

An Analysis of Cryptocurrency: A Survey on the future of Indian Digital Currency

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ABSTRACT

The demonetization of currency in the year 2016 by Modi government revolutionized the movement towards usage of digital payment methods in India. Though it was strenuous decision for country like India where 90% of the transactions are in cash, people adopted digital mode of payments in short span of time. The adoption of digital methods for payments is facilitated by phenomenal increase in ownership of smart phones and presence of user friendly payment modes like PAYTM and BHIM UPI. The paper tries to explore the shift in Indian Investing behaviour when CBDC's are launched by Indian Government and global trends in digital currencies in different countries and tries to examine the implications of digital currency for India through secondary data. A digital coin of the country in which the encryption methods are being observed to determine the creation of whole of paper money and prove the validity of transaction of money, worked freely for a central bank. As the digital currency will be issued by the central bank of India, it will help to overcome the disadvantages of cryptocurrency, bitcoin and others. The digital currency will also use the Blockchain technique and other technique to issue it. The value of each digital currency will remain as the value of the paper money, it will no varies and there will be no loss to the consumer. The proposal of launching digital currency is done in the budget of 2022 by Finance Minister Nirmala Sitharaman. Digital Currency trading will be safe in India then the cryptocurrency and bitcoin as it is issued by the Central bank of India.

The factors to study the research is to find out the future of Indian digital currency in the light of bitcoin, behaviour of the investors and the benefit in various sectors of the government after the issue of the digital currency.

Keywords: Digital currency, Blockchain, Bitcoin, Cryptocurrency

INTRODUCTION

Money must serve three basic functions: it must be a means of exchange, a store of value, and a unit of account.

To begin, an instrument must be able to facilitate the sale of goods and services in order to act as a medium of exchange. The seller in a transaction must accept the instrument as payment in the expectation that the seller would be able to transfer the instrument to another as payment for future transactions. Second, the instrument must function as a value store, maintaining purchasing power over time. A sound money instrument is one that is not subject to depreciation or inability to preserve its worth.

Third, as a monetary unit of account necessitates that the instrument serve as a yardstick for measuring and comparing value across commodities and services, guiding the users' economic judgments.

Digital currency will function similarly to email in terms of financial transactions. As a result, it is projected to completely circumvent the centralised financial infrastructure. Block chain technology is intended to lower costs in cross-border transactions and securities trading.

Private blockchain, in which banks operate as custodians of cryptographic keys, and public blockchain, in which each participating user acts independently, are the two types of blockchain technology.

Digital currencies are an important aspect of the fintech revolution, which will have a wide range of implications, including payment and settlement systems and services. Though the concept of digital currency is currently less prevalent, it will develop and disrupt current processes and institutions (how). India's attitude toward cryptocurrency has been unfavourable since its inception. The RBI's decision to halt cryptocurrency transactions resulted in the collapse of ZEB pay, India's largest crypto exchange, by prohibiting deposits and withdrawals in Indian rupees. However, it has been found that the decision was not based on sufficient research. In addition, the report of the committee established to assess the feasibility of digital currency is still pending.

Digital currencies have no physical properties and are only available in digital form. Computers or electronic wallets connected to the internet or specified networks are used to conduct digital currency transactions. Physical currencies, on the other hand, such as banknotes and minted coins, are palpable, meaning they have distinct physical qualities. Only when their holders have physical possession of these currencies are transactions involving these currencies possible.

The utility of digital currency is comparable to that of physical currencies. They can be used to pay for both products and services. They're also forbidden in some online communities, such as gaming sites, gambling websites, and social networking sites.

Instant transactions that can be carried out across borders are also possible with digital currency. For example, a person in the United States can send digital currency to a counterparty in Singapore if they are both connected to the same network.

Digital currencies are capable of transferring value. The use of digital currencies necessitates a mental shift in the conventional paradigm for currencies, which links them to products and service sales and purchases. Digital currencies, on the other hand, broaden the concept. A gaming network token, for example, can extend a player's life or provide them additional superpowers. This is not a purchase or sale transaction; rather, it is a value transfer.

Although the RBI is wary about cryptocurrency, it believes in the use of distributed ledger technology in payment and settlement solutions, as well as the capabilities of machine learning and artificial intelligence.

Due to a lack of understanding and preparedness in dealing with digital currency, the RBI has put its plan to create it on hold. However, 11 Indian banks want to unite to establish a new blockchain system to help MSMEs with their financing needs (Economic times, Jan 28)

The viability of deploying digital currency in conjunction with existing systems or suppliers can be investigated by the central bank. In conclusion, block chain will control economies all over the world in the next years, and its adoption will be forced or voluntary.

