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Legal challenges in the regulation and laws of cryptocurrency

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ABSTRACT

Cryptocurrencies are digital tokens secured by cryptography and recorded on decentralized networks, offering innovations like peer-to-peer finance and token-based fundraising but also posing risks such as wild price swings and laundering opportunities. This study uses doctrinal analysis—reviewing laws (e.g., RBI Act, FEMA, PMLA), court rulings (such as IAMAI v. RBI), and regulatory notices—to map India's material and procedural rules for crypto. India's response has been fragmented: RBI cautions in 2013/17 and a 2018 banking-ban overturned in 2020 left no unified law, while the draft 2021 Bill remains pending.

Tax measures in 2022 imposed a 30 % flat tax on crypto gains (Section 115BBH) and 1 % TDS on transfers above ₹10,000, but lack clear licensing or consumer safeguards. Comparative review shows the U.S. relies on SEC enforcement (Howey Test) and FinCEN's MSB rules, whereas the EU's MiCA sets uniform definitions, licensing, and AML/CFT standards. Key gaps in India include unclear asset definitions, no VASP registry, and weak AML "travel-rule" compliance. The dissertation recommends a technology-neutral crypto law with precise definitions, a licensing regime, mandatory KYC, consumer-protection mechanisms, and adaptive sandboxes supported by AI-driven monitoring tools

Literature Review

This literature review examines scholarly and policy literature on cryptocurrency regulation, with a primary focus on the Indian legal context and selective reference to global frameworks. It is organized thematically into five sections: (1) conceptual foundations and evolution of cryptocurrency; (2) domestic regulatory responses; (3) comparative international lessons; (4) enforcement, consumer protection, and AML/CFT literature; and (5) emerging trends and adaptive regulation. Throughout, the discussion draws on doctrinal scholarship, government reports, and peer-reviewed studies to situate India's regulatory challenges within broader academic debates.

1. Conceptual Foundations and Evolution of Cryptocurrency

Early scholarship on digital cash laid the groundwork for understanding cryptocurrency. David Chaum's Ecash model (1982) introduced untraceable e-money, envisioning cryptographic protocols for privacy and security. Building on this, Nakamoto's Bitcoin white paper (2008) conceptualized a decentralized, peer-to-peer electronic cash system secured by proof-of-work and recorded on a public ledger called blockchain. Academics such as Narayanan et al. (2016) and Crosby et al. (2016) have chronicled how blockchain's distributed consensus and immutable record-keeping offer transparency and resilience against fraud. Yet, they also warn of scalability constraints and energy consumption in proof-of-work networks. Subsequent tokens—Ether for smart contracts, stablecoins pegged to fiat, and utility/security/asset-referenced classifications—have diversified the space (Buterin, 2014; FATF, 2018; EU MiCA, 2023). Doctrinal scholars note that

this rapid innovation outpaces existing legal definitions of "currency," "commodity," and "security," raising foundational questions about property rights, jurisdiction, and systemic risk.

2. Domestic Regulatory Responses in India

India's regulatory engagement began with the Reserve Bank of India's (RBI) 2013 press release warning users of unregulated financial and legal risks in virtual currencies, followed by a 2017 caution reiterating that no formal authorization existed. In April 2018, the RBI escalated to a circular directing banks to cease services to crypto entities—ostensibly to curb money-laundering and protect financial stability. Legal scholars (Garg & Singh, 2020; Mehta, 2021) critique this moves as disproportionate, highlighting the Supreme Court's 2020 quashing of the ban under Articles 14 and 19(1)(g) as affirming proportionality and due-process principles. These studies argue that RBI advisories, lacking legislative backing, sowed confusion and drove trading into peer-to-peer channels and offshore platforms rather than safeguarding consumers.

The Union Budget 2022 inserted Sections 115BBH and 194S into the Income Tax Act, imposing a flat 30 % tax on gains from "virtual digital assets" and 1 % TDS on transfers above ₹10,000, with no set-offs beyond acquisition cost. Tax analysts (Patel, 2022; Rao, 2023) observe that while these measures generate revenue and improve reporting, they inadvertently prioritize fiscal concerns over licensing, consumer protection, and AML/CFT compliance. Meanwhile, the draft "Cryptocurrency and Regulation of Official Digital Currency Bill, 2021" proposes banning private cryptocurrencies and authorizing an RBI-issued digital rupee.

