The Cryptocurrency Conundrum: Best Approaches to Regulation

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Abstract

Cryptocurrencies have become a hot topic lately and the Indian cryptocurrency market has recorded a massive surge (641%) with respect to investments in the crypto market. Cryptocurrencies are decentralized, disintermediated and pseudonymous. Therefore, they pose unique regulatory concerns that have yet to be adequately dealt with. The crypto ecosystem is decentralised, pseudonymous and is constantly evolving, with new cryptocurrencies, and intermediaries constantly emerging.

Moreover, the blockchain technology on which cryptocurrencies are based represents novel challenges and prospects for both regulators and other stakeholders as it precludes the need for any trusted intermediary or central bank and makes it difficult to monitor and regulate transactions.

In early 2020, the Apex Court in the IAMAI case overturned a circular banning cryptocurrency. Therefore, cryptocurrencies aren't prohibited in India, but there exists significant uncertainty regarding their future on the part of all stakeholders as they presently operate in a regulatory void. This absence of a regulatory framework has not deterred Indian investments in cryptocurrencies. However, the possibility of an impending ban has given rise to apprehension among investors, exchanges and other stakeholders. Such is the confusion that the RBI recently came up with the clarification that there was no prohibition on cryptocurrencies while at the same time warning the stakeholders regarding their risks. Therefore, it is crucial that the ambiguity that exists with regard to cryptocurrency regulation in India is eliminated.

This paper explores the regulatory risks and challenges posed by cryptocurrencies and attempts to assess whether regulation is desirable and even feasible in the case of cryptocurrencies. Further, this paper analyses the pros and cons of the major regulatory approaches available to India viz. Proactive Regulation, Outright Prohibition or an ex-post-facto reactive approach after waiting and watching how the cryptocurrency markets interact with the extant economic system. It attempts to ascertain the best approach for India with regard to cryptocurrency regulation given its unique economic need and endeavours to uncover whether India could attempt regulation by analogy, by extending the traditional regulatory frameworks to cryptocurrencies.

Keywords: *Cryptocurrency, Regulatory Concerns, IAMAI Case, RBI*

Introduction

A white-paper entitled "Bitcoin a peer to peer electronic currency", published in the wake of the 2008 financial crisis, paved the way for several other altcoins, which presently, along with Bitcoin form a crypto-economy that operates outside state control and has state actors on tenterhooks as to what its decentralised and disintermediated nature might spell for financial stability, policy and regulation.[2] Cryptocurrencies may be understood to be a form of digital money which is secured by cryptographic primitives, which is monitored and organised by a decentralised peer-to-peer-network known as a blockchain.[3] The technical features of cryptocurrencies ensure that counterfeiting and double-spending attacks don't happen, and the decentralised blockchain environment ensures the integrity of the transactions. The blockchain serves as an append-only, secure, distributed and immutable ledger where the buying, selling, and settlement of transactions take place.

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With cryptocurrencies being a relatively novel technology, regulators and policymakers all over the world are struggling to keep up with it and somehow bring them within the net of their regulatory frameworks. However, as with all technological developments, the law is struggling to catch up with it. This is reflected in the variance between the different regulatory approaches to the regulation of cryptocurrencies taken by different nations- while some chose to isolate, others chose to integrate or regulate.[4] This lack of consensus on regulation has also been reflected in certain nations choosing to prohibit currencies, while some regard them as legal, and some others even deem them to be legal tender. Contention also persists concerning the classification of cryptocurrencies as property, commodity, security, etc. across jurisdictions.

Although the popularity of Bitcoin and some other altcoins has been rising consistently since their inception, the lockdown following the pandemic witnessed a massive upsurge in interest in these cryptocurrencies, with the Indian crypto-market recording a 641% upshot in investments in the past year.[5] In context of Indian users, this could also be attributed to the fact that the Apex Court in early 2020 had overturned a circular that effectively banned cryptocurrencies in India. Recently, a popular crypto currency exchange CoinDCX became India's first crypto-Unicorn, despite the apprehensions regarding the prospects of cryptocurrencies in India. However, despite the substantial uptick in interest in cryptocurrencies, the absence of an effable regulatory framework has managed to keep the various stakeholders on pins and needles, waiting and watching with bated breath as to what is likely to be the future of cryptocurrencies in India.