Traditional business processes have been severely disrupted by blockchains since apps and transactions that previously required centralised architectures or trusted third parties to authenticate them can now operate in a decentralised manner with the same level of assurance. Transparency, resilience, auditability, and security are all fundamental qualities of blockchain architecture and design (Greenspan, 2015a; Christidis and Devetsikiotis, 2016). A blockchain can be thought of as a distributed database organised as a list of ordered blocks with immutable committed blocks. This is good in the banking sector since banks may collaborate under the same blockchain and push their clients' transactions through.

Technology companies have triggered the digital revolution of payments, providing cutting-edge technology that may reduce transaction costs but also exposing consumers to new hazards. An increasing number of central banks are working on central bank digital currency in order to ensure that sovereign currencies stay at the heart of each country's financial system (CBDC). 1 Indeed, Facebook's Libra Project "lit a fire" under the

Federal Reserve's study of this matter, as Chairman Powell recently testified. 2 As a result, the Board of Governors of the Federal Reserve System requested that a team of experts examine the rapid transformation of payments, particularly with regard to the advent of stablecoins—cryptocurrencies designed to reduce volatility relative to the value of another financial asset. Staff economists present the Board with possible ideas for a digital fiat currency from the Federal Reserve. Two probable designs have been proposed by the economist teams: "Fedcoin" and "Fedcount." Internal discussion among staff economists is raging about which design is best for payment efficiency and monetary policy execution, with some even arguing that the Federal Reserve System should take no action at all.

Literature Review

In India, Bappaditya Mukhopadhyay (2016) investigated cashless payments. He created a theoretical model of consumer and seller payment decisions. He discovered that the convenience of cashless transactions outweighed the desire to avoid paying taxes.

Rahul Gochhwal (2017) conducted research on payment system advancements using the Unified Payment Interface and discovered that UPI is the most advanced payment system in the world, with minimal transaction costs and quick settlement due to the lack of intermediaries. UPI has facilitated interoperability across separate bank payment systems by allowing different banks to communicate with one another.

Somanjoli Mohapatra (2017) examined the e-transaction process using UPI, defining the elements of UPI and its software BHIM-UPI. This article details the entire payment procedure and security aspects, as well as a comparison of other online payment programmes. The UPI aims to make money transactions simple, fast, and painless.

According to Jayshree Grover, "BHIM is a unique payment method that can be used without the internet!!" You can get the same BHIM functionality on your phone screen by dialling from any phone. You can also sign up for BHIM by dialling . Additionally, the customer's mobile number must be linked to their bank account. This app is an exciting new project for the Indian market to get into the technology sector.

In their paper Bitcoin and the Future of Cryptocurrency, Rahman and Dawood (2019) looked at cryptocurrency as a creative and technologically advanced alternative to globalisation. It looked at the prospect of a new way to send money across borders, and it concluded that if properly regulated, bitcoin may solve many of the current financial problems.

In his Model draught regulation on Cryptocurrencies in India, Rahul J. Nikam (2018) focuses on aspects of India's choice to regulate cryptocurrency trading and how the RBI should be more receptive to the idea of cryptocurrencies and grasp the value and prospects that come with it.

In their paper Legal Acceptance of Bitcoin in India, Gunjan Jindal and Sheza Azeen (2018) discuss how bitcoin plays a crucial role in aggregating the nation's growth percentage and how this would not be possible unless the government pushes to make the transactions legal and imposes regulations on it.

Cryptocurrencies, according to Trautman (2014), are a subset of digital currencies that are based on a decentralised network or have centralised institutions. Simply said, cryptocurrencies are a new sort of digital currency (Duque, 2020; Hudson & Urquhart, 2019) that is created using cryptographic methods and exchanged over the Internet utilising protocols like peer-to-peer networking (Nakamoto, 2008).

Another approach to describe cryptocurrencies is that they rely on complicated cryptographic techniques to offer users with a secure and safe medium of trade (Bulut, 2018). The mining process, which is a collection of mathematical algorithms implemented within the underlying protocol, governs the production of value (or money) and the triggering of transactions (Adhami et al., 2014; Cennamo et al., 2020; 2018). The majority of cryptocurrencies were founded to introduce new currency units with a finite total amount (Baur et al., 2015). Unlike state-issued currencies, cryptocurrencies are governed by technology rather than established regulations (Dodd, 2018). As a result, cryptocurrencies are a novel invention that differs from regular currencies. Aslan & Sensoy, 2020; Baumöhl, 2019; Cerqueti et al., 2020; Corbet et al., 2019; Platanakis et al., 2018; Vidal-Tomás et al., 2019; Vidal-Tomás et al., 2019).