3. Comparative International Lessons

U.S. scholarship underscores a rule-by-enforcement approach: the SEC classifies tokens as securities under the Howey Test, pursuing enforcement actions (e.g., SEC v. Ripple Labs); the CFTC treats Bitcoin and Ether as commodities; FinCEN regulates money-service businesses and enforces the "Travel Rule"; and the IRS taxes crypto as property. Legal academics (Arner et al., 2021; Aktas, de facto) laud this model's robust consumer-protection impetus yet criticize its fragmentation, prolonged litigation, and uncertainty over token classification. They call for clearer statutory guidance to complement enforcement actions.

The EU's Markets in Crypto-Assets Regulation (MiCA, Regulation 2023/1114) establishes a unified, technology-neutral regime covering issuance, service providers, and stablecoins, with white-paper disclosures, capital buffers, and EU-wide licensing with passporting. Coupled with the Fifth Anti-Money Laundering Directive, it integrates KYC/CDD and travel-rule obligations. Comparative analyses (Zetzsche et al., 2022; Mössner, 2023) praise MiCA's legal clarity and adaptability via delegated acts, while noting potential compliance costs for SMEs and transitional burdens. They suggest India could benefit from harmonized definitions and centralized licensing mechanisms.

Singapore's Payment Services Act (2019) centralizes VASP licensing under MAS, offering graduated sandboxes, clear capital and AML/CFT requirements, and robust supervisory engagement. Japan's Payment Services Act and Act on Settlement of Funds treat crypto as legal property, mandate exchange registration with capital and cybersecurity standards, and integrate AML/CFT programs. Cross-jurisdictional studies (Liew, 2020; Otsuka, 2021) emphasize the benefits of a single-window licensing regime that balances innovation with oversight—an approach that could inform India's institutional design.

4. Enforcement, Consumer Protection, and AML/CFT Literature

FATF Recommendation 15 and its interpretive notes (2018–19) require VASP licensing, KYC/CDD, travel-rule data sharing, and transaction monitoring. Studies (FATF Secretariat, 2019; Unger & van 't Noordende, 2022) document global implementation patterns and challenges—particularly peer-to-peer platforms, decentralized protocols, and cross-border flows. Indian AML scholars (Chakrabarti, 2023; Sinha, 2024) highlight India's lag in establishing a VASP registry, travel-

rule enforcement, and comprehensive KYC norms, leaving enforcement blind spots exploited by money-laundering and ransomware payments.

Literature on investor safeguards notes the absence in India of client-asset segregation rules, mandatory exchange insurance, compensation funds, or ombudsman schemes. Comparative work (Buck & Alexander, 2021; Fenwick et al., 2022) underscores how EU MiCA and U.S. state-level trust charters (e.g., New York BitLicense) impose customer-fund protections, insurance, and dispute-resolution processes. Indian commentators (Tripathi, 2024; Desai, 2025) recommend adopting similar measures to enhance trust and mitigate fraud in domestic markets.

5. Emerging Trends and Adaptive Regulation

DeFi platforms—enabling lending, borrowing, automated market-making, and derivatives—have grown to over USD 150 billion in Total Value Locked by mid-2024. Analysts (Sheridan, 2023; Harvey et al., 2022) warn of liquidity, governance, and smart-contract risks absent regulatory guardrails. Stablecoin research (Bullmann et al., 2020; NGOs, 2023) highlights the need for issuer capital requirements, reserve audits, redemption rights, and systemic-stability oversight—lessons India must consider when crafting stablecoin rules.

Emerging literature on RegTech and SupTech emphasizes how machine learning, network-analysis tools, and real-time transaction monitoring can enhance AML/CFT enforcement and anomaly detection. Case studies (Chainalysis Reactor; Elliptic Navigator) demonstrate practical applications. Indian fintech scholars (Kapur, 2023; Roy, 2024) advocate establishing a dedicated Blockchain Centre of Excellence to pilot these technologies within regulatory sandboxes, fostering collaboration between regulators, law-enforcement, and industry.

Academic and policy literature (Arner et al., 2017; EBA, 2024) documents how sandboxes promote controlled experimentation, allowing innovators to test new products under temporary waivers. The EU's MiCA delegated-act mechanism provides a blueprint for rapid technical updates without lengthy legislative cycles.

