

“Bitcoin” As Emerging Virtual Currency and Its Related Impact on India

C.A. (Dr.) Pramod Kumar Pandey
Associate Professor
National Institute of Financial Management
Sector-48, Pali Road
Faridabad, Haryana

Abstract: The world of virtual currencies is becoming popular day by day. These currencies neither command any intrinsic value nor have any physical form and are traded on a decentralized platform without any central control. Many unique feature including faster transactions, ease of use, decentralized uncontrolled framework is contributing to its popularity. It uses block chain network for its operation which is based on encryption technology. Today it has become a cause of concern for India due to its wide publicity. This research paper discusses the unique features of Bitcoin and as well as has focused on related impact of Bitcoin on India.

Key Words: Blockchain, Digital, Encryption, Return and Risk

I. Introduction

The world of virtual currencies is becoming popular day by day. As a matter of fact financial crisis in Europe has brought focus on Bitcoin (Tetsuya Saito, 2015). These currencies neither command any intrinsic value nor have any physical form and are traded on a decentralized platform without any central control. In the last few years many virtual currencies have come into operation due to advent of advanced information technology and increasing users of internet. Bitcoin is one of the most popular virtual currencies in the world. It is attracting many investors who were earlier investing in gold or commodities. Faster transactions, easy remittances and decentralized frame work are some of the key features which is luring the investors. Today many countries including Russia, China, Japan, United states, Denmark, Sweden, South Korea, Netherlands, United Kingdom, France and Australia are among Bitcoin friendly countries. In resent few years many large reputed vendors have started accepting Bitcoin in place of flat money. Technology behind Bitcoin attracts academicians and entrepreneurs (Andy Extance, 2015).. Even if Bitcoin commands no official exchange rate, its prices are determined based on average prices of Bitcoin over all exchanges. Today the rate of one Bitcoin is approx. one lakh seventy seven thousand in INR. In the last one year its return has been around 250%. Who created Bitcoin is not clear; however, its first version was introduced in year 2009. Till date its popularity is increasing by leaps and bounds. Today the market capitalization of Bitcoin is more than \$ 40 Billion.

II. Objectives of the Study

- a) To study Bitcoin and its underlying technology blockchain
- b) To evaluate its impact in India

III. Literature Review

- a) **Andy Extance (2015)**, concluded that security is the most important concern in the Bitcoin and the value of Bitcoin is determined by market and not by the network.
- b) **Bohme, Rainer, Nicolas Christin, Benjamin Edelman and Tyler Moore (2015)**, concluded that blockchain technology has been improved a lot as compared to its initial design, however as far as instantaneous transaction confirmation is concerned, it needs fundamental change.
- c) **Dr Mark Abell, Simon Fielder and Mumuksha Singh (2014)**, held that Government policies do not affect bitcoin and this can be used for exchange of goods and services provided it is not declared illegal.
- d) **John Merriman Sholar (2016)**, held that Bitcoin will not succeed, however blockchain technology may be applied to solve many of the previously unsolved problems in the financial sector
- e) **Jonathan B. Turpin (2014)** held that there is no guarantee that Bitcoin will succeed and that there are too many unknown variables
- f) **Kevin Dowd and Martin Hutchinson (2015)**, held that Bitcoin may survive in the short run, however in the long run; its survival rate is zero.

- g) **K. Siba , Tarun and Anuj Prakash (2016)**, held that Blockchain is in infancy stage however it can be applied in coming times in sports, games, tourism and others.
- h) **Sandeep Bhattacharjee and Harmeet Kaur (2015)**, concluded that the results attained by Bitcoin so far may give rise to new hopes to both consumers and market who seek more freedom in terms of volume and payment methods
- i) **Tara Mandjee (2015)**, concluded that Bitcoin is now young and experimental, however in coming times it will make a long lasting impression
- j) **Trevor I. Kiviat (2015)**, held that Bitcoin has both upside and downside, however blockchain technology may be adapted and that policy makers should make regulations with caution and precession.