IMPORTANCE

CBDCs will result in a more efficient and cost-effective currency management system in the country. The Reserve Bank of India will regulate CBDCs, reducing the danger of volatility that exists in other digital currencies. "Digital currency payments will minimise the banking system's settlement risk."

The importance of studying this paper is to understand the impact of digital currency on the expansion of international commerce, support the financial inclusion and transform how we shop , save and do business in ways we probably cannot even yet fully understand.

The digital currency will reduce the settlement risk in the financial system. Interbank settlement will not be required as the system will transact the digital currencies instead of bank balances just like the cash is handed over.

The study of paper is related to understand the value of the digital currencies is stable as they are accepted worldwide. The sender, receiver and bank are aware about the transaction.

The importance of digital currency for Indian economy is very important because it is the safer form of currency, end of paper cash, easier policy implementation and regulation, increased diversity, cost of currency management, overcoming international differences.

NEED

This research paper intends to understand the behaviour of the investors in India and to understand the impact on Investors of India if Government of India issues digital currency (CBDC) and also the impact on Cryptocurrency and there investors.

PROBLEM STATEMENT

1. The investors awareness towards Cryptocurrency is growing in India now small Investors also started investing in Foreign Digital Currencies like Bitcoin, Ethereum, Tether, Binance Coin, XRP the biggest concerns with cryptocurrencies are the problems with scaling and it is still dwarfed by the number of transactions that payment giant, VISA, processes each day. The cryptocurrencies are subject to cyber security breaches and Price volatility finding what concussion it has on the behaviour of Indian Investors and Government of India is the main focus of this paper.

2. OBJECTIVE

The objective of this research are:

1. To understand the concept of the Indian digital currency and the benefits of it as compared to Cryptocurrency.

2. To understand the investing strategies of the Indian investors towards Indian Digital Currency.
3. To understand the Shift in Indian Investors behaviour when the Indian Digital Currency shall be launched.

SCOPE OF THE STUDY

Digital currency promises flexibility and economic progress by overcoming global borders. It would also be economical, simple, and quick, which would add to the overall picture. Digital currencies have the potential to increase trade and provide a variety of chances for countries to improve their financial health. Domestic banks' roles as deposit takers and critical intermediaries are jeopardised when central banks create digital currencies directly and pay interest on them. With fewer deposits, domestic banks have fewer resources to work with, limiting their capacity to give loans to customer.

RESEARCH METHODOLOGY

The majority of the research was conducted using secondary data. The information for the study was gathered from news stories, journals, periodicals, research papers, the internet, and other sources. The research's statistical data was gathered from a variety of sources. To analyse the data and portray it in graphical form, basic analytical procedures such as mean and percentage calculations were used.

DISCUSSION

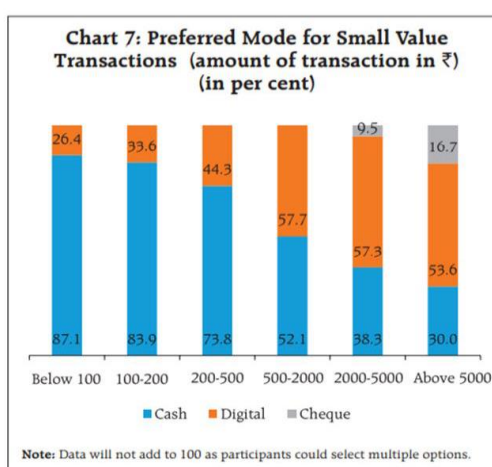
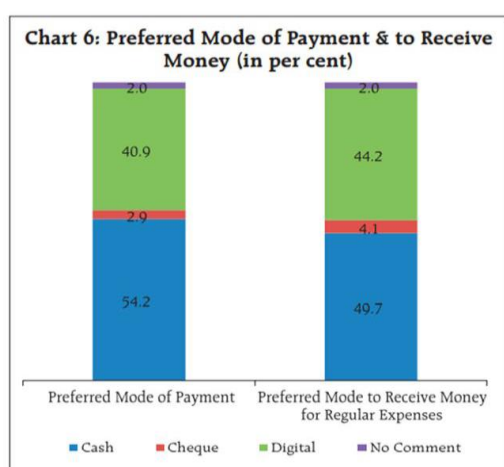
While there is widespread interest in CBDCs presently, only a few countries have progressed beyond the pilot stage of developing their own CBDCs. According to a poll of central banks conducted by the BIS in 2021, 86% were actively researching the potential for CBDCs, 60% were experimenting with the technology, and 14% were running trial programmes. What is the source of this sudden interest? CBDC's adoption has been defended for a number of reasons: - I Central banks seeking to popularise a more acceptable electronic form of currency (like Sweden); (ii) Jurisdictions with significant physical cash usage seeking to make issuance more efficient (like Denmark, Germany, Japan, or even the United States); (iii)

