A CRITICAL ANALYSIS OF THE IMPACT OF CRYPTOCURRENCY REGULATION ON FINANCIAL INNOVATION AND DIGITAL ASSET GOVERNANCE IN INDIA

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ABSTRACT

India's policy regarding cryptocurrencies is at a pivotal point, balancing prudent monetary management and the pressing demand for a definitive and prospective policy structure. In India, which is consistently one of the top 5 nations in the world as per the cryptocurrency adoption index, the legal framework is still reactive instead of proactive, despite the growing digital asset economy. The government acknowledges the existence of the virtual digital asset sector but takes only a tentative step towards its potential, with a thirty per cent flat tax on its income and a one per cent tax deducted at source on transactions under the Finance Act, 2022. Meanwhile, the Reserve Bank of India has conducted its own trial of a Central Bank Digital Currency, adding to the regulatory complexity. This paper critically examines how the existing and proposed regulatory measures affect financial innovation and digital asset governance in India. It draws on comparative examples from Singapore, the European Union, the United Kingdom, Germany, and some emerging economies, and concludes that the combination of disjointed regulation, ongoing legislative uncertainty and absence of proper regulation of digital assets are all contributing to the stifling of fintech innovation, the attraction of capital from the formal sector, and a lack of meaningful investor protection. The paper also argues that to make the most of the significant opportunities offered by the blockchain economy while ensuring systemic stability, India must have a risk-based, technology-neutral and coordinated regulatory approach that elevates digital asset governance as a separate stream of financial regulation.

Keywords: Cryptocurrency Regulation, Digital Asset Governance, Financial Innovation, Virtual Digital Assets, Blockchain, India, CBDC, MiCA.

1. INTRODUCTION

Decentralised digital assets have revolutionised the global financial landscape, potentially forever. Cryptocurrencies have evolved from a small-scale technological experiment to a multi-trillion-dollar asset class that has a complex relationship with payments services, investments, decentralised finance, non-fungible tokens and even sovereign monetary policy since the Bitcoin white paper was published in 2008. At the time of writing, the total crypto market capitalization is around USD 2.5 trillion, while the number of unique crypto users worldwide is over 420 million in 2023. With a young, tech-savvy population and a burgeoning fintech sector, India is in a very special position in this global transformation.

However, the regulatory response from India to this phenomenon has been confusing, contradictory and even hostile at times. In April 2018, the RBI issued a Circular which essentially barred regulated entities from engaging in cryptocurrency transactions with individuals and businesses. In fact, the Supreme Court of India had declared this circular invalid in March 2020 in the case of Internet and Mobile Association of India v Reserve Bank of India[1], however, this has not been adequately addressed by any legislation. The Finance Act, 2022 created a harsh tax regime for virtual digital assets[2] (VDAs) without giving any clarity in the law. In late 2021 a bill which was meant to ban or extensively regulate private cryptocurrencies was placed for Parliamentary consideration but was never tabled.

This paper examines critically the effect of this opaque regulatory landscape on India's financial innovation and digital asset governance. It is organized into five substantive parts: Literature review, analysis of current regulatory framework in India, comparative analysis of the international frameworks, impact of regulation on innovation and governance and finally, policy recommendations based on the existing literature.

2. REVIEW OF LITERATURE

In the last five years, the academic world has produced a significant amount of literature on the regulation of cryptocurrencies, and certain works are directly relevant to the Indian context.

In 2025, Santhosh Chitraju explores the nexus between Digital Asset regulation and systemic

[1] Internet & Mobile Ass'n of India v. Reserve Bank of India, (2020) 10 SCC 274.
[2] Finance Act, No. 6 of 2022, §§ 115BBH, 194S (India).

financial stability[3]. He says that the current national guidelines are too piecemeal and that they make it possible for money-lenders to take advantage of these opportunities, thus increasing the financial risks, while at the same time only adaptive governance structures can keep a balance between innovation and market stability. The key pillars of his roadmap are transparency, Anti-Money Laundering (AML) compliance, and cross-border coordination.

Dr. Aneesh V. Pillai's highly critical legal analysis of India's Finance Act, 2022[4]. He notes that imposing a thirty per cent tax on VDA income is a testament to the government's awareness of the sector, but is not substantive regulation in and of itself – it does not define the legal nature of a VDA, nor does it create a licensing regime, nor does it provide investors with enforceable rights. He is convinced that tax regime without regulation creates a dangerous legal vacuum and India should have a technology neutral and risk based framework.

