Changing Face of Cryptocurrency and the Need for Regulation

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Abstract

The market of cryptocurrency has exploded in popularity over the past several years, luring many young Indians in search of financial independence. Apart from its growth and volatility, users must be aware of various other factors that are needed to be addressed. This nascent sector has, on the one hand, acquired the acceptance of investors as a dependable investment choice, but, on the other hand, it has created concern in the minds of regulators and governments. The aim of this paper is to analyze the Concept, working, valuation, and evolution of Cryptocurrency in India. Secondary data from various articles, websites, blogs, etc. are collected for the study’s evaluation. The study reveals that it would be challenging for governments to devise a structure that would enable cryptocurrencies to flourish without simultaneously diluting their value. Cryptocurrency is the need of the hour in order to stand in the tech industry and needs to be regulated with special care as its essence remains intact.

INTRODUCTION

Despite the novelty of cryptocurrencies, they have quickly gained widespread acceptance in the market and evolved rapidly since their inception. The inclusion of cryptocurrency-related holdings in portfolios and trading methods is becoming more common among institutional investors and asset allocators. A lot of time and energy have also been invested in studying cryptocurrencies by the academic community. This paper is aimed to describe cryptocurrency and government compliances in India. Several motivational tales and perks are associated with cryptocurrency investment. Investors should be wondering how cryptocurrency transactions take place and what factors influence their value. What makes them unique from other types of investment tools? Financial experts all over the world are analyzing the potential dangers of crypto-trading and the factors that should be taken into account when assessing investment prospects. Investors should exercise caution before making any purchases or investments in Cryptocurrencies at this time. The reason for price fluctuations in cryptocurrencies and any potential security flaws should also be clear in their minds. Ultimately, this information will aid...
investors in assessing the merits and dangers of a certain investment. The aim of the paper is to provide conceptual knowledge of the working, valuation, and evolution of Cryptocurrency in India. Secondary data from a variety of research journals, articles, blogs, and other web sources are used in order to accomplish the aforementioned goals.

**Literature Review**

Nikam (2018) proved that existing frameworks and rules may be easily adapted to regulate virtual money in India. The research also included recommendations for new bitcoin model regulations that would serve as the foundation for future cryptocurrency legislation in India. The Banking Regulation Act was used as a template for this study because it provides for comprehensive and transparent regulation of new financial technology products and services in India. This includes cryptocurrencies like Bitcoin and their associated businesses, intermediaries, exchanges, and consumer protections. Thanapackiam et al. (2022) found both widespread and India-specific problems with cryptocurrency implementation. When all is said and done, it makes conclusions on how to deal with cryptocurrency's problems once they're fully adopted in India and offers advice on how to put money into the sector. Palit et al. (2022) found that having a strong financial inclusion system that is backed by good monetary and fiscal policies is one of the things that need to happen for cryptocurrency to get into the Indian market. Robust Regression was used to test their idea. Accumulation, Pure Buy, Distribution, and Pure Sell are the four market phases. So, for crypto to fit well into the Indian market and cause growth from within, the country's financial institutions and inclusions need to be strong. Adnan et al. (2022) examined TAM use in the context of crypto adoption. Surveys are used as part of a quantitative approach. The evaluation criteria include how helpful, simple, and safe the user experience is. In order to get this information, 125 millennials were given questionnaires to fill out on their own time. Participants were chosen depending on their openness to participate. Behavioral intention to invest in cryptocurrencies was found to be significantly affected by three factors: the perceived usefulness of cryptocurrencies, the perceived ease of investing in cryptocurrencies, and the perceived risk. Shukla et al. (2022) shared the details of cryptocurrency's history in India, along with predictions for its future with reference to the Union budget 2022-23. In the hope to give insight to the future researcher. Sharma (2022) Compared conventional investment channels with cryptocurrencies and conducted a SWOT analysis for cryptocurrency in India. 20 million Indians utilize cryptocurrencies. Indian investors prefer conventional investing options over bitcoin, according to a comparison. Lack of information, security difficulties, and no cryptocurrency laws are the reasons. Due to a decentralized system, no mediator intervention, and cheap transaction costs, the Indian market has a high accessible adoption rate. The fluctuating market, security risks, black marketing, lack of regulations, and unknown identities are cryptocurrency's biggest weaknesses and threats. Still, India's cryptocurrency sector is enormous and growing.

