch.

LIMITATIONS OF THE STUDY:

As known, no research is free from any limitation and this study is also no exception. The study is majorly based on secondary data taken from various crypto journals, websites and previously published work including articles.

The absence of Primary data mitigate the chance of hypothesis testing and use of any other statistical tool. A primary study is required to know more about impact of cryptocurrency in any economy if adopted. The scope for further study is very broad as no fix platform where data is available for cryptocurrency analysis.

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