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The Decentralized Conundrum: Legal and Regulatory Challenges of Blockchain Technology in India

Harshita Pandey[1], Dr. Tapan Chandola[2]
[1,2]*Amity University Lucknow*

***Abstract*—This study critically evaluates the evolving legal and regulatory environment for blockchain technology and Virtual Digital Assets (VDAs) in India. Caught between promoting technological advancement and safeguarding financial stability, India's regulatory strategy has shifted from outright bans to targeted fiscal and anti-money laundering measures. Drawing on key judicial precedents, statutory developments, and inherent technological-legal tensions such as smart contract enforceability and conflicts with data privacy norms this analysis proposes a forward-looking regulatory blueprint. The goal is to create a framework that balances innovation with risk mitigation.**

***Index Terms*—Blockchain, Virtual Digital Assets, Regulation, Smart Contracts, Data Privacy, India**

I. INTRODUCTION

Blockchain, a distributed ledger underpinned by cryptographic consensus, disrupts conventional paradigms of trust, transactions, and record-keeping. Its decentralized architecture poses a profound challenge to state sovereignty: how can regulators oversee systems designed to evade central control? In India, home to a burgeoning Web3 ecosystem and widespread cryptocurrency adoption, this tension manifests acutely. This paper traces India's regulatory odyssey from prohibition to pragmatism while dissecting unresolved frictions like smart contract validity under legacy laws and blockchain's clash with emerging privacy statutes. It culminates in actionable policy recommendations.

II. EVOLUTIONARY JURISPRUDENCE ON BLOCKCHAIN IN INDIA

2.1 The RBI's 2018 Prohibition and Its Overreach

In April 2018, the Reserve Bank of India (RBI) issued a directive barring regulated entities from facilitating virtual currency transactions, citing risks to financial stability. This "master circular" severed banking access for crypto exchanges, prompting industry exodus and legal backlash. [1]

2.2 The 2020 Supreme Court Pivot: Internet and Mobile Association of India v. RBI

The Supreme Court's landmark ruling in Internet and Mobile Association of India v. Reserve Bank of India (2020) invalidated the RBI circular.[2] Applying the doctrine of proportionality, the Court held that while the RBI could regulate systemic risks, a total ban exceeded its statutory powers absent proven harm to banking entities. This decision breathed life into India's crypto sector, creating a de facto regulatory hiatus.

III. PREVAILING LEGAL AND REGULATORY ARCHITECTURE

India has eschewed a standalone crypto law, opting instead for piecemeal integration into extant frameworks.

3.1 VDA Taxation Regime

The Finance Act, 2022, formally acknowledged VDAs via Sections 115BBH and 194S, imposing:

[1] Reserve Bank of India, Prohibition on Dealing in Virtual Currencies, Circular No. DBR.No.BP.BC.104/08.13.102/2017-18 (Apr. 12, 2018).

[2] Internet & Mobile Ass'n of India v. Reserve Bank of India, (2020) 10 SCC 274.

- A 30% flat tax on VDA transfer gains (no loss set-off allowed).
- 1% TDS on transfers exceeding ₹50,000 (₹10,000 for specified persons).[3]

This punitive structure, while revenue-generating, signals VDAs' legal legitimacy short of legal tender status.

3.2 PMLA Integration and FIU-IND Oversight

A March 2023 notification extended the Prevention of Money Laundering Act, 2002 (PMLA) to VDA service providers (VASPs), mandating FIU-IND registration, KYC/AML protocols, and suspicious transaction reporting.[4] This aligns India with FATF's "Travel Rule," curbing illicit finance but raising decentralization concerns.

IV. PERSISTENT LEGAL TENSIONS

4.1 Enforceability of Smart Contracts under the Indian Contract Act, 1872

Smart contracts autonomous code executing predefined conditions test traditional contract law. Section 10 of the Contract Act requires mutual consent and lawful object; Section 10A of the IT Act, 2000, endorses electronic contracts.[5] Yet, disputes over code bugs or oracle failures challenge remedies, as pseudonymity obscures party identification. Courts may invoke equity principles, but "code is law" ethos demands novel jurisprudence.[6]

4.2 Immutability vs. Data Privacy: The DPDP Act Collision

The Digital Personal Data Protection Act, 2023 (DPDP Act) enshrines the "right to erasure."[7] Blockchain's append-only ledgers render this impossible for on-chain personal data, birthing a compliance paradox. Mitigation strategies include zero-knowledge proofs or off-chain storage, but these dilute blockchain's purity.

4.3 Jurisdictional Quandaries and Arbitrage Risks

Borderless blockchains confound territorial jurisdiction. A DAO exploit impacting Indians implicates multiple regulators (RBI, SEBI, MeitY), fostering forum-shopping and enforcement gaps.[8]

V. INDIA'S CENTRALIZED COUNTERMEASURE: THE E₹ CBDC

The RBI's digital rupee (e₹) pilot, launched in 2022, exemplifies "blockchain with guardrails."[9] Programmable and traceable, it neutralizes private crypto threats while piloting DLT for wholesale/retail use.

VI. POLICY PRESCRIPTIONS FOR EQUILIBRIUM

1. Token Taxonomy: Classify assets (e.g., utility vs. security tokens) with SEBI overseeing the latter.[10]
2. DeFi Sandboxes: Tailored regulatory testing zones for protocols and audits.
3. Privacy-Tech Hybrids: Incentivize privacy preserving tech like homomorphic encryption.
4. International Alignment: Champion G20 standards to preempt arbitrage.

VII. CONCLUSION

India's blockchain saga reflects a maturing yet fragmented response: judicial liberalization, fiscal deterrence, and AML vigilance. Absent comprehensive legislation, frictions persist eroding investor confidence and innovation. A principled,

[3] Finance Act, No. 6 of 2022, §§ 115BBH, 194S.

[4] Ministry of Finance, Notification No. PMLA/3/2023 (Mar. 7, 2023), Gazette of India.

[5] Ministry of Finance, Notification No. PMLA/3/2023 (Mar. 7, 2023), Gazette of India.

[6] Werbach, Kevin & Cornell, Nicolas, Contracts Ex Machina, 67 Duke L.J. 313 (2017).

[7] Digital Personal Data Protection Act, No. 22 of 2023, § 12.

[8] See Global Legal Insights, Blockchain & Cryptocurrency Laws 2026: India (2025), https://www.globallegalinsights.com/practice-areas/blockchain-cryptocurrency-laws-and-regulations/india/.

[9] RBI, Concept Note on Central Bank Digital Currency (Oct. 7, 2022).

[10] Cf. EU Markets in Crypto-Assets Regulation (MiCA), Regulation (EU) 2023/1114.

adaptive framework is imperative to position India as a Web3 leader, transforming the decentralized dilemma into a sovereign opportunity.

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[4] Finance Act, 2022; Prevention of Money Laundering Act (PMLA) Notification, 2023.
[5] Digital Personal Data Protection Act, 2023.