Naveen Kumar analyzes the risks and opportunities in the Indian cryptocurrency market[5]. He highlights an intriguing paradox: India is one of the biggest markets for cryptocurrencies in the world, but has a regulatory regime that actively discourages formal involvement. Kumar advocates for a regulatory model that can be used to learn from the experiences of the United States, the European Union and Japan, and that can work to tackle questions of volatility, cybersecurity and money laundering and not be an impediment to innovation.

Amit K. Kashyap, Kadambari Tripathi and Pranav Singh Rathore discuss the viability[6] of incorporating crypto into the legal and financial landscape in India. They contend that an outright ban is legally unfeasible, following the Supreme Court's decision, and unworkable due to the decentralised nature of networks. They recommend a "licensed" structure, and a "structured" one, for the dual purpose of investor protection and financial innovation.

Muhammad Hafizuddin bin Sufian and co-authors[7], from a comparative standpoint, look at the regulatory frameworks of Malaysia, Indonesia and Singapore and conclude the Payment Services Act of Singapore (PSA) is the most successful in terms of investor confidence and market depth, given that digital payment token services are licensed, subject to AML/CFT

[3] Santhosh Chitraju, Digital Asset Regulation and Systemic Financial Stability (2025).
[4] Aneesh V. Pillai, Legal Analysis of India's Finance Act, 2022 and Virtual Digital Assets (2025).
[5] Naveen Kumar, Cryptocurrency Regulation: Risks and Opportunities in India (2024).
[6] Amit K. Kashyap, Kadambari Tripathi & Pranav Singh Rathore, Cryptocurrency Regulation and the Indian Legal Framework (2024).
[7] Muhammad Hafizuddin bin Sufian et al., Comparative Regulation of Digital Assets in Malaysia, Indonesia and Singapore (2024).

measures, and meet consumer protection standards. Christoph Wronka's comparative study of the UK and Germany[8] shows a tension between principle-based and rules-based regulation, while Junaid Rahman and co-authors singled out the EU's Markets in Crypto-Assets Regulation (MiCA)[9] as the most comprehensive regulatory model so far developed.

Junaid Butt places the discussion in the wider context of international governance[10], suggesting that institutions like the IMF, the Financial Stability Board, etc. have a pivotal role to play in creating a harmonised set of standards across the globe. At the same time, Ian Staley and Eric Amankwa[11], among those researching emerging markets such as India, are discovering that a supportive and clear regulatory stance is measurable in terms of how fast blockchain adoption happens, while the opposite is true for other nations that present less hospitable conditions. Chinhita Sanyal concludes the survey[12] by reviewing the corporate dimension, outlining the risks to businesses wishing to integrate crypto-assets into their financial activities stemming from the regulatory uncertainty.

Combined, the literature reflects four recurring ideas: firstly, that taxes are insufficient as substitutes for regulations, and secondly that international coordination is essential for the effectiveness of regulation, thirdly the importance of a centralising function of protection of investors and consumers in the design of regulation and fourthly, that India is lagging behind the comparator jurisdictions. This paper continues along this theme in the analysis below.

3. INDIA'S EXISTING REGULATORY ARCHITECTURE FOR DIGITAL ASSETS

3.1 The Taxation-First Approach and Its Limitations

The most tangible interaction with cryptocurrency regulation that India has had so far is fiscal and not structural. The Finance Act, 2022, introduced a new section 115BBH in the Income Tax Act, 1961, stating that any income attributable to transfer of a virtual digital asset shall be taxed at a flat rate of thirty per cent, irrespective of the investor's income bracket and time of holding the asset. The introduction of Section 194S also brought along a one per cent tax

[8] Christoph Wronka, Cryptocurrency Regulation in the United Kingdom and Germany: A Comparative Study (2023).
[9] Junaid Rahman et al., The European Union's Markets in Crypto-Assets Regulation (MiCA): A Comprehensive Analysis (2024).
[10] Junaid Butt, International Governance of Cryptocurrencies and Digital Assets (2024).
[11] Ian Staley & Eric Amankwa, Regulatory Clarity and Blockchain Adoption in Emerging Markets (2024).
[12] Chinhita Sanyal, Corporate Challenges in Cryptocurrency Regulation and Governance (2024).

deducted at source on transactions where the value of goods involved is more than a certain amount with respect to VDA transactions. There is an explicit legislative aim of taxing this activity and thus to collect data on the extent of participation in the sector.