This paper delves into the regulatory and policy risks associated with cryptocurrencies and attempts to ascertain the best approach towards cryptocurrency regulation for India, with reference to the predominant regulatory approaches in existence. This article is divided into five sections. Section 1 provides an overview of cryptocurrencies and their major technological and operational underpinnings. Section 2 highlights the major regulatory and enforcement-related risks and challenges that are likely to arise from unchecked proliferation of cryptocurrencies. Section 3 highlights the three major approaches viz. proactive regulation, prohibition and wait-and-see approaches and addresses their outcomes, while Section 4 highlights Indian regulatory environment pertaining to cryptocurrency regulations and attempts to ascertain which of the aforementioned approaches has India followed thus far. The Article concludes with suggesting a proactive, bespoke regime for India that balances the need for regulation with fostering an environment for encouraging technological innovation.

Cryptocurrencies: what are they?

October 31, 2008, marked a watershed moment for virtual currencies, when an mysterious person (or a group) going by the pseudonym Satoshi Nakamoto, released a paper that paved the way for the creation of Bitcoin, a system of digital 'currency'. This was a novel concept, as this digital currency constituted nothing but a 'string of digital signatures' stored on a blockchain, which was made tamper-proof by utilising cryptographic tools such as hash functions, asymmetric key cryptography and a proof-of-work consensus protocol.[6] Although, there had been multiple attempts at creating private digital currencies prior to bitcoin, Bitcoin managed to integrate various technological innovations like hash functions, cryptographic primitives etc, to create a unique and decentralised private virtual currency. The key feature of this technological innovation was that it took away the role of 'minting' money (rather, a digital coin) and record-keeping from trusted financial institutions like central banks and instead reposed it in a community of computer networks known as nodes, who relied on the protocol to arrive at a consensus regarding the state of the ledger (blockchain). Presently, more than 19,000 cryptocurrencies exist with a market capitalisation of more than 1 trillion dollars,[7] and are based upon the tenets of decentralisation, supply scarcity, anonymity and irreversibility of transactions.[8]

Cryptocurrencies denote a type of virtual currency that is reliant on a blockchain network i.e. a distributed network of computers, thereby ensuring that no single entity is in control of the network. They are capable of functioning as money in some cases, and therefore they have attracted significant attention from regulators and financial institutions.[9] Their distributed and decentralised nature permits them to circumvent the clutches of centralised regulatory and policy frameworks, and they do not depend on intermediaries such as central banks for their creation and distribution.[10]

Traditionally, money has been conceived of as something that derived value from a sovereign decree or an underlying asset. Historically, this process has invariably involved some trusted intermediaries, whether the sovereigns or central banks who monitor, validate and regulate the ecosystem. Cryptocurrencies, turn the system on its head and leverage the power of consensus to achieve cryptographic stigmergy to facilitate, verify and secure transfers of value between network participants.[11] These instruments take the power of ledger keeping away from centralised institutions and intermediaries, and vest it in a distributed network that employs cryptographic algorithms like public/private keys, hash functions and consensus protocols to verify, validate and secure transactions. Whether or not cryptocurrencies can be considered as money is a topic of contention, with the proponents arguing that cryptocurrencies can adequately function as a unit of account, a store of value and a medium of exchange. The opponents, however, believe that their market volatility precludes them from functioning as money, with some referring to their popularity as something akin to 'tulip mania'.[12] The jury is still out on this issue as there exists little consensus internationally concerning cryptocurrencies' status as money or otherwise.

The surge in their adoption has raised various regulatory and policy questions. On one hand, they have regulators on tenterhooks as their pseudonymous and encrypted nature precludes regulatory oversight and enables their use for illegal undertakings such as money laundering, tax evasion etc.[13] The lack of a central intermediate entity also makes it difficult to find a focal point for regulators, where possible regulations could be introduced. Their distributed nature leads to the creation of a variety of jurisdictional questions. Moreover, a secondary market for cryptocurrencies has also emerged, which is rife with scams and frauds. Therefore, the need to introduce investor protection and consumer protection measures has emerged, as well. The threat that they pose to economic stability & the fact that they circumvent governmental control over monetary policies arising from the ability of cryptocurrencies to compete with fiat currency, attract the apprehension of regulators.

On the other hand, cryptocurrencies can facilitate efficiency, cost-effectiveness and trust in decentralised systems, which could aid the unbanked population of the world. Similarly, cryptocurrencies might hold promise for people in nations where there exists hyperinflation, capital control and little trust in the government's monetary policy.[14] This is because cryptocurrencies purport to provide a decentralised, reliable and cost-effective means of transferring value peer-to-peer without relying on any trusted intermediary.[15] By relying on blockchains, cryptocurrencies are capable of creating distributed systems that are not as susceptible to attacks because there exists no single point of failure or control.[16]

Legal Risks and Challenges

With the recent boom in the proliferation of cryptocurrencies, various regulatory risks and challenges have also come into sight. While some of the risks pertaining to cryptocurrencies are imminent, some of them are largely remote. The decentralised, immutable, anonymous and borderless characteristics of cryptocurrencies make them a hotbed of possible regulatory concerns. While cryptocurrencies can be used to commit frauds, money laundering and circumvent taxation and CFT (countering the financing of terrorism) regimes, and various frauds and scams can be conducted through them, these risks associated with their usage are beyond the remit of this paper. This section primarily delves into the regulatory challenges and legal risks posed by cryptocurrencies.

