

## Trend Analysis of Cryptocurrency Prices

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### ABSTRACT

*Over recent years there has been a frequent use of the word virtual currency. Unlike traditional currency which were backed by gold or silver; a Cryptocurrency is a digital currency produced by a public network, rather than any government, that uses cryptography to make sure payments are sent and received safely. In recent years Cryptocurrencies has seen popularity due to their decentralised distribution, peer-to-peer protocols.*

*There were more than 1600 Cryptocurrencies available over the internet as of 19<sup>th</sup> August 2018 and growing. New cryptocurrency can be created any time. In recent years some major currencies such as Bitcoin, Ethereum, Bitcoin cash, Litecoin and Ripple has emerged as a fascinating phenomenon in the financial markets because of their large market capitalization. They are also associated with controversy ever since popularity, accompanied by increased public interest, reached high levels. As of 15 December 2018, total Cryptocurrencies market capitalization is \$100bn and larger than GDP of 127 countries (Wikipedia).*

*The present paper is descriptive research based on secondary data. This paper aims to study the trends of prices of different Cryptocurrencies mainly Bitcoin, Ethereum, Litecoin, and Ripple in recent times and their performances are compared with Nifty and Gold MCX.*

**[KEY WORDS: Cryptocurrencies, Market prices, Nifty, Gold MCX, Descriptive Statistics, Correlation]**

### INTRODUCTION

In real world, cash allows parties to exchange currency with some sort of central authority. Earlier, there was no electronic equivalent to this exchange. In 1982 David Chaum proposed anonymous electronic cash based system on blind signatures, and in 1990 he founded DigiCash as an electronic cash company. In the year 1997 and 1998 this DigiCash and the banks who had implemented electronic cash systems became bankrupt and thus between 1998 and 2008 there were no implementations of electronic cash.

Virtual currencies have become a global phenomenon known to most people. Cryptocurrency is a digital asset which as a medium of exchange for buying or selling. Unlike traditional currency which were backed by gold or silver; A Cryptocurrency is a digital currency produced by a public network, rather than any government, that uses cryptography to make sure payments are sent and received safely. In recent years Cryptocurrencies has seen popularity due to their decentralised distribution, peer-to-peer protocols.

Under centralized system governments or banks issues new currency whereas cryptocurrency when created is known from the beginning to the public thereby protecting it from political influences. Cryptography helps to secure a transaction. Transactions are recorded in a public ledger and then the minor verifies and secures the transactions in exchange of certain amount of cryptocurrency and thus new currencies are added to the system.

There were more than 1600 Cryptocurrencies available over the internet as of 19<sup>th</sup> August 2018 and growing. New cryptocurrency can be created any time. In recent years some

major currencies such as Bitcoin, Ethereum, Bitcoin cash, Litecoin and Ripple has emerged as a fascinating phenomenon in the financial markets because of their large market capitalization. Bitcoin; the largest decentralized Cryptocurrency was created in 2009 and since then numerous other named as “altcoins” have been created. They are also associated with controversy ever since popularity, accompanied by increased public interest, reached high levels. As of 15 December 2018, total Cryptocurrencies market capitalization is \$100bn and larger than GDP of 127 countries.

### **BITCOIN [2009]**

Bitcoin is a decentralized digital currency introduced by Satoshi Nakamoto in 2008. The main objective of Bitcoin is instant payments to anyone, anywhere in the world. It operates through peer-to-peer technology no central authority. Transactions are made by the network. Bitcoin is the first crypto-currency based on the concept that money is a kind of record of payment of goods and services and repayment of debts and thus is designed around the idea of using cryptography to control the creation and transfer of money instead of depending on central authorities. Since then, many other Cryptocurrencies have been created employing the same innovations that Bitcoin introduced, but changing some of the specific parameters of their governing algorithms. Bitcoins can be created by anyone having excessive amount of computer power. The process of creating a Bitcoin is known as mining. The two major innovations that Bitcoin introduced, and which made Cryptocurrencies possible, were solutions to two long-standing problems in computer science: the double-spending problem and the Byzantine Generals Problem. This currency is the most famous, popular, notable and highest market capitalization.

### **ETHEREUM [2015]**

Ethereum is the brainchild of Vitalik Buterin, a programmer who was originally heavily involved in the Bitcoin software code. The problem Buterin sought to solve was that he saw how Bitcoin and the blockchain could actually support a wide range of broader applications if a fully robust scripting language could be built into the Bitcoin core code. Failing to gain a consensus among the Bitcoin developer community, Buterin created a new cryptocurrency that incorporated many of the improvements and broader capabilities he envisioned.

A decentralised public ledger namely Blockchain records the transactions between parties with complete security. The data stored is known as “block”. In order to verify the transaction it is to be broadcasted to all the nodes on the blockchain.

Blockchain technology is so revolutionary that everyone started introducing new blockchains with different functions ahead of the first version of Bitcoin. In case of Ethereum; this new blockchain is used for smart contracts execution, decentralized app (DAPPS) and autonomous organizations. It also introduced its own currency known as “Ether”. On execution of smart contract using Ethereum blockchain they need ether to run the program.

### **LITECOIN [2011]**

Litecoin is a close cousin to Bitcoin, and technically very similar. Created by a former Google engineer, Charles Lee, it is actually based on the core Bitcoin software, but incorporates a few key differences. The maximum number of coins to be issued is four times larger, the blocks are added to the blockchain in 2-3 minute increments vs. around ten minutes for Bitcoin, and some technical differences are built in to change how the hard math of the Proof-of-Work is accomplished.

### **RIPPLE [2013]**

Ripple was started in 2012 and is a peculiar hybrid in the space. It is both a currency and a payment network that allows for instant conversion into different currencies. You

can convert bitcoin to Ripple, and vice-versa, serving (at least in its own eyes) not as a competitor to Bitcoin, but rather a compliment to it. By making currency conversions easy, Ripple attempts to provide more liquid access to traditional currencies and help make Cryptocurrencies easier for the mainstream consumer to adopt.