**Objectives and Methodology**

The study aims to accomplish the following objectives:

- To provide a definition for Cryptocurrency and an explanation of how cryptocurrency functions.
- To provide an overview of Cryptocurrency evolution and its Valuation.
- To discuss the status of Cryptocurrency in India and other nations.

In order to achieve the above-mentioned objectives secondary data from various sources like websites, blogs, research articles, books, and other online resources has been gathered.

**Definition of Cryptocurrency**

The need for private and secure communication during World War II inspired the creation of the first cryptocurrencies. In theory, cryptography is immune to tampering or manipulation by governments because of its decentralized, organic nature, which is arguably its greatest selling point. A type of digital currency that is encrypted is known as “cryptocurrency.” It is also known as a form of digital money. Bitcoin and other cryptocurrencies
are digital currencies developed to be untraceable and very secure. Bitcoin and other cryptocurrencies are linked to the usage of encryption in the online world. In order to keep tabs on transactions, cryptography encrypts regular text into a nearly unbreakable code.

Cryptocurrency is a digital currency that uses encryption to make internet transactions private. Through digital technology’s advent, it has adapted by incorporating concepts from mathematics and computer science.

**Evolution of Cryptocurrency**

The first documented use of the term “blockchain” dates back to 2008, when a paper by “Satoshi Nakamoto,” the alleged creator of the most prominent cryptocurrency, Bitcoin, was released “What is Bitcoin? It’s a Peer-to-Peer Electronic Cash System” (Nakamoto 2008). The article explained that the primary motivation behind developing Blockchain Technology was to create a decentralized, peer-to-peer monetary system. “a totally peer-to-peer version of electronic cash would allow internet payments to be made directly from one party to another without passing through a financial institution,” as the original justification for the development put it (Nakamoto, 2008b, p.2). In addition to other applications, blockchain technology shows promise for the creation of digital currencies. By 2030, it is predicted that the annual revenue generated by the use of blockchain in business might reach $3 trillion. The World Economic Forum (WEF) predicts that by 2025, blockchain will be used to record 10% of global GDP, and it is one of seven disruptive technologies that is expected to drastically alter our daily lives. One form of digital currency, cryptocurrency, is underpinned by a system similar to a distributed ledger called Blockchain. A blockchain is a distributed database or distributed ledger that records all cryptocurrency transactions. Data concerning a bitcoin transaction, such as its date, time, value, parties involved, etc., is recorded in a block and sent to all users of the protocol on which it was conducted. A “hash” is a unique code in a block that can be used to distinguish it from any other block.

**Working of Cryptocurrency**

Cryptocurrencies, often known as “virtual currencies,” are digital tokens that use blockchain technology to track transactions, including the issuance of new tokens and the transfer of existing ones. Decentralized peer-to-peer networks, in which no single entity or agency is in charge, are used for every step of the cryptocurrency creation process. Below, we’ll go over some of the main components of the cryptocurrency ecosystem.

**Blockchain**

The cryptocurrency’s blockchain serves as a digital ledger that records and documents all agreements made and financial transactions made between users. The blockchain grows in size and duration over time since it contains the full audit trail of all cryptocurrency transactions. A bitcoin transaction is not deemed complete until it has been uploaded to the blockchain, which typically takes minutes. It’s also worth noting that once a payment has been made with cryptocurrency, it can’t be undone, despite the fact that cryptocurrency transactions normally go through much more quickly than fiat currency transactions.

**Private Keys**

Every cryptocurrency holder is issued a private key that serves as a unique authentication mechanism for making and receiving transactions. Personal private jets can be produced randomly or by the user but must be a whole number between 1 and 78 digits in length to be accepted. Without the key, the contents of a wallet are effectively worthless, as only the key holder can spend the currency. Some have compared losing a key to losing money since while a replacement can be made, the lost key cannot be used to regain access to the funds it protected.

**Miners**

As the decentralized record keepers and indirect influencers on Bitcoin’s value, miners play a crucial role in the cryptocurrency ecosystem. To ensure the safety, integrity, and completeness of digital currencies like Bitcoin’s underlying blockchains, “miners” employ massive quantities of computing
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power and technical expertise. Given that miners' process of creating new copies of the blockchain allows them to add recent and prior unverified transactions to a previous blockchain copy that allows for the effective completion of a transaction, the importance of traceability in the context of cryptocurrencies becomes clear.