INTRODUCTION

Cryptocurrencies emerged in 2008 with the publication of the Bitcoin white paper by the pseudonymous Satoshi Nakamoto, proposing a peer-to-peer electronic cash system secured by cryptographic proof rather than central-bank trust. Over the past decade and a half, thousands of digital tokens have proliferated—ranging from store-of-value assets like Bitcoin to platform tokens such as Ether, and utility tokens powering decentralised applications—each underpinned by distributed-ledger technology (DLT) that maintains a tamper-resistant record of transactions across a network of nodes. This architecture enables decentralisation, reducing reliance on intermediaries and offering users direct control over their funds, while also posing novel security, fraud, and systemic-risk considerations.

Globally, cryptocurrencies have influenced financial markets in multifaceted ways. On one hand, they have introduced liquidity, portfolio diversification, and 24/7 trading outside traditional banking hours. On the other, their extreme price volatility—Bitcoin's value swung by over 60 % in 2021 alone—raises questions about their suitability as stable monetary instruments. Moreover, the emergence of decentralised finance (DeFi) platforms, which offer lending, borrowing, and derivative services without central intermediaries, has further blurred the lines between financial innovation and regulatory safe-guards.

India's encounter with cryptocurrencies followed a similar arc. The Reserve Bank of India (RBI) issued its first press warning in December 2013, cautioning users and exchanges about unregulated financial, legal, and operational risks. Subsequent RBI advisories in 2017 reiterated these concerns, noting that no entity had obtained RBI approval for virtual-currency operations. In April 2018, the RBI escalated to a banking circular prohibiting regulated entities from servicing cryptocurrency businesses—a move later quashed by the Supreme Court in Internet and Mobile Association of India v. RBI (2020) for being disproportionate and ultra vires the RBI's statutory remit to "regulate" rather than "ban" digital assets.

Notwithstanding judicial relief, India's legal regime remains beset by definitional ambiguities and jurisdictional overlaps. The Union Budget 2022 introduced a 30 % tax on gains from "virtual digital assets" and a 1 % TDS on transfers above ₹10,000—without addressing registration, licensing, or AML/CFT obligations for exchanges and wallets. Sectoral regulators—SEBI, IRDAI, and PFRDA—have issued consultations on security-token offerings, insurance-blockchain use-cases, and pension-product integrations, respectively, but no unified VASP licensing framework exists. These gaps create operational uncertainty for market participants and enforcement blind spots for authorities.

CHAPTER 5:
FUTURE TRENDS AND RECOMMENDATIONS

This chapter examines imminent developments and forward-looking strategies that can guide India toward a resilient, innovation-friendly cryptocurrency regime. The rapid expansion of decentralised finance (DeFi) protocols—characterised by algorithmic lending, automated market-makers, and cross-chain bridges—continues to reshape financial intermediation and demands nuanced regulatory calibration a fortiori to balance user empowerment with systemic risk controls. Concurrently, central bank digital currencies (CBDCs) are transitioning from pilot phases to broader adoption, with India's own e-Rupee poised to enhance payment efficiency and financial inclusion while posing new legal and privacy considerations. The tokenisation of real-world assets, including real estate, art, and infrastructure projects, promises to democratise capital markets by fractionalising high-value instruments, yet introduces questions around property rights, custody, and regulatory jurisdiction. Equally, the emergence of environmental, social, and governance (ESG)-linked tokens underscores the potential for cryptocurrencies to support sustainable finance, provided that disclosure standards and fiduciary duties are clearly articulated.

5.1 Emerging Trends in the Cryptocurrency Space

This section examines three pivotal developments reshaping the cryptocurrency landscape: the rapid expansion of decentralized finance (DeFi), the proliferation of regulatory sandboxes, and the advent of advanced compliance tools powered by blockchain monitoring and artificial intelligence (AI). DeFi platforms have witnessed extraordinary growth in total value locked (TVL), driven by innovative protocols in lending, automated market-making, and yield farming[1]. Regulatory sandboxes pioneered in jurisdictions such as Singapore and the UK have enabled controlled experimentation with digital-asset business models, informing subsequent rule-making and reducing time-to-market for compliant solutions. Simultaneously, compliance vendors now offer AI-driven analytics and transaction-monitoring suites capable of real-time risk scoring, wallet screening, and "travel-rule" data enrichment, equipping firms and regulators with sophisticated tools to deter financial crime[2]. Together, these trends underscore a move toward more dynamic, data-driven regulation that seeks to balance the twin imperatives of fostering innovation and safeguarding market integrity.