Bitcoin is a digital currency, Ethereum is a platform for developing smart contracts whereas Ripple is a new payment method towards international financial transactions. The working of XRP is different from other Cryptocurrencies. All 100billion XRP's have been created before Ripple was started.

## LITERATURE REVIEW

**JAYSING BHOSLE AND SUSHIL MAVALE (2018);** in there paper showed comparison of three Cryptocurrencies – Bitcoin, Ethereum and Litecoin with respect to their Volatility and stability and concluded that Bitcoin can grow more in five year time horizon. Ethereum has lower expected value whereas Litecoin can be preferred as a new investment option.

**JORG OSTERRIEDER (2017);** has shown the statistical properties of the top seven Cryptocurrencies versus the US dollar using fifteen popular parametric distributions in finance.

From the analysis of two and a half years data, it is observed that Cryptocurrencies exhibit heavy tails. The researcher had used the discrimination criteria of the log-likelihood; AIC; AICc; BIC; HQC; CAIC and the results obtained show that none of the distributions used give the best fit jointly across the data for all of the Cryptocurrencies. Researcher discovered that the generalized hyperbolic distribution gives the best fit for the Bitcoin and LiteCoin; the Normal inverse Gaussian distribution gives the best fit for Dash, Monero, and Ripple; the generalized t distribution gives the best fit to Dogecoin; the Laplace distribution gives the best fit to MaidSafeCoin. Implications of these results are in the area of risk management, where one may need to compute the Value-at-Risk (VaR) and Expected Shortfall (ES) for risk, but also for investment purposes. According to the researcher this is the first study investigating the statistical properties of Cryptocurrencies, going beyond Bitcoin and the traditional fiat currencies.

**PIOTR PRYZMONT (2016)** has discussed about the social aspects of Bitcoin by analysing the changes in price volatility and has empirically proven that negative events have no impact on the fluctuations of Bitcoin Price.

**MAJID PAKROU AND KHADEMALIZADEH AMIR (2016) investigated** the effective factors in the selection of Bitcoin with patterning the models of technology acceptance and publication of innovations was done in order to identify the preferences of people in using Bitcoin. Based on the research findings, the variables of infrastructural, structural, individual, Cultural factors through perceived value have had a positive and significant impact on the user's intention of use at 95% confidence level. But innovative, political and environmental factors through the perceived value variable at the confidence level 95% haven't had a significant impact on the user's intention of use. Techniques used were Confirmatory Factor Analysis (CFA) techniques and Structural Equation Modeling (SEM). Also due to low sample size to verify the model, the Partial Least Squares (PLS) method using the software SMARTPLS version 2 was used.

**ERIK PARLSTRAND AND OTTO RYDEN (2015)** in his thesis has attempted to model the market price of Cryptocurrencies. Since 2010 Cryptocurrencies have gone from being fairly unknown to being familiar amongst the general public which increases the need for knowledge on what affects the market price of Cryptocurrencies. These connections are analysed by statistical analysis and applied on cryptocurrency data from January 2012 to January 2015. The results suggest that the price of Cryptocurrencies depends heavily on the search traffic on the specific cryptocurrency name on Google's search engine.

**TIMO-PEKKA HUHTINEN (2014);** in this research, the researcher had conducted interviews and gave some insight into the world of some Finnish stakeholders. Even though Bitcoin technology was met with interest and excitement by all interviewees, he concluded that Bitcoin had some major challenges in the way of wider adoption. Some of the major challenges are difficult to understand the system, core technology weaknesses, trust, and reputational issues. The long-term potential of decentralized systems in general is seen to be significant. Disintermediation will likely happen on many fronts due to this new technology and the survival of different applications will be highly dependent on the regulatory environment. Researcher also concluded that even Bitcoin entrepreneurs accept the fact that the survival of Bitcoin is very uncertain. In case of price drivers, the regressions showed that there is a momentum effect with the price performance and network hash rate forecasted future bitcoin returns. The researcher also concluded an inflationary effect caused by increased the bitcoin supply. There was no significant relation found between Google Trends SVI and bitcoin price.

Researcher challenged these findings by the Granger causality tests that suggested a reverse causality for some of the explanatory variables. Finally the researcher concluded in his research paper that the unpredictable speculative element of Bitcoin valuation is dominating the utility valuation and thus resulting into unpredictable prices sensitive to external factors.

**PETER SURDA (2014);** Researcher had done an empirical analysis of Bitcoin using variables such as price, price volatility, liquidity, visibility and velocity. Researcher concluded that Liquidity of Bitcoin appears to correlate negatively with price volatility. This is consistent with behaviour of a medium of exchange (but not necessarily a proof thereof). Price and visibility of Bitcoin appear to correlate too. The research paper suggests that they are both a consequence of demand for Bitcoin. Price and liquidity correlate weakly so it can be interpreted as certain level of stability of its foundation, but being prone to bubbles. The evolution of liquidity over time does not follow any particular direction. Factors other than those measured (for example, qualitative factors or fraud) have the potential to influence liquidity to a significant extent. The velocity of Bitcoin appears to be similar to other currencies, however due to significant approximations a direct comparison should be treated cautiously.

**SATOSHI NAKAMOTO (2008);** have proposed a system for electronic transactions without relying on trust. He started with the usual framework of coins made from digital signatures, which provides strong control of ownership and he proposed a peer-to-peer network using proof-of-work to record a public history of transactions that quickly becomes computationally impractical for an attacker to change if honest nodes control a majority of CPU power. Nodes work all at once with little coordination. Nodes can leave and rejoin the network at will, accepting the proof-of-work chain as proof of what happened while they were gone. They vote with their CPU power, expressing their acceptance of valid blocks by working on extending them and rejecting invalid blocks by refusing to work on them. Any needed rules and incentives can be enforced with this consensus mechanism.

## **SCOPE OF STUDY**

Due to a high increase in interest for crypto currencies such as Bitcoin, there is a real concern about the ability of this currency to replace the monetary system by overcoming the issues related to it. Several aspects are to be considered in order to estimate the ability of replacement. The report will determine the trends of market price of major Cryptocurrencies and there comparisons with Major Indian Indices with descriptive statistical analysis.