The distributed and decentralised attributes of cryptocurrencies pose unprecedented questions regarding the extension of the traditional regulatory frameworks to these novel assets. Unlike traditional regulatory and policy frameworks which rely on regulation of a trusted intermediary like a central bank, payment processor, clearing house etc., cryptocurrencies are absolutely decentralized. Usually, there exists a central bank or a payment service such as PayTM, GooglePay etc. to monitor and oversee transactions, and these trusted intermediaries also serve as a focal point where regulations can be introduced. The decentralized architecture of blockchains (the technology upon which cryptocurrencies are based) precludes such regulatory oversight.[17] This also means that there is no specific legal entity within the blockchain environment that is charged with ensuring consumer or investor protection. Blockchains being transnational and disintermediated, have no gatekeepers or superior authorities, which can monitor and implement best practices. Because no one controls a blockchain, it becomes difficult for participants as well as regulators to govern the network and influence its underlying software protocol.[18] However, with time and proliferation, multiple new intermediaries are now arising, particularly in the secondary market for cryptocurrencies, which could potentially serve as focal points for regulation.[19]

Another cause of concern is the pseudonymous nature of cryptocurrencies which implies that while the transactions on the blockchain are transparent, the identifying or contextual information regarding such transactions, such as the real-world identity of the parties, the purpose of the various transactions etc. are not discernable on a blockchain. The use of cryptography, digital signatures, asymmetric public/private key functions make the identification of real-world identities of the participants difficult. Participants are identified on-chain by their cryptographic public "addresses" rather than their real-world identities. This pseudonymity offered by cryptocurrencies is an integral part of its value proposition, however, it is trite that this feature may be leveraged by malicious actors to conduct illicit transactions and to fund illegal activities.[20] The pseudonymity might encourage participants to employ cryptocurrencies to conduct tax evasion, terrorism financing and money laundering, because of limited chances of detectability.[21] The infamous Silk Road case[22], wherein cryptocurrencies such as Bitcoin were used on a darknet platform for illegal purposes such as the sale and purchase of drugs, illustrates the possibility of misuse of cryptocurrencies. Moreover, advanced cryptographic techniques known as zero-knowledge proofs have been used to facilitate greater anonymity in the case of certain cryptocurrencies like Monero and Zcash.[23]

From the regulators' perspective, the threat posed by cryptocurrencies is significant. Recently, RBI's Governor Shaktikanta Das flagged the ability of private cryptocurrencies to adversely impact the nation's economic stability.[24] Cryptocurrencies may compete with the fiat currency of a nation, and because of their decentralized nature which precludes sovereign control over monetary policy, they may have far-reaching impacts on financial stability. Central banks may eventually stand to lose their control over monetary policies if cryptocurrencies manage to compete with fiat currency in any real and meaningful way.[25] Money Laundering and financing of terrorist activities by leveraging the anonymity and encrypted features of these novel assets are also likely to attract the ire of regulators.

Their transnational and borderless nature allows them to easily circumvent jurisdictional norms in the absence of global consensus and standardization of regulatory frameworks. Since cryptocurrencies can easily cross state boundaries because of their decentralized, peer-to-peer nature, a lack of harmonious international standards of regulation may lead to jurisdiction shopping and regulatory arbitrage. For instance, there is a possibility of the creation of 'crypto havens' wherein market participants may easily circumvent stringent taxation and money-laundering laws.[26] The energy consumption levels of certain proof-of-work cryptocurrencies like Bitcoin have also raised apprehensions about their environmental impacts.[27]

Further, there exists little international consensus and standardisation across jurisdictions as far as regulation is concerned. This might lead to the development of crypto havens on one hand, or may even lead to onerous compliance requirements that overlap across jurisdictions, thus subverting the very merits (such as cost-effectiveness, efficiency and accessibility) of this innovation. Presently, most regulatory and policy regimes are nascent and are yet to mature, with all jurisdictions grappling with the following question: How do you regulate something that is borderless, distributed and decentralised? While it is possible to regulate consumers and users within a particular jurisdiction, the decentralised and distributed architecture of blockchain means that it is immensely difficult to regulate the cryptocurrencies themselves.[28]

Various Regulatory Approaches

As cryptocurrencies have gained immense popularity and traction during the past few years, several states have taken note of their potential risks and challenges. Although certain pro-active jurisdictions like USA, Canada, Germany, and France have already attempted to regulate cryptocurrencies, there still exists significant uncertainty regarding the best approach to regulate crypto-assets. Recently, the IMF also emphasized the need for "robust and globally consistent" standards for regulating the crypto market, owing to the risks it poses to global financial stability.