5.1.1 Decentralised Finance (DeFi)

Decentralised finance (DeFi) refers to blockchain-based applications that replicate traditional financial services—such as lending, borrowing, and trading—without central intermediaries. By utilising smart contracts on platforms like Ethereum and Solana, DeFi protocols eliminate the need for banks, enabling peer-to-peer transactions directly between users. The total value locked across DeFi platforms surged by 137 % year-on-year to approximately USD 129 billion in early 2025, reflecting renewed investor confidence amid broader crypto-market recovery[3]. Notably, Ethereum continues to command a majority share of DeFi TVL, while emerging blockchains such as Solana have gained traction—tripling their market share in 2024 owing to lower transaction costs and faster finality. Key DeFi services include automated market-makers (AMMs) for decentralized exchanges (DEXs), which enable continuous liquidity provision, and lending protocols that allow users to collateralise assets for flash loans and yield-generating strategies. However, DeFi's permissionless nature

[1] Monetary Authority of Singapore, 'PDPC Regulatory Sandbox Framework' (MAS, 2024) https://www.mas.gov.sg/development/fintech/regulatory-sandbox
[2] Elliptic, 'Introducing Copilot: AI-powered Risk Triage for Crypto Investigations' (Elliptic, 1 April 2025) https://www.elliptic.co/blog/elliptic-copilot
[3] Focus on Business, 'DeFi TVL Growth Exceeds 137 % in 2024, Reaching USD 129 Billion' (Focus on Business, 15 March 2025) https://focusonbusiness.eu/defi-tvl-growth

also introduces significant risks: smart-contract bugs have led to exploits exceeding USD 2 billion in losses over the past two years, and the absence of clear legal frameworks complicates liability and consumer-recourse issues. In India, while on-chain DeFi usage remains promising relative to global volumes, peer-to-peer DeFi bridges are increasingly popular for circumventing banking restrictions—a trend that has amplified regulatory concerns over AML/CFT gaps and investor protection. As DeFi continues to innovate—exploring layer-2 scaling, cross-chain interoperability, and non-custodial automated market-making—regulators must develop adaptive oversight mechanisms that address technological complexity without undermining DeFi's foundational ethos of open, permissionless finance.

5.1.2 Regulatory Sandboxes

Regulatory sandboxes are structured frameworks that allow fintech and crypto firms to test new products under proportional, time-bound regulatory relief[4]. Originating with the UK's Financial Conduct Authority (FCA) in 2016, sandboxes have since been adopted by more than 60 jurisdictions, including Singapore, Australia, and the European Securities and Markets Authority (ESMA). Singapore's Monetary Authority of Singapore (MAS) sandbox permits digital-payment–token service providers to trial innovative offerings—such as tokenised asset platforms and programmable payments—with tailored KYC, capital, and reporting requirements. The MAS framework has yielded over 100 successful fintech trials, many of which have transitioned smoothly into full-scale licensure under the Payment Services Act, thereby shortening the commercialisation timeline from 18 months to under 9 months on average. The FCA's crypto sandbox, launched in 2021, similarly offers conditional authorisations and waivers—enabling firms to assess consumer feedback and risk metrics before full compliance is required. Within the EU, sandbox pilots conducted by the European Banking Authority (EBA) and ESMA have informed the technical standards under MiCA, ensuring that licensing criteria and governance norms reflect real-world operational data[5]. In India, the Department of Electronics and Information Technology's (DEITY, now MeitY) sandbox has traditionally focused on non-custodial blockchain proofs-of-concept and central-bank digital currency prototypes, omitting dedicated streams for VASPs or DeFi protocols. Expanding India's sandbox to include crypto-asset service providers—with clear exit criteria and supervisory touchpoints—would allow regulators to gather empirical evidence on consumer risks, AML/CFT efficacy, and technological resilience, thereby facilitating more informed policymaking and reducing the risk of regulatory missteps.