**RESEARCH METHODOLOGY**

**RESEARCH OBJECTIVES**

The primary objective of this study is to know about the future of cryptocurrency as a whole. The trend of prices of cryptocurrency and major Indices of India are compared with reference to its volume and past prices. The specific objectives of this study are:

- To conduct the trend analysis of past prices and volumes of leading four Cryptocurrencies.
- To compare closing prices of cryptocurrency with major market Indices namely Nifty and gold MCX.

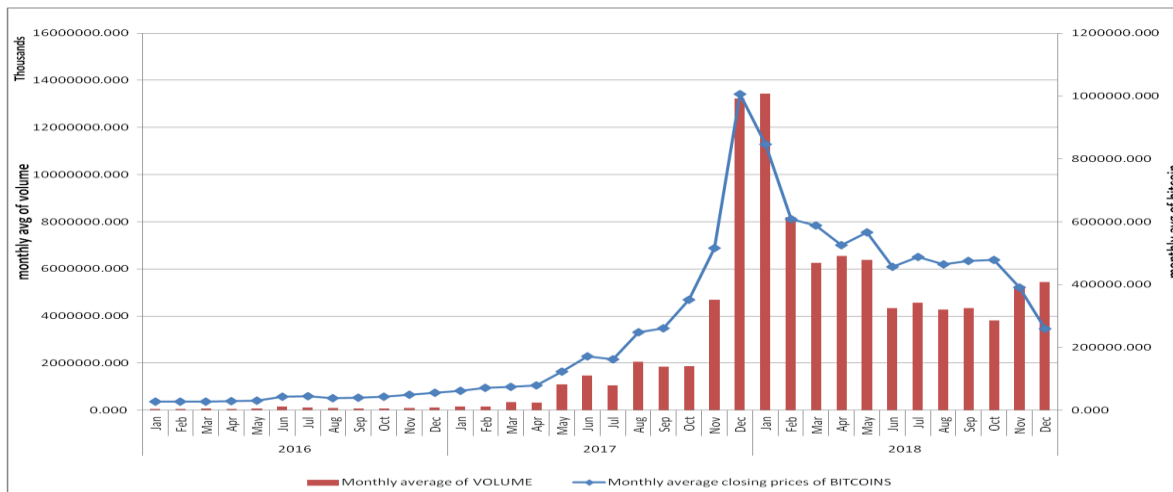
**SAMPLING DESIGN**

This paper uses daily closing prices data of the four major Cryptocurrencies (as per Market cap) namely, Bitcoin (BTC), Ether (ETH), Ripple (XRP) and Litecoin (LTC) for a sample period from January 2015 to December 2018. This constitutes a total of 1096 data points. The data was sourced from the website coinmarketcap.com and coingecko.com and is publicly available for download. The four Cryptocurrencies constitute about 70% of the total value of Cryptocurrencies available. Although Bitcoin Cash is among the top five Cryptocurrencies, it is not used in this analysis since it was introduced recently (August 2017). The monthly averages of closing prices are used for the year 2016, 2017 and 2018 in terms of INR.

**DATA ANALYSIS**

**COMPARISON OF PRICE AND VOLUME OF CRYPTOCURRENCIES**

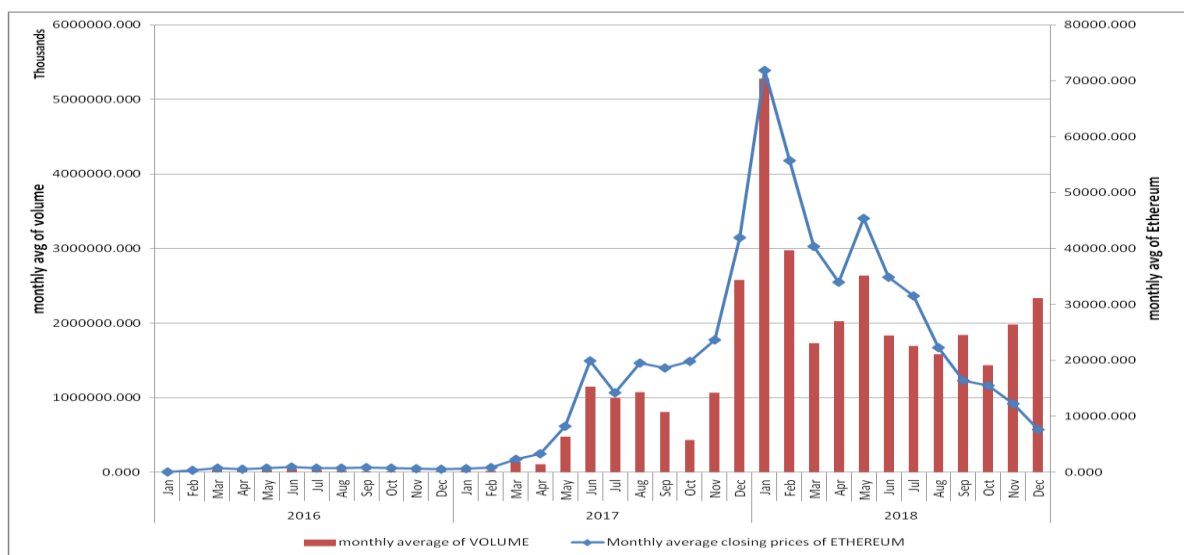
**CHART 1: PRICE AND VOLUME CHART OF BITCOIN**



From the above chart we can say that highest monthly average volume of 13427350263.742 was recorded in the month of January 2018 but bitcoin monthly average prices went down to ₹ 847214.613 from ₹ 1006272.677

Since January 2018 volume and prices have been declining drastically but from November 2018 we can see increasing trend in volumes although bitcoin prices are still declining. This can bring a trend reversal in the following months in the prices of bitcoins.