The Bank of International Settlements, Financial Action Task Force and IMF have also issued various white papers and guidelines on the potentials and pitfalls of cryptocurrencies. There exists a lack of international consensus regarding the treatment of cryptocurrencies and the nascent regulatory regimes established by jurisdictions are fragmented and inconsistent. Various countries subject cryptocurrencies to varying legal characterizations and tax treatments.[29] Furthermore, in a lot of countries cryptocurrencies continue to operate amongst regulatory uncertainty, and there is a lack of a clear and coherent framework.

Largely, the varied approaches taken by countries can be divided into three categories:

- *Proactive Regulation:* where states have attempted to install some sort of a regulatory structure, whether by bringing cryptocurrencies within the ambit of their present regulatory frameworks or adopting a sui generis regime.

  States opting for such proactive regulation have sought to harness the innovative technology behind cryptocurrencies to foster innovation and economic growth. They have taken a variety of approaches from extending existing regulatory and legal frameworks to cryptocurrencies to coming up with bespoke regulations to effectively monitor cryptocurrency-related activities. Many countries have come up with regulatory guidelines and white papers pertaining to the legal treatment of cryptocurrencies under their existing regimes and have classified certain activities as permissive while seeking to curb undesirable certain undesirable activities such as money laundering, funding of illicit activities and consumer/ investor fraud.[30] The Financial Conduct Authority of the United Kingdom, for instance, has published guidance in order to clarify what cryptocurrency-related activities fall within the purview of the extant regulatory framework and which fall outside.[31]

  On the other hand, certain countries have introduced amendments to their existing laws and regulations so as to proactively extend them to cover cryptocurrency-related activities and transactions. For example, the Securities Exchange Commission in the United States has extended its definition of exchanges to include cryptocurrency trading platforms and therefore subjected them to the existing registration requirements. Similarly, Japan has brought forth amendments to its Payment Services Act 2009 in order to govern various activities pertaining to cryptocurrencies.

Whereas jurisdictions such as Malta have also attempted proactive regulation by notifying several regulations such as The Virtual Financial Assets Act 2018, The Innovative Technology Arrangement and Services Act 2018, and have established the Malta Digital Innovation Authority pacifically attempt to cover, regulate and monitor blockchain and cryptocurrency-based services. France has also adopted a specific regulatory framework in order to provide licensing opportunities for Initial Coin Offerings.[32]

These proactive attempts at regulation, whether they be in the form of extension of the existent regulatory regimes or regulation by analogy or bespoke regulation – enable jurisdictions to harness the positive impacts of crypto currencies, to fuel innovation, and to incentivize new economic opportunities and job creation without forcing the entire crypto industry into shadows. Such approach provides regulatory clarity to various stakeholders such as consumers, investors, market participants and the novel into intermediaries that have emerged, thus fostering technological innovation and economic growth.

- *Outright Prohibition:* where countries have attempted to isolate the crypto markets by imposing an absolute ban on various activities pertaining to cryptocurrency usage, trading and exchanges.

  Such jurisdictions have attempted to ring-fence or isolate all activities pertaining to cryptocurrencies as they perceive cryptocurrencies as a threat to their economic stability and their ability to exercise capital controls and control their money supply. Examples of such jurisdictions include states like China, Bangladesh and Bolivia that have explicitly banned cryptocurrencies and all activities pertaining to cryptocurrencies such as use, exchange, trading, possession et cetera, and have thereby denied mainstream financial and banking service access to crypto-market participants.[33]

  Since regulated financial institutions have been barred from providing services to those dealing in cryptocurrencies it has forced the cryptocurrency industry into the shadows. The drawback of this approach is that it may drive cryptocurrency transactions underground, which may amplify the difficulties pertaining to the detection of illicit activities as well as enforcement of laws.[34] This might also lead to a massive exodus of talent and innovation, leading to the creation of cryptocurrencies as the stakeholders engaging in the industry might choose to migrate to more permissive jurisdictions. Such a restrictive approach also precludes jurisdictions from leveraging the beneficial aspects pertaining to cryptocurrencies in terms of enhanced transparency, privacy, efficiency and cost-effectiveness.