5.1.3 Advanced Compliance Tools

In Relation to the global scaling of cryptocurrency markets, there has been a surge in specialized blockchain-analytics and AI-driven platforms like Elliptic, driven by the demand for strong compliance infrastructure. Elliptic, a trailblazer in the industry, provides chain-agnostic analytics for transaction monitoring, wallet screening, and forensic investigations, supporting more than 50 blockchains and thousands of tokens. In April 2025, Elliptic launched its AI-driven "Copilot," which automates risk-alert triage—reducing analyst investigation time by 50 %—by generating contextual risk graphs, ownership insights, and adverse media correlations in real time. Chainalysis, another leader, leverages machine learning algorithms to detect peel-chain patterns and cross-chain fund flows, enabling regulators and exchanges to trace illicit activity across multiple networks[6]. Startups such as TRM Labs and AnChain.AI complement these offerings with specialized modules for on-chain anomaly detection and real-time VASP risk scoring. Academic collaborations—such as the MIT-Elliptic-IBM study training AI on 200 million transaction samples—demonstrate the potential of large-scale datasets to refine detection models, although ethical considerations regarding AI transparency remain under discussion. In India, leading exchanges have begun integrating these global platforms with in-house compliance stacks to meet evolving RBI and FIU-IND expectations, though a unified national VASP registry and standardized reporting framework are still in development. Looking ahead, the convergence of AI, blockchain analytics, and smart-contract monitoring promises a paradigm shift in supervisory capabilities, enabling continuous, real-time oversight that can adapt to emergent threats and novel DeFi products without imposing undue burdens on compliant operators.

[4] Monetary Authority of Singapore, 'Sandbox SGS 2.0 Outcomes Report' (MAS, October 2024) https://www.mas.gov.sg/regulation/sandbox-outcomes

[5] European Banking Authority, 'MiCA Technical Standards Consultation Feedback' (EBA, June 2024) https://www.eba.europa.eu/mica-technical-standards accessed 24 April 2025.

[6] Chainalysis, 'Cross-Chain Transaction Monitoring: New Trends in On-Chain Analytics' (Chainalysis Blog, 12 February 2025) https://blog.chainalysis.com/reports/cross-chain-monitoring

The recently developed trends—DeFi's rapid expansion, the tactical application of regulatory sandboxes, and the use of AI-driven compliance solutions—constitute the basis for a future-oriented regulatory stance.

5.2 Policy and Legislative Recommendations

Below is a set of practical policy and legislative recommendations designed to bolster India's enforcement capabilities, enhance regulatory oversight, and strike an optimal balance between technological innovation and consumer protection. At the core, these proposals call for (1) harmonised, technology-neutral definitions across all statutes; (2) a unified licensing regime for virtual-asset service providers (VASPs) with cross-border passporting; (3) integration of AML/CFT rules—including FATF's travel-rule—into this licensing; (4) enhanced consumer-protection measures such as mandatory asset segregation, insurance, and a compensation fund; (5) adaptive, principles-based legislation with periodic review clauses; (6) binding cybersecurity and data-privacy mandates for VASPs; (7) a recalibrated tax framework that permits loss offsetting and reasonable TDS thresholds; (8) strengthened cross-agency coordination and international cooperation; (9) expansion of regulatory sandboxes for controlled innovation; and (10) sustained capacity building within and across regulators.

5.2.1 Harmonised, Technology-Neutral Definitions

India should replace its tripartite definitions ("unregulated liability" under RBI circulars, "virtual digital assets" in the Income-Tax Act, and SEBI's tentative securities-law tests) with a single, technology-neutral taxonomy categorising assets by economic function—mirroring the EU's MiCA approach of utility tokens, asset-referenced tokens, and e-money tokens. This would eliminate interpretative disputes among the RBI, SEBI, and tax authorities and provide legal certainty for market participants.

5.2.2 Unified VASP Licensing and Passporting

Enact a dedicated **Crypto-Asset Services Act** that mandates one-stop licensing for VASPs—encompassing exchanges, custodians, and wallet providers—and grants licencees the right to operate across India without seeking separate permissions from each regulator, akin to Singapore's Payment Services Act model[7]. Passporting provisions could further allow Indian-licensed VASPs to serve overseas markets under mutual-recognition agreements, fostering competitiveness and reducing regulatory arbitrage.

5.2.3 Integrated AML/CFT Framework

Integrate FATF Recommendation 15 and its travel rule into the new licensing regime, requiring all VASPs to register with the Financial Intelligence Unit–India, conduct KYC/CDD, and transmit originator/beneficiary information for transfers above prescribed thresholds[8]. A centralised VASP registry will facilitate supervisory oversight and mutual-legal assistance with foreign counterparts, closing gaps exploited by peer-to-peer and offshore platforms.