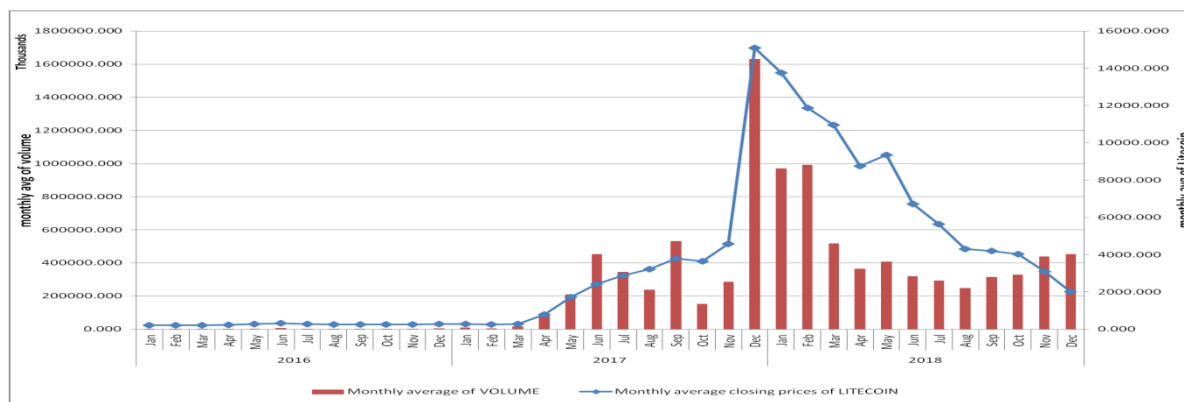
**CHART 2: PRICE AND VOLUME CHART OF ETHEREUM**



From the above chart we can say that highest monthly average volume of 5277749041.548 was recorded in the month of January 2018 and Ethereum monthly average prices went up to ₹ 71802.000 in January 2018 contradicting to bitcoin prices which were peak in December 2017.

Since January 2018 volume and prices have been declining drastically but from November 2018 we can see increasing trend in volumes although Ethereum prices are still declining. This can bring a trend reversal in the following months in the prices of Ethereum.

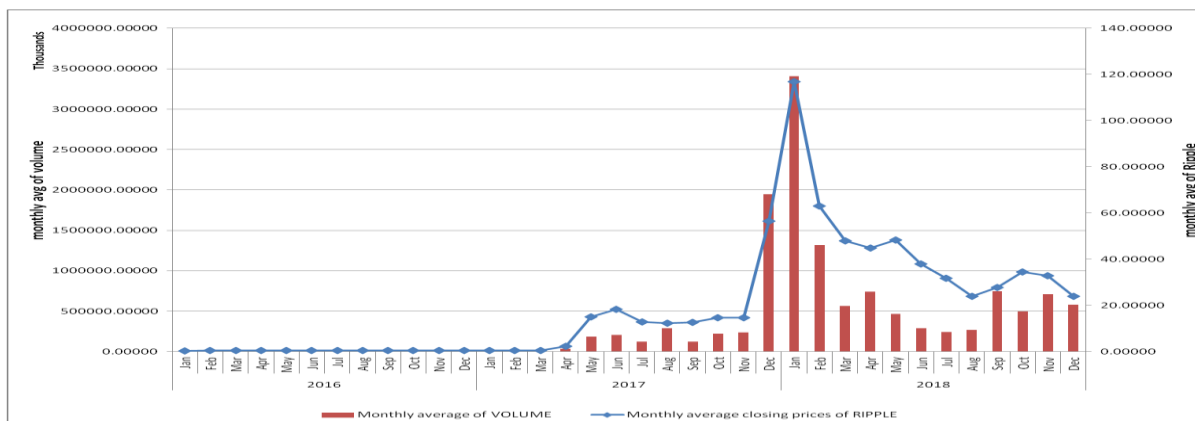
**CHART 3: PRICE AND VOLUME CHART OF LITECOIN**



From the above chart we can say that highest monthly average volume of 1630030504.258 was recorded in the month of January 2018 but Litecoin monthly average prices went down to ₹ 15094.676 from ₹ 13754.653 showing a similar trend with Bitcoin.

Since January 2018 volume and prices have been declining drastically but from November 2018 we can see increasing trend in volumes although Litecoin prices are still declining. This can bring a trend reversal in the following months in the prices of Litecoin.

**CHART 4: PRICE AND VOLUME CHART OF RIPPLE**

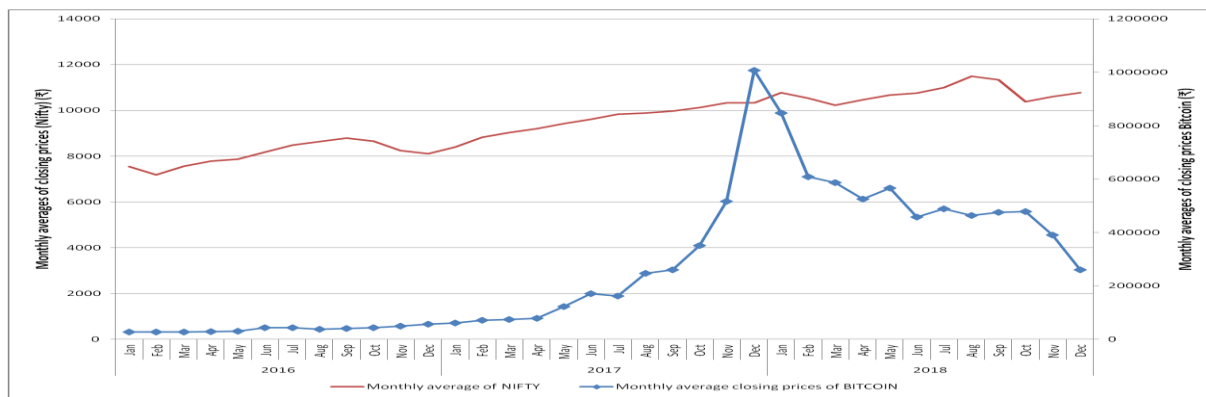


From the above chart we can say that highest monthly average volume of 3406550633.29032 was recorded in the month of January 2018 and Ripple monthly average prices went up to ₹ 116.81387 in January 2018 contradicting to bitcoin prices which were peak in December 2017.