  Presently India also appears to be considering a blanket prohibition on cryptocurrency-related activities, although a similar restrictive measure by the Reserve Bank of India which directed regulated financial institutions from facilitating any cryptocurrency-related activities was turned down by the Indian Supreme Court in early 2020.[35] However, the evidence in favour of this prohibitory approach in India is fairly inconclusive.

- *Wait and See approach:* where certain nations have adopted an ex-post-facto reactive approach that entails waiting and watching how the cryptocurrency markets interact with the extant economic system.

  Certain jurisdictions have neither zeroed in on the potential of cryptocurrencies nor have they perceived the proliferation of cryptocurrencies as an immediate risk. This is owing to the relatively smaller proportion of the market cryptocurrencies occupy in comparison to the mainstream capital markets and fiat currencies. Jurisdictions following the wait-and-see approach often choose not to regulate or prohibit activities pertaining to crypto currencies, rather they elect to hold off on introducing any regulation until other jurisdictions have set a precedent.

Generally such jurisdictions tend to issue warnings while awaiting regulatory guidance from mature jurisdictions. For instance, the finance minister of India has flagged various risks and challenges pertaining to risks and challenges pertaining to crypto currencies. The Reserve Bank Of India has also issued certain warnings. [36]Similar warnings have also been issued in Netherlands. [37]Further, some of the jurisdictions following this approach may even believe that crypto currencies are self-regulating in the sense that the code running the block chains and cryptographic primitives ensure the safety of cryptocurrencies.

This approach entails close monitoring of cryptocurrencies without proactive attempts at regulation and ensures that a nascent industry is not stifled by overzealous or pre-emptive regulation. Nations like Japan, Canada, Hong Kong, Israel and Australia had initially followed this approach for the longest time until they decided to regulate. For the time being, it appears as if the Indian government is also following this approach and is looking towards regulatory guidance from the west.

India's Regulatory Landscape

Cryptocurrencies are not banned in India, however, there exists significant apprehension regarding cryptocurrencies on the part of all stakeholders in the absence of a robust regulatory regime. In India, cryptocurrency exchanges operated in a regulatory vacuum until the Reserve Bank of India in its Circular Prohibition on dealing in Virtual Currencies dated April 6, 2018[38], banned all entities under its regulation from dealing in or facilitating any dealings in cryptocurrencies.

This circular was quashed by the Supreme Court in Internet and Mobile Association of India v. RBI[39], wherein the Apex court, dealing for the first time with cryptocurrencies, held that while Virtual Currencies fall under RBI's regulatory authority, the prohibition imposed by the aforementioned circular was disproportionate, therefore ultra vires the right to carry out any occupation, trade or business enshrined in Article 19 (1) (g) of the Indian constitution. Subsequently, on February 28, 2019, the Government's Inter-ministerial Committee on released a report recommending certain measures in relation to cryptocurrencies, as well as a draft bill known as "Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019" which intends to prohibit mining, holding, selling, trade, issuance, disposal or use of cryptocurrency in the country and also proposes the introduction of a national cryptocurrency.[40] However, the fate of cryptocurrency regulation in India remains uncertain as of now.

Despite the looming threat of a ban, participation in activities involving cryptocurrencies has rocketed since the Supreme Court judgement and the lockdown following the COVID-19 pandemic. The year 2020 has exhibited a marked increase in traffic amongst international cryptocurrency exchanges from Indian users while the Indian crypto exchanges have reported a tenfold increase in user registrations.[41] Moreover, major businesses like Paypal, Cashaa and Tata Consultancy Services have exhibited an intention to enter the cryptocurrency market in India.[42] In light of these developments it seems that the only thing holding back the blossoming crypto industry in India is the lack of a clear regulatory ecosystem.

Cryptocurrencies continue to operate in the nebulous Indian regulatory ecosystem and have so far evaded regulation as currency or prepaid instruments or securities under the frameworks of FEMA, PSSA, SCRA or SEBI.[43] One of the major concerns of the Indian government regarding cryptocurrencies is their money laundering potential as the Indian anti-money laundering legislation i.e. the Prevention of Money-Laundering Act 2002 currently does not expressly cover cryptocurrency transactions. Reservations about a prospective ban continue to exist, however, it appears that the government has recently exhibited an inclination to tax cryptocurrencies, possibly because it was losing out on revenue from crypto-exchanges which escalated in the aftermath of the Supreme Court judgement.[44] This was evinced by the recent notices sent out by the income department to cryptocurrency investors enquiring about their cryptocurrency gains. Further, there are reports regarding a proposal regarding cryptocurrency taxation being formulated by the Central Board of Indirect Taxes and Customs to be laid before the GST Council in order to bring various activities associated with cryptocurrencies within the scope of the GST.[45]

In light of this background, it is important to note that regulation still lags behind financial innovation. The regulatory response to cryptocurrencies has been mixed, with the emerging premise being that while governments do not desire to stifle innovation by excessive and stringent regulation, there is a need to mitigate risks associated with these new financial advancements.