IV. Bitcoin: Concept and Features

Bitcoin is a type of crypto currency which operates on digital platform and peer to peer based network. Unlike other currencies it has neither any physical form nor any intrinsic value and its value being based on mathematical proof. Many unique feature including faster transactions, ease of use, decentralized uncontrolled framework is contributing to its popularity. It uses block chain network for its operation which is based on encryption technology.

Some of the unique features of Bitcoin are:

- a) No intrinsic value
- b) No physical form
- c) No central authority to control it
- d) Decentralized setup
- e) Use of secured blockchain network
- f) Price determined on average basis of all exchanges
- g) An open source where everyone can take part
- h) Created and held digitally
- i) Use of encryption technology

In spite of above Bitcoin needs more to do on the technology side (Dr Mark Abell, Simon Fielder and Mumuksha Singh, 2014). Risk of hacking has become very common in the world of virtual currencies. Further, its lack of regulation contributes to a negative public image (John Merriman Sholar, 2016).

V. Comparative performance evaluation of Bitcoin

Bitcoin is generating outstanding return every year except year 2015 when it generated negative return (Table:A). On an average basis it has generated a yearly return of 361%., whereas it is only around 14% in case of Nifty and -0.29% in case of gold. However, mere return will not tell the truth. As far as risk is concerned, the standard deviation of Bitcoin has been 382%, which is on a very higher side as compared to 14.56% of gold and only 11.89% in case of nifty. When we rank all three based on return per percent of risk, Nifty stands first, Bitcoin second and gold third (Table:B)

Table – A: Return of Bitcoin, Nifty and Gold in last 5 years

Date	July, 2013	July, 2014	July, 2015	July, 2016	July, 2017
Bitcoin Return	941.49	491.42	-50.74	119.85	304.96
Gold Return	-21.56	5.85	-11.90	14.86	-9.08
Return Nifty	10.41	30.77	9.79	-0.75	20.08