Since January 2018 volume and prices have been declining drastically but from November 2018 we can see increasing trend in volumes although Ripple prices are still declining. This can bring a trend reversal in the following months in the prices of Ripple.

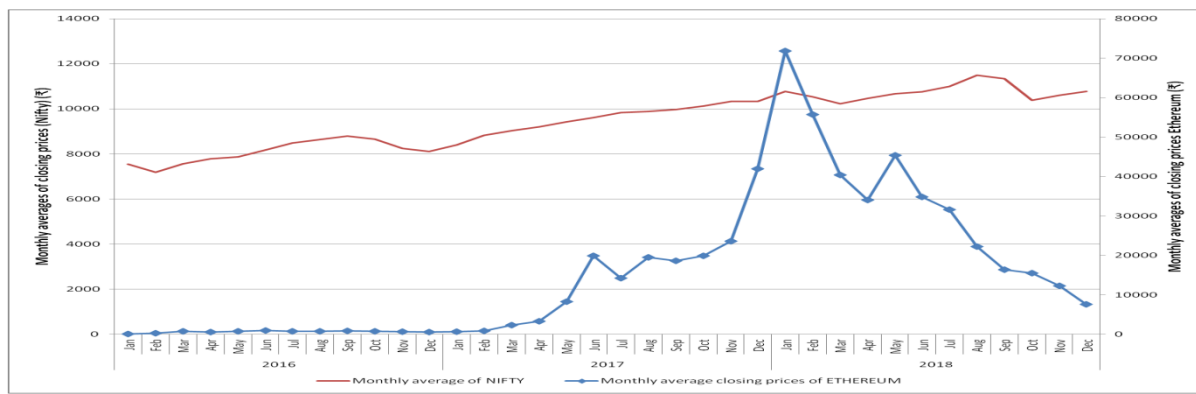
**COMPARISON OF MONTHLY AVERAGES CLOSING PRICES OF NIFTY AND CRYPTOCURRENCIES**

**CHART 5: PRICE TREND CHART OF NIFTY AND BITCOIN**



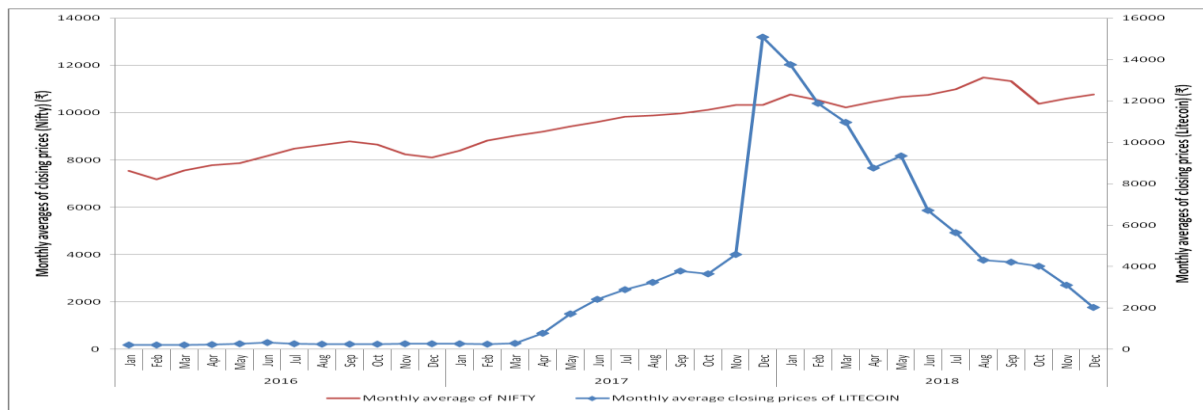
From the above chart of monthly average of closing prices of Bitcoin and Nifty it can be said that during the period of 2016 to 2018 Nifty has given stable and increasing trend whereas Bitcoin prices has fluctuated drastically. Bitcoin prices were at peak during December 2017 ₹1006272.677 and then declining sharply whereas Nifty was at 10336.35645 showing an increasing trend till September 2018 where it was at its peak at 11331.62833.

**CHART 6: PRICE TREND CHART OF NIFTY AND ETHEREUM**



From the above chart of monthly average of closing prices of Ethereum and Nifty it can be said that during the period of 2016 to 2018 Nifty has given stable and increasing trend whereas Ethereum prices has fluctuated drastically. Ethereum prices were at peak during January 2018 ₹ 71802 and then declining sharply whereas Nifty was at 10780.61774 showing an increasing trend till September 2018 where it was at its peak at 11331.62833.