The domestic exchange sector suffered immediate and serious consequences. In the post tax regime period, trading volumes on Indian crypto exchanges were seen to drop by an estimated sixty-seven per cent.In the months after the new tax regime, the trading volume on cryptocurrency exchanges in India was seen to drop by an estimated sixty-seven per cent. However, a large amount of trading activity moved to offshore platforms and decentralised exchanges, which are much more difficult to monitor and control, said the industry body Bharat Web3 Association. The statistical data is of value: In the first quarter of the fiscal year 2022-23, the volume of trades on the centralised exchanges in India dropped from some USD 38 billion per month to less than USD 12 billion per month, while trades on exchanges elsewhere in the world remained constant. What they are saying is that if you tax, you don't have risk, you just have risk transferred somewhere else, which, as Dr. Pillai and others have said, is an important point.

3.2 The PMLA Extension and AML/CFT Obligations

The central government in March 2023 included virtual digital asset service providers under the Prevention of Money Laundering Act, 2002[13]. It was a major leap forward in several aspects: crypto exchanges and wallet service providers had to register with the Financial Intelligence Unit, implement KYC and KDD protocols and store transaction logs.

This extension is generally seen as an essential step towards financial integrity, but has been criticized as failing to offer a tangible structure for the licensing, capitalization, or consumer redress. The Indian experience of businesses having difficulties in opening bank accounts or gaining access to payment infrastructure despite PMLA registration is in line with the aforementioned observation by Chinhita Sanyal.

3.3 The CBDC Initiative

The Reserve Bank of India (RBI) has initiated pilots of the digital rupee, its Central Bank Digital Currency (CBDC), in the wholesale and retail segments in late 2022 and 2023

[13] Prevention of Money Laundering Act, No. 15 of 2003, India Code (2002).

respectively. Unlike private cryptocurrencies, the digital rupee is a liability of the RBI and will have a different kind of identity; it will be centrally issued, centrally controlled and having the same characteristics of physical cash.

This has been observed as an interesting contrast from the government's position, which seems to simultaneously oppose the regulation of private digital assets and to advocate for the CBDC, both of which represent a government's love for state-controlled digitisation over financial innovation at a decentralised level, by analysts and legal scholars like Dr. Pillai. The pilot of the CBDC is an important technological development, but it doesn't address the governance lacuna in the private agri-digital asset sector, nor does it necessarily exclude the development of creative, private-sector applications.

3.4 The Legislative Gap: The Lapsed Bill

The most notable lack in the regulatory framework in India is primary legislation. The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 was included in the business schedule of Parliament in December 2021, but never came up for debate. At the time, government officials said a committee of stakeholders was still discussing the shape of the committee. To date, there is no new bill and the industry continues to be governed by a piecemeal tax regime, PMLA requirements, and judicial precedents, as Kashyap and his co-authors point out, which is "legally untenable".

In recent years, the Securities and Exchange Board of India (SEBI) has indicated that it is interested in taking regulatory control of crypto-assets with the characteristics of securities, and in 2024, SEBI issued a consultation paper for a framework for crypto asset regulation. But, any SEBI framework would lack clarity in terms of legal powers, and would fail to cover all the types of digital asset, including the utility tokens, stable coins and decentralised finance protocols.

4. COMPARATIVE REGULATORY FRAMEWORKS: LESSONS FOR INDIA

4.1 The Singapore Model: Innovation with Guardrails

In the literature, Singapore's Payment Services Act, 2019[14] (PSA) is often referred to as the

[14] Payment Services Act 2019 (Sing.).

most developed and informative model for a developing country such as India. The Monetary Authority of Singapore (MAS) supervises digital payment token services under a multi-tiered licensing framework that sets the requirements for compliance based on the level and risk associated with each service. The AML/CFT requirements are very strict, but the framework is technology neutral and offers certainty to the innovators.

A more successful example is the Singapore model which proves that investor protection and financial innovation do not need to be sacrificed: The MAS has implemented clear definitions that allow for licensing and also put in place mechanisms for consumers to seek redress, which has led to a significant influx of investment in the blockchain infrastructure without compromising systemic integrity. This model would be useful for India, which has a similar challenge of financial inclusion and market development.

4.2 The European Union's MiCA Framework

The Markets in Crypto-Assets Regulation (MiCA) becomes effective in June 2023[15] and is the most comprehensive effort so far by any major jurisdiction to establish a harmonised regulatory regime for digital assets. MiCA distinguishes crypto-assets into three categories: asset-referenced tokens, e-money tokens and other crypto-assets which are required to comply with specific disclosure obligations in the white paper, capital requirements, reserve requirements and conduct of business.

The two features of MiCA are instructive for India. First, its classification approach provides a blueprint that India can follow: Payment tokens, investment tokens and utility tokens can be subject to different regulations, and not a blanket ban or a single tax. Second, MiCA's extraterritorial nature – requiring non-EU issuers that target EU consumers to follow disclosure obligations – indicates that India's regulatory decisions will impact Indian consumers' access to global platforms.