Recently, RBI published a clarification stating there was no prohibition on cryptocurrencies but it also warned the public about their risks.[46] While cryptocurrencies continue to operate in a regulatory lacuna, this uncertainty has failed to deter Indian households' investments in cryptocurrencies. India has witnessed a massive surge in cryptocurrency transactions- almost 641% over the course of 2020-2021.[47] On 1 February 2022 the budget speech by the Indian finance minister proposed a 30% tax on the income obtained from transfer of virtual digital assets. However, no deduction of expenses except the acquisition cost was contemplated. Moreover, losses in transfers of these virtual assets were not liable to be offset against other income, and gifts thereof were also declared taxable. On one hand, the proposed tax appears to be a step towards indirectly regulating cryptocurrency, but the high rate of tax imposed begs the question- is it a prohibitory measure in the guise of a regulation?[48]

Therefore, it is crucial that the ambiguity that exists with regard to cryptocurrency regulation in India is wiped out through a graduated proactive approach as opposed to the present "wait and see" approach. India should primarily attempt to extend the extant frameworks to regulate and legitimize permissible activities pertaining to cryptocurrencies, so as to provide clarity to stakeholders while encouraging further innovation. Simultaneously, Regulatory sandboxes and safe havens ought to be created by the government in order to gain better insights into the crypto markets and to incentivize permissible and legitimate uses.

India should look into the enactment of a sui generis regulation that provides technologically innovative solutions and a balanced approach that impedes the negative impacts of cryptocurrencies but interferes minimally with their benefits. Another key consideration for Indian law makers is the exorbitant cost and difficulty of enforcing any regulations withing the decentralised architecture of cryptocurrencies, therefore, they must attempt to harness the promise of this technology without isolating it entirely, which will lead to a massive exodus of talent and capital from India.

Conclusion and Suggestions: Ascertaining the best regulatory approach for India

The distributed, pseudonymous and transnational nature of cryptocurrencies makes it difficult to regulate these novel assets. Regulators face various jurisdictional and enforcement related challenges in regulating these borderless, decentralised, anonymous assets. Despite the regulation of cryptocurrencies being challenging, various nations have attempted to regulate cryptocurrencies in a variety of ways . This paper submits that broadly, three types of regulatory approaches exist with regard to cryptocurrencies, viz. Proactive Regulation, where states have attempted to install some sort of a regulatory structure, whether by bringing cryptocurrencies within the ambit of their present regulatory frameworks or adopting a sui generis regime; Outright Prohibition, where countries have attempted to isolate the crypto markets by imposing an absolute ban on various activities pertaining to cryptocurrency usage, trading and exchanges; or Wait and See approach where certain nations have adopted an ex-post-facto reactive approach that entails waiting and watching how the cryptocurrency markets interact with the extant economic system. It is submitted that given the costs and difficulties in enforcing stringent regulations in context of these borderless and decentralised assets, the regulation of cryptocurrencies ought not to entirely isolate the market, as this will lead to creation of cryptocurrency havens. Rather, optimal regulation of cryptocurrencies should focus of eliminating the risks and leveraging the benefits of cryptocurrencies and their underlying blockchain technology.

The paper then analyzes the Indian regulatory response to cryptocurrencies and highlights that cryptocurrencies are not banned in India. Despite there being no outright prohibition in place, significant apprehension regarding the prospects of cryptocurrencies exists on the part of all stakeholders in the absence of an effable and clear regulatory regime. In India, cryptocurrency transactions and associated market participants continue to operate in a regulatory vacuum, with little to no clarity about their regulation. The vacillating opinions published time and again by various government officials further exacerbate this confusion. Presently, India appears to be following a 'wait and see approach' while issuing intermittent warnings cautioning users against the risks of cryptocurrencies. India could possibly be looking for regulatory guidance from other jurisdictions with more well-established and. Mature cryptocurrency regulation regimes.