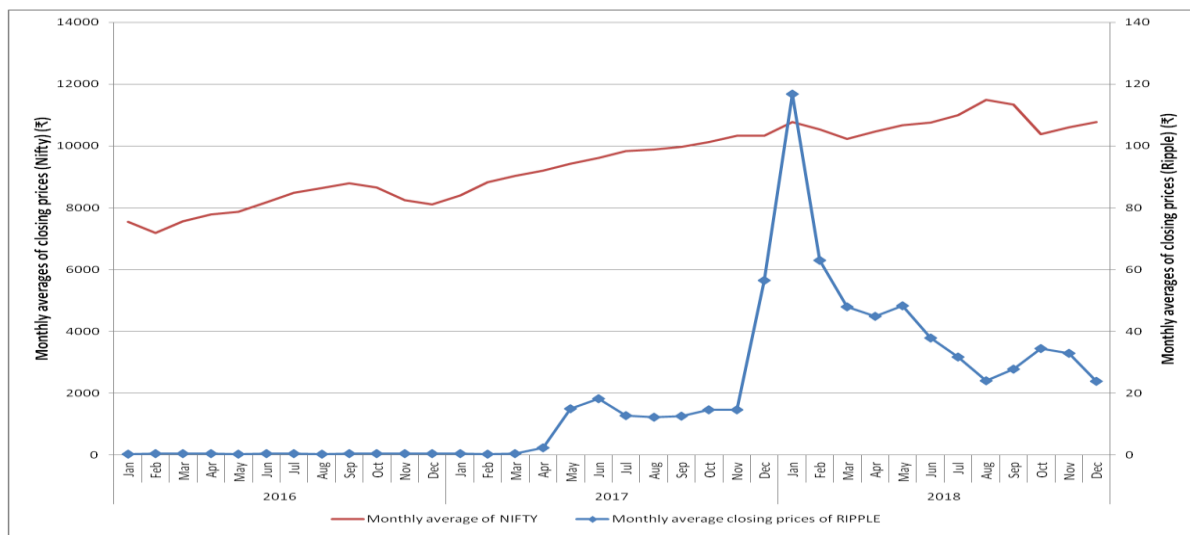
**CHART 7: PRICE TREND CHART OF NIFTY AND LITECOIN**



From the above chart of monthly average of closing prices of Litecoin and Nifty it can be said that during the period of 2016 to 2018 Nifty has given stable and increasing trend whereas Litecoin prices has fluctuated drastically. Litecoin prices were at peak during December 2017 ₹ 15094.67613 and then declining sharply whereas Nifty was at 10336.35645 showing a increasing trend till September 2018 where it was at its peak at 11331.62833.



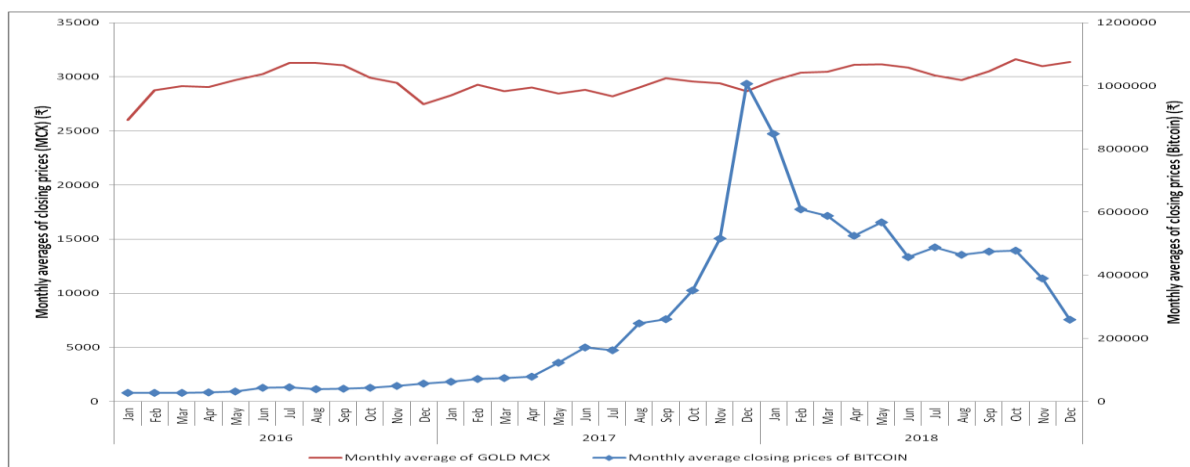
**CHART 8: PRICE TREND CHART OF NIFTY AND RIPPLE**



From the above chart of monthly average of closing prices of Ripple and Nifty it can be said that during the period of 2016 to 2018 Nifty has given stable and increasing trend whereas Bitcoin prices has fluctuated drastically. Ripple prices were at peak during January 2018 ₹ 116.813871 and then declining sharply whereas Nifty was at 10780.61774 showing a increasing trend till September 2018 where it was at its peak at 11331.62833.

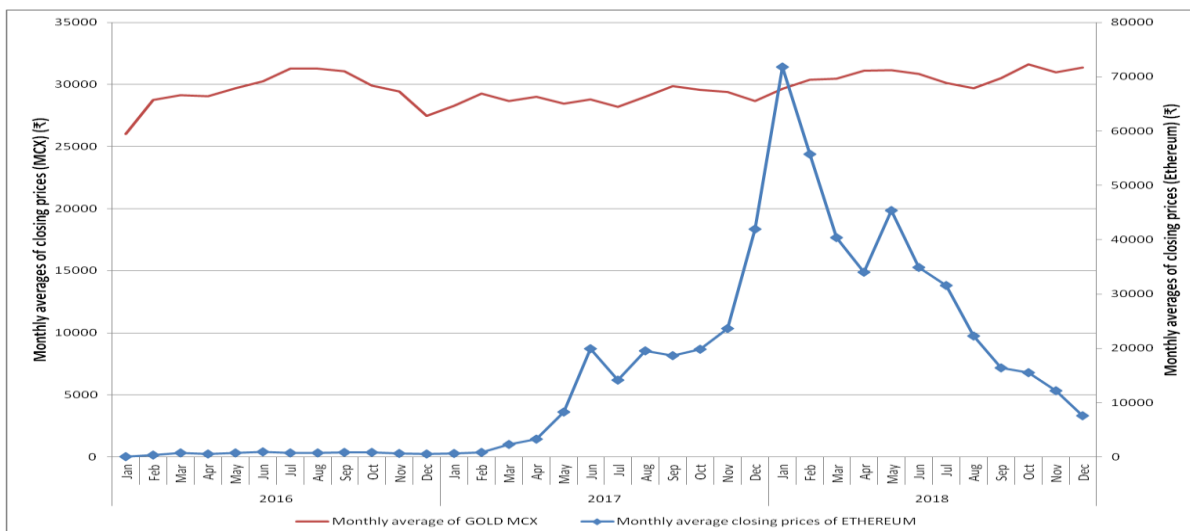
**COMPARISON OF MONTHLY AVERAGES CLOSING PRICES OF GOLD MCX AND CRYPTOCURRENCIES**