**Exchanges**

Less-popular currencies can only be transmitted between individuals through unofficial channels, which are slower and more difficult to value than more popular modes of exchange. Popular cryptocurrencies like Ripple and Bitcoin are exchanged on secondary markets that are distinct from those used to trade fiat currency. These facilitate the buying and selling of cryptocurrencies for fiat currency and vice versa. However, the platforms do charge a fee, often less than one percent of the total transaction value. There is still some uncertainty about the exchange rate and market volatility if you want to convert your fiat currency into cryptocurrency.

**Wallets**

To keep cryptocurrency safe, users save it in “wallets,” which are typically pieces of software. An individual's digital wallet will normally include their wallet address, private keys, and other security measures. The wallet not only serves as a place to put money but also as a means of sending and receiving payments. The user's wallet stores the whole transaction history for all of their accounts.

**Confidentiality and Privacy**

Given the decentralized nature of cryptocurrencies, user anonymity is a crucial part of the crypto revolution. With this technology, users can conduct transactions and transfers without revealing their identities to the recipient. Users are able to maintain a measure of privacy when using it. Users can maintain their anonymity when using cryptocurrencies because there is no proof that governments can monitor transactions or access user accounts.

**Valuation of Cryptocurrency**

The capacity to value newly received cryptocurrency in a fork or drop is vital, notwithstanding the lack of explicitly controlling law or regulation regarding the taxation of forks and drops. Whether cryptocurrency income is taxable, proper valuation is critical. The value of the coins is treated as taxable income if the receipt is deemed to be taxable. A valuation is required to determine the appropriate basis allocation between the old and new cryptocurrency if it is found that the receipt is not taxable.

A serious chunk of an investor's due diligence should be dedicated to studying the Crypto market. The rationale is that this market may offer profitable investment options. Investors and traders need to know how much cryptocurrency is worth in this context. Therefore, the price of a cryptocurrency plays a significant role in determining whether or not to make a purchase. To rephrase, the importance of a cryptocurrency’s valuation for buyers and sellers cannot be overstated. Cryptocurrency valuation techniques include:

- One method for determining the true worth of a cryptocurrency is to use its book value.
- Using discounted cash flow analysis and cash flow forecasting to estimate development prospects.
- The performance of a business or organization over a specified time frame can be compared using ratio analysis.
- Investors and traders can use the formula for market capitalization to predict whether a rise or fall in the figure will have a positive or negative effect on the value of a company.
- It is assumed under the Net Cost Model (NCM) of cryptocurrency valuation that a user can either 1) mine bitcoin in exchange for a reward of some number of units, or 2) purchase units through a cryptocurrency exchange. We want to know how much it would cost to be completely agnostic about whether or not to mine or buy cryptocurrency on an exchange.
- As investors, we would like to see the currency’s transaction volume be higher than usual. Therefore, the under/overvaluation of crypto assets is evaluated using the Network Value-to-Transaction Ratio (NVT). The network value is calculated by taking the last 24 hour’s USD transaction volume and multiplying it by the asset’s price per unit of circulation.
Cryptocurrency in India

Investment in unregulated digital assets, especially Bitcoin, has demonstrated a remarkable rising trend since 2020, despite the fact that the future of cryptocurrencies in India is unknown. Over 1.5-2 crore Indians have reportedly put $10 billion into the asset class by November of this year, according to data from several domestic cryptocurrency exchanges. As more people in the country start using cryptocurrencies, it may signal a shift in the government’s traditional investment focus on gold and other stable assets.

In the years since its birth, cryptocurrency has generated considerable interest. Investors, cutting-edge technology firms, enterprises, and banks have all benefited from the market’s favorable conditions. However, there is a lot of confusion over whether or not cryptocurrencies are actually legal. This is due to the fact that cryptocurrency use is viewed differently in different parts of the world. The majority of nations have not yet determined how to regulate or enforce legislation concerning cryptocurrency. Let’s take a look at the voyage of Cryptocurrency.

In 2008, a developer working under the alias Satoshi Nakamoto published a paper titled “Bitcoin: A Peer-to-Peer Electronic Cash System,” marking the beginning of the cryptocurrency movement.

Two years later, the first Bitcoin sale was made: 10,000 Bitcoin for two pizzas. For the first time, this gave digital currencies an actual dollar value. The digital asset quickly gained traction, and new cryptocurrencies like as Litecoin, Namecoin, and Swiftcoin emerged shortly thereafter.