4.3 Emerging Markets: The Importance of Institutional Readiness

A comparative study by Ian Staley and Eric Amankwa reveals that the effectiveness of a crypto regulatory regime is not just dependent on its legal substance but also on the institutional

[15] Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets (MiCA).

competence of the regulatory bodies charged with its implementation, in emerging markets such as India, China, Nigeria, Kenya, Turkey, and Albania. Those jurisdictions with supportive regulations that did not invest in supervisory capacity (e.g., training, technology, inter-agency coordination) experienced limited benefits. India's problem is not just that it needs to create good laws, it also needs to establish the set of institutional mechanisms to ensure their effective implementation.

This is consistent with the international FATF guidance on virtual assets, which highlights the need for good regulation to have not only legal definitions but effective supervision and international coordination through mutual legal assistance and information sharing.

5. IMPACT OF REGULATION ON FINANCIAL INNOVATION AND DIGITAL ASSET GOVERNANCE

5.1 The Innovation Suppression Effect

The immediate and measurable consequences of the present regulatory stance of India have been on the stifling of domestic financial innovation. In times of high regulatory uncertainty, institutional investors and venture capitalists invest in other opportunities. The Indian crypto market raised around USD 1.1 billion in total during 2021-23, a small portion of the amount raised by the similar markets in Singapore, UAE and UK in the same time frame. To avail the benefits of regulatory clarity, several crypto firms established by Indian entrepreneurs moved their headquarters to Singapore, the UAE or the Cayman Islands, among which are some of the biggest exchanges and DeFi development protocols.

Regulations that align with, and don't hinder, the evolving nature of digital finance can enable businesses to plan with greater certainty, bring in long-term investors, and recruit the best talent available, Chitraju says, which is where adaptive governance comes into play. It is not doing any of these in India. The tax rate of thirty per cent, one of the highest in the world for an asset class, coupled with the lack of loss set-off provisions – a feature which is unique in the world and which makes India a less competitive innovation hub than it was before – has made the situation even worse.

The fact that India's domestic retail participation in crypto markets, though relatively great in numbers given the size of its population, has actually fallen as a percentage of the global participation is specifically highlighted by Naveen Kumar's empirical observation, given a trend that, up until the 2022 tax changes, was one of growing participation.

5.2 Investor Protection and the Governance Vacuum

One consistent issue highlighted throughout the literature is that retail investors have no meaningful legal protection because of the lack of a licensing system. In a regulated market like securities market, investors have options of using the dispute resolution forums provided by SEBI, Securities Appellate Tribunal, and Courts. In the virtual digital asset area, there is no similar framework. So far, when withdrawals have been suspended, as they were during market stress, investors have been unable to take effective steps to recoup their losses.

But Kashyap and co-authors make a strong case for the inability of taxation to achieve investor protection. Protection relies on disclosure duties (so that investors have sufficient information regarding the risk of the assets purchased), segregation of client assets (so that if the exchange becomes insolvent, investors do not lose the assets they placed), fit and proper criteria for promoters and key management persons and market conduct rules which forbid exchange manipulation and insider trading. However, none of the following protections are available in the Indian crypto space as of yet.

Both MiCA in the EU and the authorisation regime of the FCA in the UK offer examples of how this protection can be provided without banning the activity itself. India hasn't taken similar steps, leaving a population of tens of millions of retail investors vulnerable to substantial and unabated risk.

5.3 AML/CFT Compliance and Financial Integrity

It would be wrong to underestimate the significance of the extension of the PMLA obligation to VDA service providers, as the measure is the most substantive governance step so far taken by India. The government has enhanced their on-chain visibility with KYC, transaction monitoring, and suspicious transaction reporting. The Financial Intelligence Unit noted a significant surge in the number of Suspicious Transaction Reports in the virtual asset industry in the year after the PMLA extension.

But as both Chitraju and Butt note, AML/CFT compliance frameworks work only as much as they can to cover the entire spectrum of activity. A VASP-centric framework cannot be implemented in decentralised exchanges, privacy coins, or cross-chain bridges, all of which are currently being used in India. To overcome these deficiencies, adequate internal controls are not only a necessity but also FATF's inter-governmental peer review process and bilateral supervisory cooperation with relevant partner jurisdictions.

The Financial Stability Board has also recommended similar measures in its global framework for crypto-asset activities from 2023, which involve making information about crypto-assets fully available to regulators and establishing a baseline understanding of crypto-assets that would prevent regulatory arbitrage.