**CHART 9: PRICE TREND CHART OF GOLD MCX AND BITCOIN**



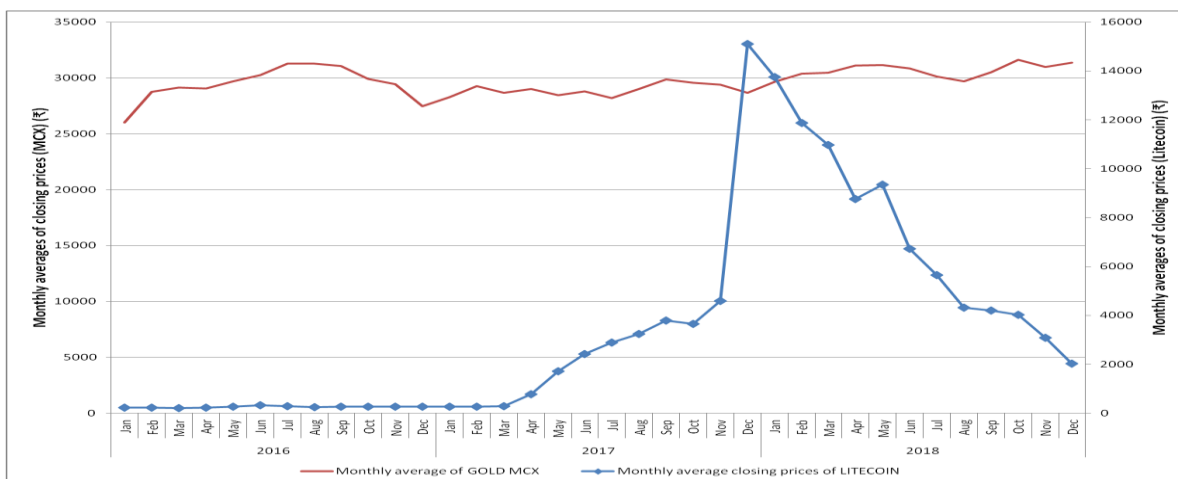
From the above chart of monthly average of closing prices of Bitcoin and gold MCX it can be said that during the period of 2016 to 2018 gold MCX has given stable and increasing trend whereas Bitcoin prices has fluctuated drastically. Bitcoin prices were at peak during December 2017 and then declining sharply whereas gold MCX a mixed but stable trend.

**CHART 10: PRICE TREND CHART OF GOLD MCX AND ETHEREUM**



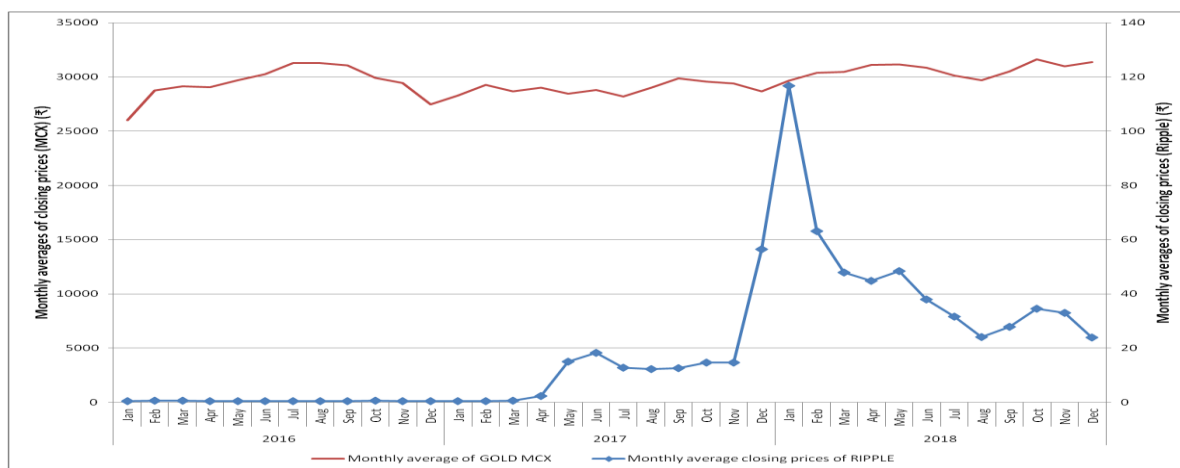
From the above chart of monthly average of closing prices of Ethereum and Gold MCX it can be said that during the period of 2016 to 2018 Gold MCX has given stable and increasing trend whereas Ethereum prices has fluctuated drastically. Ethereum prices were at peak during December 2017 and then declining sharply whereas Gold MCX a mixed but stable trend.

**CHART 11: PRICE TREND CHART OF GOLD MCX AND LITECOIN**



From the above chart of monthly average of closing prices of Litecoin and Gold MCX it can be said that during the period of 2016 to 2018 Gold MCX has given stable and increasing trend whereas Litecoin prices has fluctuated drastically. Litecoin prices were at peak during December 2017 and then declining sharply whereas Gold MCX a mixed but stable trend.

**CHART 12: PRICE TREND CHART OF GOLD MCX AND RIPPLE**



From the above chart of monthly average of closing prices of Ripple and Gold MCX it can be said that during the period of 2016 to 2018 Gold MCX has given stable and increasing trend whereas Ripple prices has fluctuated drastically. Ripple prices were at peak during December 2017 and then declining sharply whereas Gold MCX a mixed but stable trend.

**DESCRIPTIVE STATISTICAL ANALYSIS**

**TABLE-1: DESCRIPTIVE STATISTICS**

	<b>BITCOIN</b>	<b>ETHEREUM</b>	<b>LITECOIN</b>	<b>RIPPLE</b>	<b>NIFTY</b>	<b>GOLD MCX</b>
<b>Mean</b>	270664.556	15779.637	3518.623	19.449	29677.734	9476.163
<b>Standard Deviation</b>	262298.859	18322.289	4304.961	26.957	1284.847	1199.785
<b>Coefficient of variation (C.V.)</b>	96.91%	116.11%	122.35%	138.61%	4.33%	12.66%
<b>Kurtosis</b>	0.754	1.422	2.686	11.976	0.492	-1.147
<b>Skewness</b>	1.079	1.344	1.688	2.786	-0.564	-0.194
<b>Minimum</b>	24723.000	62.100	202.990	0.345	24962.000	6970.600
<b>Maximum</b>	1259942.000	92098.000	23158.000	215.100	32116.000	11738.500
<b>Jaraq-Bera</b>	237.3207	419.8449	844.3954	7898.236	68.58812	66.94554
<b>Probability</b>	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

\* DAILY CLOSING PRICES ARE TAKEN

**INTERPRETATION:**

- From the above descriptive data, it can be observed that though the trend for Bitcoin seems to be going down but in terms of stability of the performance, Bitcoin is much more consistent than other two coins as its Coefficient of variation is smaller than Ethereum and Litecoin.
- C.V. of Nifty and MCX are very less as compared to Cryptocurrencies.
- Also when we compare Ethereum and Litecoin prices over a given period, though the average price for Ethereum is much more than Litecoin price, Litecoin price performance is more stable than Ethereum prices.