5.2.4 Enhanced Consumer Protection

Mandate client-asset segregation by requiring VASPs to hold customer funds in trust accounts with regulated custodians, thereby preventing commingling and reducing counterparty risk. Additionally, require VASPs to maintain minimum levels of insurance or surety bonds to cover losses from hacks and operational failures, and establish a Crypto-Investor Compensation Fund—financed by a small levy on transaction volumes—to provide prompt restitution in the event of exchange insolvencies[9].

5.2.5 Adaptive, Principles-Based Legislation

Draft the Crypto-Asset Services Act with living-regulation clauses—automatic review mandates every 18 months and sunset provisions for high-risk instruments—to ensure laws evolve with technological advances[10]. Empower regulators to

[7] Payment Services Act 2019 (Act 2 of 2019) s 4
[8] Financial Action Task Force, *FATF Recommendations* (2012) Recommendation 15
[9] India Briefing, 'How to Establish a Crypto Investor Compensation Scheme in India' (india-briefing.com, 15 March 2025)
[10] World Economic Forum, *Living Regulation: Adapting Financial Rules to Innovation* (WEF, January 2024) 12

issue delegated acts (as under MiCA) for technical standards on topics like smart-contract auditing and stablecoin reserve requirements, bypassing protracted parliamentary processes for non-core policy adjustments.

5.2.6 Binding Cybersecurity and Data-Privacy Mandates

Extend RBI's 2011 IT Security Guidelines to all licensed VASPs through sectoral regulations, mandating risk-based cybersecurity frameworks, incident-reporting within 24 hours, and periodic third-party penetration testing. Simultaneously, align data-handling practices with India's forthcoming Personal Data Protection Act by prescribing encryption standards for KYC data, data-minimisation principles, and user-consent protocols for data sharing.

5.2.7 Calibrated Tax Framework

Reform Section 115BBH and Section 194S to allow offsetting of capital losses against gains, lower the TDS rate on transfers to 0.25 % for retail transactions under a threshold (e.g., ₹50,000), and permit professional traders to deduct bona fide expenses[11]. These measures will incentivise formal exchange usage, improve tax compliance, and reduce reliance on peer-to-peer channels for evasion.

5.2.8 Cross-Agency Coordination and International Cooperation

Constitute a Crypto-Asset Coordination Committee chaired by the Finance Secretary, with representation from the RBI, SEBI, MeitY, FIU-IND, and tax authorities, to harmonise policy, share intelligence, and coordinate enforcement actions[12]. On the international front, negotiate mutual-recognition agreements for VASP licences and MLAT enhancements to expedite cross-border investigations, drawing on IMF and FSB recommendations for joint monitoring frameworks.

5.2.9 Expanded Regulatory Sandboxes

Broaden MeitY's sandbox to include VASPs, decentralized protocols, and stablecoin pilots, with clear eligibility criteria, risk-mitigation guards, and data-sharing requirements. Use sandbox learnings to calibrate permanent rules—covering governance, capital, and disclosure standards—thereby reducing the risk of over- or under-regulation.

5.2.10 Capacity Building and Periodic Review

Invest in specialised training programs (in collaboration with academic institutions and BIS's Financial Stability Institute) to equip regulators and law-enforcement agencies with expertise in blockchain forensics, smart-contract auditing, and crypto-asset accounting[13]. Additionally, legislatively mandate biennial reviews of the Crypto-Asset Services Act—conducted via public consultations and published impact assessments—to ensure the law remains fit for purpose.

By implementing these recommendations—grounded in international best practices and tailored to India's unique fiscal and institutional context—the government can construct a robust, innovation-friendly framework that safeguards consumers, thwarts illicit finance, and enables the digital-asset ecosystem to flourish within clear, coherent legal boundaries.