The Reserve Bank of India (RBI) issued circulars in 2013 that formally recognized cryptocurrency as an entity in India. Circulars like this served to forewarn crypto users of the myriad dangers they faced by using the technology. Increased adoption of digital payment methods as a result of the experiment with demonetization has had the unintended consequence of drawing tech-savvy investors into the cryptocurrency market. However, despite the RBI’s 2017 circular expressing its concerns with virtual coins, Indian banks continued to permit transactions on cryptocurrency exchanges. By the end of 2017, the RBI and the finance ministry had issued a warning making it clear that virtual currencies are not recognized as legal money. The Central Board of Direct Taxes (CBDT) proposed a ban on virtual currencies to the Indian Ministry of Finance in March 2018, and a month later the Reserve Bank of India (RBI) issued a circular prohibiting bank, NBFCs, and payment systems providers from engaging in business with virtual currencies or providing services to virtual currency exchanges. As a result, crypto exchanges took a major hit, with trade volumes plummeting by 99 percent.

In 2020, As a result of the severe blow dealt by the prohibition, cryptocurrency exchanges filed a writ petition with the Supreme Court, which led to the Supreme Court striking down the ban and finding the RBI circular unlawful. So, cryptocurrency exchanges came back to life, and the Supreme Court verdict couldn’t have come at a more opportune time, right in the middle of the crypto boom. The fight for cryptocurrency in India, however, was not yet won. The Indian government declared on January 29, 2021, that it would draft legislation to establish a national digital currency and outlaw all private cryptocurrencies. Meeting with the Blockchain and Crypto Assets Council (BACC) and other cryptocurrency representatives in November 2021, the Standing Committee on Finance reached the consensus that cryptocurrencies should be regulated rather than prohibited.

In Union Budget 2022-23, the Finance Minister of India made two major statements that will have a huge impact on the country’s cryptocurrency and blockchain asset business. In the fiscal year 2022-23, the Indian government plans to implement the Digital Rupee and impose a tax of 30% on crypto-asset profits. Although initially wary of cryptocurrencies, India’s government has opted to embrace digital currency. Despite the ongoing uncertainty surrounding cryptocurrencies, these developments have sent a strong signal to crypto enthusiasts that the industry is moving closer to full legalization in the United States. The government has some concerns about cryptocurrencies, but it is also developing its own digital currency. The government is eager to take use of blockchain technology because it does not want to fall behind in the technological race. In February, the Reserve
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Bank of India (RBI) Governor said that RBI is developing its digital currency, saying, “The moment has come to leverage its uses while at the same time building the digital infrastructure.”

Finance Minister has stated that during India’s G20 presidency next year, the country will work toward adopting standard operating procedures for cryptocurrency. She emphasized that all countries want technology to survive but not be misused. On the final day in Washington, DC for the annual meetings of the International Monetary Fund and the World Bank, FM told a gathering of Indian media, “That (crypto) will also be part of India’s thing.” Starting on December 1, 2022, and ending on November 30, 2023, India will lead the Group of Twenty as its president. Beginning in December 2022, India will assume the Presidency of the G20 and will subsequently hold more than 200 meetings across the country. To combat the concerns of money laundering and terror funding, Finance Minister has been a staunch advocate for international regulation of cryptocurrencies. The minister remarked, “We would definitely want to collate all this and do a bit of study and then bring it on to the table of the G-20 so that globally, countries can have a technology-driven regulatory framework,” in reference to the fact that institutions affiliated with the G-20 or the World Bank or any such organization are conducting their own assessment and studies of matters related to cryptocurrencies or crypto assets.

Global Regulations of Cryptocurrencies

As Crypto has evolved from purely speculative investment to a new asset class, governments throughout the world have begun looking into measures to control its volatility and ensure its integrity. The regulatory framework for virtual currencies in various nations is briefly summarized here.

United States: Even though it is difficult to establish a uniform legal framework at the state level, the United States is progressing with the creation of federal cryptocurrency legislation. The Financial Crimes Enforcement Network (FinCEN) does not consider cryptocurrency tokens to be legal tender since they are “other value that substitutes for currency,” although cryptocurrency exchanges are regarded as money transmitters. According to tax regulations published by the IRS, cryptocurrencies are not considered to be legal tender but rather “a digital representation of value that serves as a medium of exchange, a unit of account, and/or a store of value.”