- The interpretation of a positive skewness is that frequency of closing prices larger than the average is higher than the frequency of closing prices below average. Here prices of Cryptocurrencies are positively skewed whereas Nifty and MCX are negatively skewed. The fact that there is a positive skewness means there is a higher than average probability of having high prices.
- The behaviour of Cryptocurrencies is much closer to stock indices as compared to the index of precious metals.
- We also notice that over the sample period Cryptocurrencies have positive skewness and excess kurtosis where as MCX has both negative skewness and kurtosis.
- J-B test is significant thus normality assumption is rejected. Prices are not normally distributed.

**TABLE-2: PEARSON’S CORRELATION**

CORRELATIONS							
		BITCOIN	ETHEREUM	LITECOIN	RIPPLE	GOLDMCX	NIFTY
<b>Pearson Correlation</b>	<b>BITCOIN</b>	1.000					
	<b>ETHEREUM</b>	0.891 (0.000)	1.000				
	<b>LITECOIN</b>	0.934 (0.000)	0.935 (0.000)	1.000			
	<b>RIPPLE</b>	0.836 (0.000)	0.878 (0.000)	0.867 (0.000)	1.000		
	<b>GOLDMCX</b>	0.271 (0.000)	0.237 (0.000)	0.211 (0.000)	0.253 (0.000)	1.000	
	<b>NIFTY</b>	0.779 (0.000)	0.707 (0.000)	0.650 (0.000)	0.627 (0.000)	0.427 (0.000)	1.000

From the above table it can be seen that almost all the Cryptocurrencies are highly correlated with Bitcoin. MCX has the least correlation with all the Cryptocurrencies so it can be concluded that movement of gold prices and Cryptocurrencies are not related. The prices are non-normal as indicated by Jaraq-Bera test and are significant.

**FINDINGS OF THE STUDY**

- The comparisons between volume and price of crypto currencies shows an increasing trend with respect to both price and volume was a result of increasing awareness of such currencies amongst people; their features of anonymity and decentralisation but then there was a sharp decline owing to the negative events such as the regulatory aspect of such currencies and they not being legalized. It can be concluded that as volumes are increasing the price may increase later.
- The closing prices have shown an increasing trend during the period from Jan 2016 to Dec 2017 except during the year 2018. The prices of bitcoin and Litecoin were at its peak in the month of December 2017 whereas the prices of Ethereum and Ripple were at peak in the month of Jan 2018.
- The closing prices for major Cryptocurrencies Bitcoin, Ethereum, Litecoin and Ripple were compared for December 2017 and January 2018 as this was the time when the volatility of crypto-currencies was very high. It was seen from the charts that there is a highest volatility of Bitcoin and Litecoin where in the month of December 2017 and the prices for both the currencies showed a declining trend after that but at the same time

Ethereum and Ripple comparatively showing increasing trend as they are newly introduced coins into the market till January 2018 but later they also declined sharply.

- The charts of Nifty and Cryptocurrencies shows that Nifty has always given a stable returns to the investors and prices also seems to be stable for all the three years but Cryptocurrencies prices showed a fluctuating trend. These currencies may have given high returns to its investors but the sharp decline has caused high risk.
- The charts of Gold MCX and Cryptocurrencies show that prices of MCX are stable whereas crypto currencies showed high fluctuations.

## CONCLUSIONS

Though Cryptocurrencies are being used as buying and selling things in many countries; there prices are very vulnerable causing high risk for investment purpose. In order to increase its reliability it is necessary to make such digital currencies more secured and accessible. People need to be educated and regulatory aspect should be taken care off. The main reason for such vulnerable price of Cryptocurrencies are technical flaws, lack of any central authority issuing and controlling this digital currency, controversies such as scams, theft, hacking from the day of its popularity.

The main events which contributed to the fluctuations in prices where; CBOE Bitcoin futures were launched on 11<sup>th</sup> December 2017; South Korea threatens to shut down cryptocurrency exchanges on 28<sup>th</sup> December 2017; CoinMarketCap removed prices from South Korean exchanges from its calculations of cryptocurrency rates without any warning, resulting in a steep drop in all prices on 8<sup>th</sup> January 2018; facebook and google bans all ads promoting cryptocurrency in January- march 2018; One of India's biggest cryptocurrency trading platforms has lost about 438 Bitcoins worth some 190 million rupees (\$3 million), allegedly due to a rogue employee. Coinsecure pledges to compensate customers from personal funds on 13<sup>th</sup> April 2018.

Cryptocurrencies is a known topic amongst very few Indians. There is a lot of scope of popularity of such digital currency in India. RBI has banned the trading of such digital currencies but there were Indian traders, exchanges and merchants who were accepting payments in Bitcoins. Bitcoins have already gained wide acceptance around the world; hence banning them is not a solution. Instead this industry needs to be regulated.

These digital currencies have generated high returns but at the same time they are very risky because of their uncertain future. Investors may be attracted because of the increasing trend in their prices so there is an urgent need of creating awareness amongst people. These digital currencies cannot be backed by anything so the greatest challenge for the regulators is to classify it as a currency or commodity. If it is classified as currency then RBI will play the leading role in its regulation, while if this commodity, SEBI will regulate it.

Even though trading in Cryptocurrencies is not legal in India but Indian banks are showing interest in the technology used for Bitcoins namely blockchain. The main feature of this technology is incorruptible public ledger, a distributed data base and a shared ledger. The blockchain technology used has already gaining pace which may be adopted by banks and financial institutions for faster international transactions with some modifications.

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