It is submitted that in order to harness and leverage the innovation behind cryptocurrencies, it is crucial that the ambiguity that exists with regard to cryptocurrency regulation in India is resolved through a graduated proactive approach as opposed to the present "wait and see" approach. India should primarily attempt to extend the extant frameworks to regulate and legitimise permissible activities pertaining to cryptocurrencies, so as to provide clarity to stakeholders while encouraging further innovation. Simultaneously, Regulatory sandboxes and safe havens ought to be created by the government in order to gain better insights into the crypto markets and to incentivise permissible and legitimate uses. Subsequently, India should enact a bespoke, or sui generis regulation that provides technologically innovative solutions and a balanced approach that harness the benefits and potential for cryptocurrencies and their underlying technology without isolating them and stifling innovation. The suggested approach will enable India to capitalise on the prospects and potential of this emerging technology, without leading to a massive exodus of talent and capital that will certainly ensue if India attempts to isolate cryptocurrencies by opting for a prohibitive approach.

Endnotes

[1] Cryptocurrencies other than Bitcoin are referred to as altcoins.
[2] Regulatory Approaches to Cryptocurrency: Isolate, Integrate, or Regulate, DUFF & PHELPS, https://www.kroll.com/en/insights/publications/expert-services/regulatory-approaches-to-cryptocurrency-isolate-integrate-or-regulate (last visited Dec 9, 2021).
[3] India's crypto market grew 641% over past year: Chainalysis, MINT (2021), https://www.livemint.com/market/cryptocurrency/indias-crypto-market-grew-641-over-past-year-chainalysis-11633398252642.html (last visited Dec 9, 2021).
[4] Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System, 9.
[5] All Cryptocurrencies, COINMARKETCAP, https://coinmarketcap.com/all/views/all/ (last visited May 28, 2022).
[6] AsianMarketCap Official, Key Characteristics of Cryptocurrency and Why Do They Matter to You, THE CAPITAL (2020), https://medium.com/the-capital/key-characteristics-of-cryptocurrency-and-why-do-they-matter-to-you-5f33e483a40f (last visited May 28, 2022).
[7] David W Perkins, Cryptocurrency: The Economics of Money and Selected Policy Issues, 31.
[8] What Is Cryptocurrency?, INVESTOPEDIA, https://www.investopedia.com/terms/c/cryptocurrency.asp (last visited Mar 14, 2022).
[9] Prateek Goorha, The Return of 'The Nature of the Firm': The Role of the, 1 5 (2018).
[10] Shaktikanta Das burns cryptocurrency investors: Crypto as bad as Tulip bubble? No, even worse | The Financial Express, https://www.financialexpress.com/market/shaktikanta-das-burns-cryptocurrency-investors-calls-crypto-assets-worth-less-than-tulip-bulbs/2430274/ (last visited Mar 14, 2022).
[11] Virtual currencies – Key Definitions and Potential AML/CFT Risks, 17 (2014).
[12] Perkins, supra note 8.
[13] Federal Reserve Bank of Boston, Bitcoin as Money?, FEDERAL RESERVE BANK OF BOSTON (2014), https://www.bostonfed.org/publications/current-policy-perspectives/2014/bitcoin-as-money.aspx (last visited Mar 19, 2022).
[14] What Is Cryptocurrency? supra note 9.
[15] Virtual currencies – Key Definitions and Potential AML/CFT Risks, supra note 12.
[16] Primavera De Filippi and Aaron Wright. Blockchain and the Law: The Rule of Code. , (2018) 34.
[17] ibid at
[18] Virtual currencies – Key Definitions and Potential AML/CFT Risks, supra note 12.
[19] Id.
[20] United States of America v. Ross William Ulbricht, No. 15-1815-cr (2d Cir. May 31, 2017).
[21] Aritra Banerjee, Michael Clear & Hitesh Tewari, Demystifying the Role of zk-SNARKs in Zcash, 2020 IEEE CONFERENCE ON APPLICATION, INFORMATION AND NETWORK SECURITY (AINS) 12–19 (2020).
[22] BL Mumbai Bureau, RBI Governor: Cryptocurrencies are threat to economic stability, https://www.thehindubusinessline.com/money-and-banking/rbi-governor-cryptocurrencies-are-a-threat-to-economic-stability/article64999837.ece (last visited Mar 23, 2022).
[23] BIS Quarterly Review September 2017 - International banking and financial market developments, 174 (2017).