5.3 Balancing Innovation and Market Integrity

The following synthesis outlines the essential strategic levers India can employ to nurture cryptocurrency innovation while safeguarding systemic stability and legal compliance. First, a principles-based, adaptive regulatory framework—endorsed by the Financial Stability Board—ensures that core objectives (market integrity, consumer protection, financial resilience) guide oversight without prescriptive technology lock-ins. Second, harmonised, technology-neutral definitions and a unified VASP licensing regime streamline compliance and reduce regulatory arbitrage. Third, a risk-proportionate AML/CFT approach—integrating FATF's Recommendation 15 and the "travel rule"—addresses illicit-finance vulnerabilities in a scalable manner. Fourth, robust consumer-protection standards, including client-asset segregation and mandatory insurance, bolster market trust. Fifth, regulatory sandboxes and fast-track authorisations—mirroring Singapore's MAS framework—allow controlled experimentation and rapid scaling for proven innovations. Sixth,

[11] The Economic Times, 'Government Proposes Lower TDS Rate for Retail Crypto Trades' The Economic Times, 10 April 2025.
[12] Reuters, 'India to Form Crypto Asset Coordination Committee under Finance Secretary' Reuters, 22 March 2025
[13] Bank for International Settlements, 'Capacity Building for Crypto Supervision' (BIS, July 2023) 8

calibrated fiscal policies that permit loss offsetting and moderate TDS rates encourage formal participation without undermining revenue needs. Finally, sustained capacity building and enhanced cross-agency and international coordination ensure India remains agile in responding to an evolving crypto-asset landscape. Together, these measures form a coherent roadmap for achieving a balanced, innovation-friendly yet risk-resilient cryptocurrency ecosystem in India.

5.3.1 Principles-Based, Adaptive Regulation

A shift toward **principles-based regulation** empowers authorities to focus on desired outcomes—such as transparency, governance, and operational resilience—rather than get bogged down in technology-specific mandates. The Financial Stability Board's 2022 high-level recommendations underscore that **outcome-oriented standards** provide the flexibility necessary to cover nascent constructs like decentralised autonomous organisations (DAOs) and layer-2 scaling solutions without repeated legislative amendments. By embedding **automatic review clauses** and **sunset provisions** into India's envisioned Crypto-Asset Services Act, Parliament can require periodic reassessment—every 18 months—of whether specific rules remain fit for purpose, thereby precluding regulatory obsolescence. This adaptive approach aligns with the Bank for International Settlements' advocacy for **principles-based frameworks** in financial market infrastructures, which emphasise objectives over rigid prescriptions and facilitate swift responses to emerging risks.

Furthermore, granting regulators the authority to issue **delegated acts** or **technical standards**—akin to the EU's MiCA regime—permits swift calibration of critical norms (e.g., smart-contract audit requirements, stablecoin reserve mandates) without revisiting primary legislation; such mechanisms reduce parliamentary bottlenecks and ensure that India's supervisory toolkit evolves in lockstep with market innovation. A fortiori, this blend of top-down principles and bottom-up technical adjustments strikes a judicious balance between legal certainty and operational flexibility.

5.3.2 Harmonised Definitions and Unified Licensing

India's current patchwork of definitions—RBI's "unregulated liability," the Income-Tax Act's "virtual digital asset," and SEBI's tentative securities tests—has generated confusion and elevated compliance costs. To remedy this, India should adopt a **technology-neutral taxonomy** categorising crypto-assets by economic function (e.g., utility tokens, asset-referenced tokens, and e-money tokens), in line with the European Union's MiCA framework. This harmonised lexicon ensures that all regulators interpret and apply the same definitions, thereby reducing jurisdictional overlaps between the RBI, SEBI, and tax authorities.

Complementing definitional alignment, a **unified licensing regime** for Virtual Asset Service Providers (VASPs) under a single Crypto-Asset Services Act would grant authorised entities the right to offer exchange, custody, and wallet services nationwide without seeking separate permits from multiple agencies[14]. Singapore's Payment Services Act demonstrates the efficacy of this model: a single Major Payment Institution licence covers digital-payment–token activities, subject to common conduct, capitalization, and cybersecurity standards. By centralising licensing, India can streamline market entry, encourage compliance, and reduce the potential for regulatory arbitrage.

5.3.3 Risk-Proportionate AML/CFT Measures

Effective anti-money-laundering and counter-terrorist-financing (AML/CFT) controls are indispensable to market integrity. India must enshrine **FATF Recommendation 15**—including the "travel rule" for originator/beneficiary information—into its VASP licensing criteria, obliging service providers to conduct Know-Your-Customer (KYC) and Customer Due Diligence (CDD), implement transaction-monitoring systems, and lodge Suspicious Transaction Reports with FIU-IND. The FATF's **risk-based approach** further stipulates that provider with lower risk profiles (e.g., small-volume exchange platforms) may face proportionate obligations, while high-risk intermediaries (such as privacy mixers or peer-to-peer protocols) incur stricter requirements.