China: When it comes to the subject of inheritance in China, virtual currencies are treated the same way as any other form of property. The People's Bank of China (PBOC) has prohibited cryptocurrency exchanges from functioning within its borders on the grounds that they enable unregulated public financing. More importantly, China banned bitcoin mining in May 2021, prompting many miners to either cease operations or move to countries with more accommodating regulations. Furthermore, complete cryptocurrency prohibition was enacted in September of 2021. The country, however, has been working on creating the digital yuan (e-CNY). The second phase of its pilot test program for its central bank digital currency (CBDC) launched in August 2022.

Canada: Cryptocurrencies can be used online or by merchants who accept them, but they are not recognized as legal tender in Canada. Under its provincial securities laws, Canada has taken the initiative to regulate cryptocurrencies. The Proceeds of Crime (Money Laundering and Terrorist Financing Act or PMLTFA) was introduced in Canada in 2014. The first cryptocurrency-specific investment vehicle was filed with the British Columbia Securities Commission in 2017. The Canadian Securities Administrators (CSA) published a notice in August 2017 regarding the applicability of securities laws to cryptocurrencies, and the governor of the Canadian Central Bank referred to them as “technically” securities in January 2018. Since 2013, cryptocurrencies have been subject to taxation by the Canada Revenue Agency.

Australia: In Australia, both buying and selling cryptocurrencies and using cryptocurrency exchanges are not only legal but encouraged by the innovative nature of the country’s regulatory framework. The Australian government made Bitcoin and other cryptocurrencies with similar qualities lawful in 2017 and announced that Bitcoin
should be taxed as property for the purposes of capital gains (CGT). Australia's goods and services tax (GST) formerly subjected cryptocurrencies to controversial double taxation; the shift in tax treatment is symptomatic of the government’s progressive stance on the cryptocurrency issue.

**Germany:** Although cryptocurrency is allowed in Germany, care must be taken not to break tax rules. However, there are a few caveats that investors should consider. When it comes to investing money in cryptocurrencies, there are also a number of advantages to be aware of. Germany, one of the top economies in Europe, does not aim to restrict the use of virtual currencies; therefore, German banking regulations do not apply to them. Such a distinction makes the ownership of cryptocurrencies legal so long as they are not exchanged for fiat cash. According to German criminal law, cryptocurrencies like Bitcoin are considered property and not currency.

They may be termed “private” funds that are unregulated by the government. As a result, no designated entity ensures cryptocurrency transactions, and the decentralized nature of cryptocurrencies prevents banks from intervening if a sale goes awry for one or both parties.

**India:** In terms of crypto legislation, India remains on the fence, neither legalizing nor criminalizing its use. A bill prohibiting all private cryptocurrencies in India is in circulation, although it has not yet been voted on. There is a 30% tax on all cryptocurrency investments and a 1% tax deduction at source (TDS) on cryptocurrency transactions. Overall, India continues to waffle between banning cryptocurrencies outright and regulating them. Existing restrictions are, at best, vague and offer investors little direction. The country has been developing a digital version of the rupee, which might be introduced in the 2022-2023 fiscal year.

**Limitations of the Study**

Given the current state of the regulatory environment, it is difficult to assess the level of transparency present in such a market. This study includes the limitations of assessing all of the risk variables that are included in cryptocurrency in order to construct the regulatory framework. This is because there is a lack of information and assessment of all of the risk elements that are related to Cryptocurrency. When it comes to cryptocurrencies, having a solid understanding of the notions of risk can provide market makers, investors, and regulators with useful implications. The potential future researcher can contribute to the advancement of the subject by analyzing all of the components that are a part of the cryptocurrency industry in order to give a useful framework.

**Conclusion**

Like any other innovative and potentially disruptive technology, the cryptocurrency ecosystem is always developing and changing. Volatility and growth alone should not be enough to entice interested investors. Before investing, they should have a firm grasp of the nature, function, rules, and state of these asset categories. From the analysis of the study, we can conclude that the Crypto market is growing tremendously despite its risks and most countries have provided laws for the sake of users. India also is at the stand of making regulations on Cryptocurrencies and their uses. Given the explosive growth of the crypto financial system, it is prudent for the Indian government to embrace digital money. However, it would be difficult for governments to craft a system that allows cryptocurrencies to thrive without watering them down. Therefore, essential measures must be done to design the cryptocurrency infrastructure so that its fundamental characteristics are preserved.

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