5.4 The DeFi and NFT Frontier

One of the more important and overlooked aspects of the governance challenge is the rise of decentralised finance (DeFi) and non-fungible tokens (NFTs). DeFi platforms are different from centralised exchanges because they don't have any named middleman, they are automated and self-executing contracts. This makes it difficult to apply the traditional regulatory methods of regulating the intermediary, not the underlying transaction.

Junaid Rahman and co-authors highlight the struggle the regulatory world is facing around the world. The MiCA, for example, which is the EU's new crypto regulation, leaves completely decentralised services with no identifiable issuer or service provider outside its scope and the European Commission has pledged to review the current rules within 18 months of the adoption. India, which has not even come up with an all-encompassing solution for the centralised crypto, is still lagging when it comes to thinking about the DeFi question. Regulatory sandboxes, which are supervised environments where new business models can be tried out subject to different rules, are seen as the most promising short-term way to create proportionate regulation for DeFi without stifling innovation in the academic literature.

The definition of innovation sandboxes has been tried and tested in other sectors like India's SEBI and RBI in their respective fields and if it were to be applied to the digital asset space, it would be a practical and low-risk approach.

6. POLICY RECOMMENDATIONS

This paper makes the following recommendations based on the comparative literature cited and the analysis of the prevailing regulatory regime in India.

First, India should adopt a specific 'Virtual Digital Assets Act' that offers legal definitions, a graduated licensing system, investor protections requirements and market conduct laws. The classification adopted by MiCA (payment tokens, investment tokens and utility tokens) is a workable starting point that can be fine-tuned as per the Indian market structure and constitutional design.

Second, the jurisdiction over the regulations shall be clearly defined. The existing uncertainty regarding the jurisdiction of SEBI, RBI and a new dedicated body over various types of digital assets brings compliance and enforcement challenges. A level of inter-agency co-ordination would help to minimise this through the use of a clear framework, similar to that of the Financial Services Regulatory Authority in some jurisdictions.

Third, the tax framework of VDAs needs to be rationalized. The current 30 percent flat tax, however, without any facility of loss, is an anomaly in the international arena and is a disincentive to formal market entry. The reduction of the tax rate with the usual capital gains treatment or at least the addition of a loss set-off mechanism would make India's regime more in sync with established international norms and it would still serve its legitimate revenue aim.

Fourth, India needs to develop the capacity of the institutions for supervision in advance of complete regulations. As Staley and Amankwa show, even a well-designed regulation can be ineffective when the institutions responsible for its implementation are technically deficient, do not have the necessary data systems, and do not have the necessary inter-agency linkages.

Fifth, India must be actively involved in the multilateral development of regulations through the FATF, the FSB, the International Organisation of Securities Commissions and the G20 framework for digital assets (whose presidency India will occupy in 2023). In the absence of bilateral control of a borderless technology, international coordination is not only needed but it is structurally required.

Last but not least, India needs a regulatory sandbox crafted for DeFi and blockchain innovation. A well-designed sandbox would enable the regulator to study new business models in an environment that is conducive to responsible innovation, create proportionate rules on the back of real-world experience and help India to be a thoughtful and credible member in global digital asset governance.

7. CONCLUSION

India is at a crossroads when it comes to the governance of digital assets. The country boasts a demographic profile, technological prowess and financial infrastructure to be a front runner for responsible digital asset innovation. It is a lack of the right legal and regulatory structure that is missing and is very much needed.

The analysis in this paper shows that the status quo in India – marked by a harsh tax regime, a partial obligation to PMLA, a pilot for a central bank digital currency and a complete lack of primary legislation – has created the worst of two worlds – it has stifled domestic innovation while failing to curb financial crime and shield retail investors adequately. Trading volumes have been shifted outside the United States, startups have been moved and tens of millions of retail investors are legally unprotected.

The comparative literature offers lessons and, viewed as a whole, provides remarkably similar guidance: Legal Certainty, technology-neutral and graduated licensing, consumer and investor protection, AML/CFT enforcement coordination, and supervisory institutional capacity are the fundamentals of effective Digital Asset Governance. All of these are not barriers to innovation, in fact, the evidence from Singapore, EU and UK indicates that they facilitate innovation.

India's constitutional and legislative framework can certainly provide such a framework. There needs to be political courage to do so and intellectual humility to learn from the experience of regulatory development and the failures in regulatory development of jurisdictions that have gone ahead of us and further on this path. The consequences of doing nothing, in terms of lost investment, lost innovation and unprotected investors, increase over the years.