Central banks seeking to meet the public's demand for digital currencies, manifested in the increasing use of bitcoin; (iv) Central banks seeking to meet the public's demand for digital currencies, manifested in the increasing use of bitcoin.

CBDCs also have certain distinct advantages over other digital payment systems: payments made with CBDCs are final, reducing financial system settlement risk. Consider a UPI system in which CBDC is traded instead of bank balances, as if it were currency; the requirement for interbank settlement is eliminated. CBDCs could also help payment systems become more real-time and cost-effectively globalised. It is possible for an Indian importer to pay an American exporter in digital Dollars in real time, without the need for a middleman. This transaction would be complete, just like handing over cash dollars, and it would not even require the US Federal Reserve system to be open for settlement.

In terms of digital payment advances, India is at the forefront of the world. Its payment systems are available 24 hours a day, seven days a week, to both retail and wholesale customers, are mostly real-time, have some of the lowest transaction costs in the world, offer users an excellent menu of transaction possibilities, and digital payments have risen at an impressive rate. A 55 percent compound annual growth rate (over the last five years). It would be difficult to locate another payment system that permits a single Rupee transaction, such as UPI. Is there a basis for CBDCs in the face of such significant digital progress?

Cash remains the preferred mode of payment and for receiving money for regular expenses, according to a pilot survey conducted by the Reserve Bank on retail payment habits of individuals in six cities between December 2018 and January 2019, the results of which were published in the April 2021 RBI Bulletin (please see charts below). Cash is most commonly utilised for small-value transactions (under RS. 500).



As a result, there is a unique scenario in which the country's adoption of digital payments is accompanied with a continued interest in cash usage, particularly for small-value transactions. CBDC is unlikely to replace cash usage to the extent that cash preference causes pain for digital modes of payment. However, a desire for cash because of its secrecy can be transferred to CBDC acceptance as long as anonymity is guaranteed.

Another advantage of CBDCs is India's high currency-to-GDP ratio. The cost of printing, transporting, storing, and distributing currency can be decreased to the extent that substantial amounts of cash can be substituted by CBDCs.

Another reason CBDCs may become important is the emergence of private virtual currencies (VCs). It's unclear what precise need these private VCs fill that government money can't, but that may not be a deterrent in and of itself. The adoption of their children National currencies with limited convertibility are likely to be threatened if these VCs gain acceptance. To be sure, readily convertible currencies such as the US Dollar may be unaffected, given the majority of these VCs are denominated in the US Dollar. Indeed, as Randal Quarles 3 has suggested, these VCs may boost the usage of the US Dollar. Developing our own CBDC could give the public with purposes that no private VC can provide, preserving public support for the Rupee to some extent. It could also shield the general public from the unusually high volatility that some of these venture capital firms endure. Indeed, this may be the primary factor dissuading central banks from seeing CBDCs as a safe and stable type of investment.

To lead the study of central bank digital currencies and define credible principles and foster innovation, central banks must supplement their domestic efforts with close cooperation. "The rationale for CBDCs in emerging economies is apparent - they are desired not only for the benefits they provide in payment systems, but they may also be required to protect the general public in a climate where private VCs are volatile.

Conclusion

CBDC's introduction has the potential to deliver major benefits, such as less reliance on cash, increased seigniorage due to lower transaction costs, and reduced settlement risk. CBDC could lead to a more reliable, efficient, trustworthy, regulated, and legal tender-based payment solution. There are hazards involved, to be sure, but they must be carefully weighed against the potential advantages. As we move forward in the

direction of India's CBDC, it will be the RBI's goal to take the required steps to reaffirm India's leading position in payment systems.

CBDCs are expected to be a part of any central bank's armoury in the future. Setting this up will necessitate careful calibration and a nuanced execution strategy. Stakeholder engagement and considerations on the drawing board are critical. The relevance of technological difficulties cannot be overstated. Every idea, as the saying goes, will have to wait its turn. CBDCs may be coming into their own.

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