Chart- I: Return of Nifty and gold in last 5 years

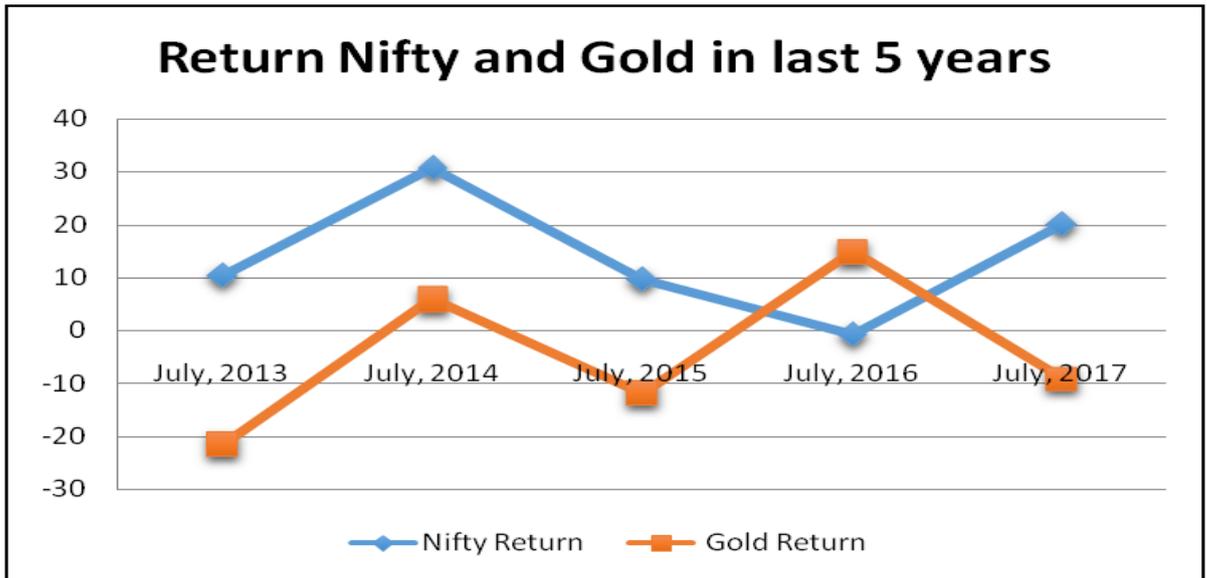


Chart- II: Return of Bitcoin in last 5 years

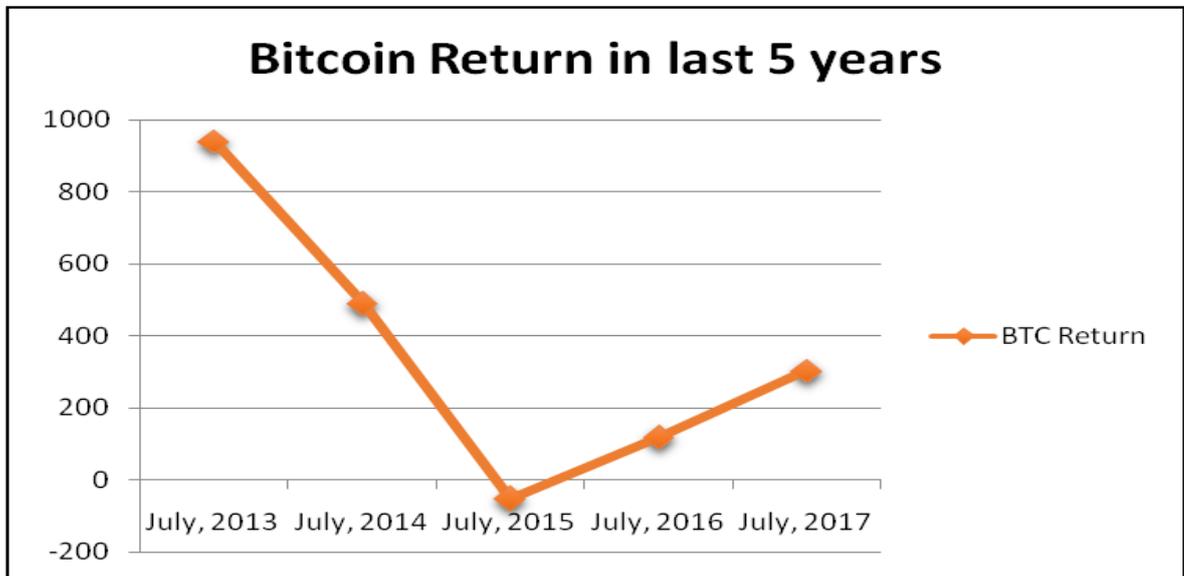
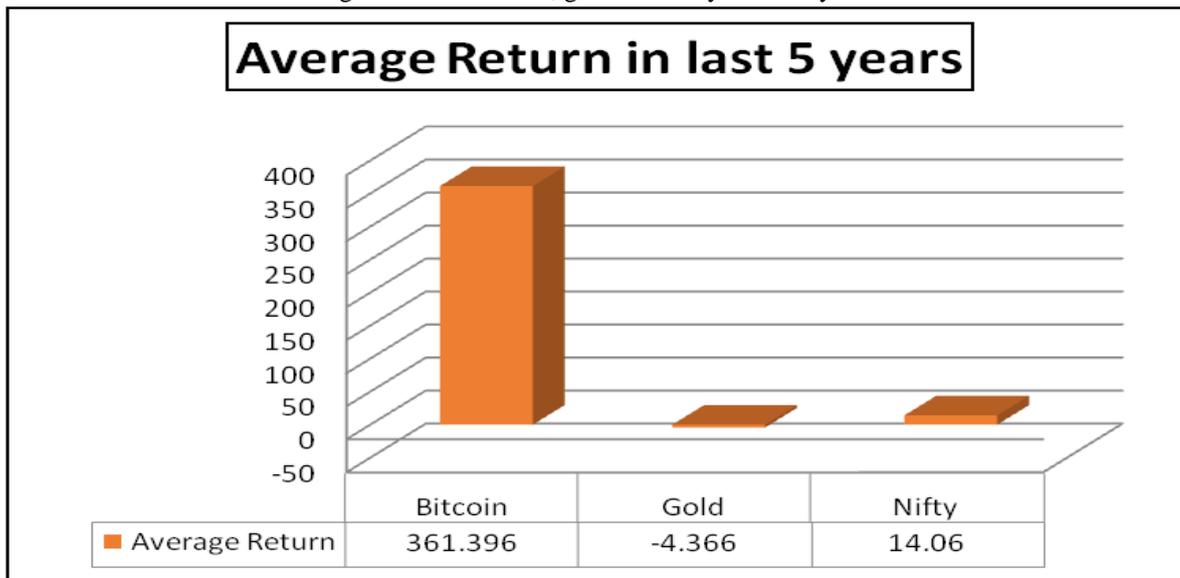