[24] Anastasia Sotiropoulou & Stephanie Ligot, Legal Challenges of Cryptocurrencies: Isn't It Time to Regulate the Intermediaries?, 16 EUROPEAN COMPANY AND FINANCIAL LAW REVIEW 652–676 (2019).
[25] Joshua Rhodes, Is Bitcoin Inherently Bad For The Environment?, FORBES, https://www.forbes.com/sites/joshuarhodes/2021/10/08/is-bitcoin-inherently-bad-for-the-environment/ (last visited Mar 25, 2022).
[26] Scott D Hughes; Cryptocurrency Regulations and Enforcement in the U.S.; (2017) 45 W. St. U. L. Rev. 1.
[27] Cryptocurrency Regulations Around the World, INVESTOPEDIA, https://www.investopedia.com/cryptocurrency-regulations-around- the-world-5202122 (last visited Mar 25, 2022).
[28] Law Library Of Congress, U.S.. Global Legal Research Directorate, Issuing Body. Regulation of cryptocurrency around the world Albania, Algeria, Angola, Anguilla, Antigua and Barbuda, Argentina, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Belgium. THE LAW LIBRARY OF CONGRESS, GLOBAL LEGAL RESEARCH DIRECTORATE, Pdf. https://www.loc.gov/item/2021687419/ (last visited May 23,2022).
[29] Cryptocurrency Regulations Around the World, COMPLYADVANTAGE (2020), https://complyadvantage.com/insights/cryptocurrency-regulations-around-world/ (last visited Mar 26, 2022).
[30] Plan d'Action pour la Croissance et la Transformation des Entreprises, 2019.
[31] Crypto is fully banned in China and 8 other countries | Fortune, https://fortune.com/2022/01/04/crypto-banned-china-other-countries/ (last visited May 28, 2022).
[32] Cryptocurrency Regulations Around the World, supra note 28.
[33] Internet And Mobile Association of India v. Reserve Bank Of India MANU/SC/0264/2020.
[34] Reserve Bank of India - Notifications, https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11243 (last visited Mar 25, 2022).
[35] Everything you should know about cryptos, https://www.dnb.nl/en/innovations-in-payments-and-banking/everything-you-should-know-about-cryptos/ (last visited Mar 26, 2022).
[36] Prohibition on dealing in Virtual Currencies, RESERVE BANK OF INDIA (April 6, 2018), https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11243.
[37] Internet and Mobile Association of India v. RBI. (2020) SCC Online SC 275.
[38] Report of the Committee to propose specific actions to be taken in relation to Virtual Currencies, DEPARTMENT OF ECONOMIC AFFAIRS, MINISTRY OF FINANCE (2019),
[39] Approved and Signed Report and Bill of IMC on VCs 28 Feb 2019.pdf, https://dea.gov.in/sites/default/files/Approved%20and%20Signed%20Report%20and%20Bill%20of%20IMC%20on%20VCs%2028%20Feb%202019.pdf (last visited Mar 26, 2022).
[40] Indian crypto industry expanding, regulators seem reluctant to engage, COINTELEGRAPH, https://cointelegraph.com/news/indian-crypto-industry-expanding-regulators-seem-reluctant-to-engage (last visited Mar 25, 2022).
[41] TBitcoin Cryptocurrency Crosses Rs. 11 Lakh Mark in India | Technology News, https://gadgets360.com/others/news/bitcoin-rs-11-lakh-mark-india-cryptocurrency-etherium-monero-prices-2321455 (last visited Mar 25, 2022).
[42] MICHAEL S SACKHEIM, THE VIRTUAL CURRENCY REGULATION REVIEW (2018).
[43] India to ban trade in cryptocurrency, government working on a law, https://www.moneycontrol.com/news/business/economy/india-to-ban-trade-in-cryptocurrency-government-working-on-a-law-5642461.html (last visited Mar 26, 2022).
[44] Bitcoin & GST In India, https://www.avalara.com/in/en/resources/press/bitcoin-and-gst-in-india.html (last visited Mar 26, 2022).

[45] Reserve Bank of India - Notifications, https://rbi.org.in/Scripts/NotificationUser.aspx?Id=12103 (last visited Mar 26, 2022).Reserve Bank of India - Notifications, supra note 35.

[46] India's crypto market grew 641% over the past year: Report | Deccan Herald, https://www.deccanherald.com/business/business-news/india-s-crypto-market-grew-641-over-the-past-year-report-1037435.html (last visited Mar 25, 2022).

[47] Is Bitcoin Legal in India? SC Asks Centre to Take Clear Stand on Cryptocurrencies, NEWS18 (2022), https://www.news18.com/news/business/cryptocurrency/is-bitcoin-legal-in-india-sc-asks-centre-to-take-clear-stand-on-cryptocurrencies-4808711.html (last visited Mar 26, 2022).