Table-B: Average Return and Average Risk in last five years

	Average Return	Average Risk (Std. Deviation)	Return per percent of Risk	Rank
Bitcoin	361.396	382.361	0.94	II
Gold	-4.366	14.566	-0.29	III
Nifty	14.06	11.899	1.18	I

Chart-III: Average return of Bitcoin, gold and Nifty in last 5 years



VI. Block chain as emerging technology

Blockchain may broadly be defined as an electronic ledger for all bitcoin transactions. Blockchain is the essence of Bitcoin (Bohme, Rainer, Nicolas Christin, Benjamin Edelman and Tyler Moore, 2015). This is based on decentralized technology. Even though trading in bitcoin is not legal in India but the Indian Banks have started showing interest in the blockchain, the underlying technology under bitcoin. Blockchain works on the basis of client-server technology. Transactions are entered through the servers and client accomplishes the task of verifying and updating the records based on inputs from transactions. Blockchain technology ensures security by using encryption technology through public and private keys. The three most important features of blockchain technology are incorruptible public ledger, a distributed data base and a shared ledger.

VII. Bitcoin and India

Virtual currencies are becoming a cause of concern for India due to its wide publicity. Even if virtual currencies have no legal backing, some exchanges have started operating, for example Zebpay, Coinsecure, and Unocoin etc. Particularly, it has become more popular after demonetization. Most importantly, people are jumping into trading of Bitcoins without clearly understanding its functioning mechanisms and related security risks. According to a domestic app-based bitcoin exchange Zebpay, more than 2500 users are adding per day. RBI has already warned the connected users. Further, Ministry of Finance Government of India has constituted an inter-disciplinary committee to inquire and report the status of virtual currencies both in India and globally. Till now, trading of virtual currencies including bitcoins are not legalized in India. As a matter of fact it is the outstanding returns in bitcoin in last few years which is attracting the common investors. They have herd instinct and thus already started dealing in Bitcoins without the use of fundamentals.

However, one bare fact may be noted that there are upside and downside both of Bitcoin (Trevor I. Kiviat, 2015). Thus it is very much necessary that regulators and other actors need to come forward with suggestions (Tara Mandjee, 2015).

VIII. Conclusions

Bitcoins may have generated handsome returns but at the same time it has high risk with uncertain future. It is still in infancy stage and a long way to go before it matures. Putting money without its complete stabilization and acquiring legal status will be jumping into a dark well without knowing its depth. Further since Bitcoin is not backed by anything (Kevin Dowd and Martin Hutchinson, 2015) and as such extra precaution is needed till it occupies legal status and proper regulations are prescribed regarding its operations and control. The greatest challenge for regulators will be whether to classify Bitcoin as currency or commodity. If this is classified as currency, probably RBI will play leading role in its regulation, while if this is commodity, SEBI will initiate regulations. However, the blockchain technology should be viewed differently than Blockchain which may be adopted with some modifications by Banks and Financial Institutions for faster international transactions.

IX. References

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