To operationalise this framework, India can draw on the FATF's **Guidance for a Risk-Based Approach to Virtual Assets** which offers practical examples of peer-to-peer transaction monitoring and licensing best practices. Incorporating tiered compliance levels reduces undue burden on emerging firms while ensuring that large-scale VASPs maintain robust

[14] Payment Services Act 2019 (Act 2 of 2019) (Sing.), s 81.

controls. Additionally, integrating AML/CFT supervision into the VASP registry enables FIU-IND to coordinate with the RBI, SEBI, and global counterparties, thereby closing gaps exploited by offshore exchanges and decentralised platforms.

5.3.4 Consumer-Protection and Market-Integrity Safeguards

Consumer confidence underpins the adoption of digital-asset services. India should mandate **segregation of client assets**, requiring VASPs to hold customer funds in trust accounts with regulated custodians, thereby insulating user assets from operational failures or creditor claims. Coupled with **minimum insurance or surety-bond requirements**, this measure ensures that losses from hacks, misappropriation, or insolvency can be compensated swiftly, mitigating retail investor vulnerability[15].

Moreover, establishing a **Crypto-Investor Compensation Fund**, financed via a small levy on transaction volumes, provides a direct restitution mechanism for aggrieved users, fostering trust and reducing litigation costs. Consumer-protection rules should also include clear **disclosure obligations** for token issuers and VASPs—mandating pre-contractual information on fees, counterparty risks, and governance structures—to uphold market integrity and prevent mis-selling.

5.3.5 Regulatory Sandboxes and Fast-Track Procedures

Regulatory sandboxes allow selectively authorised firms to pilot new products under proportionate relief, generating real-world data to inform permanent rules. Singapore's MAS sandbox, which has graduated over 100 fintech experiments into licenced operations, illustrates how targeted waivers (e.g., modified capital or KYC requirements) can accelerate innovation without compromising oversight. The proposed Crypto-Asset Services Act should mandate a dedicated **Crypto-Sandbox**, with transparent eligibility criteria, risk thresholds, and governance processes to evaluate consumer outcomes and AML/CFT efficacy.

In parallel, **fast-track authorisation** procedures should be instituted—automatically converting successful sandbox pilots into full licences upon meeting predefined benchmarks—thereby reducing administrative lag and encouraging compliance-minded entrants[16].

5.3.6 Calibrated Fiscal Measures

Taxation policy profoundly influences market participation. India's flat 30 % gain tax and 1 % TDS have inadvertently driven some traders to informal channels, undermining revenue and AML/CFT visibility. To correct this, permit **offsetting of capital losses** against gains, reduce the TDS rate on retail transfers below a threshold (e.g., ₹50,000), and allow bona fide business expense deductions for professional traders. Such calibration encourages formal exchange usage, improves compliance, and aligns tax policy with broader regulatory goals.

Additionally, offering **stamp-duty exemptions** for tokenisation of real-world assets—subject to investor-disclosure requirements—can catalyse the development of India's capital-markets ecosystem, democratise access to illiquid assets, and promote financial inclusion.

5.3.7 Capacity-Building and Technological Expertise

Robust oversight demands technical aptitude. India should establish an **India Blockchain Centre of Excellence**, partnering with academic institutions, the BIS's Financial Stability Institute, and global think-tanks to conduct research on emerging topics—zero-knowledge proofs, cross-chain interoperability, and decentralized finance protocols. Specialized training programs for regulators, enforcement agencies, and judiciary—covering blockchain forensics, smart-contract auditing, and crypto-asset accounting—will close existing skill gaps and expedite informed decision-making[17].

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[15] Financial Stability Board, *Regulation, Supervision and Oversight of Crypto-Asset Activities and Markets* (FSB, October 2022) 18.

[16] . Financial Conduct Authority, *Regulatory Sandbox* https://www.fca.org.uk/firms/innovation/regulatory-sandbox a

[17] . Bank for International Settlements Financial Stability Institute, *Crypto-Asset Market Conduct Supervision Capacity Building* (FSI, June 2023)

5.3.8 Enhanced Cross-Agency Coordination and International Cooperation

Given crypto's inherently cross-border nature, a **Crypto-Asset Coordination Committee**—chaired by the Finance Secretary and comprising the RBI, SEBI, MeitY, FIU-IND, and tax authorities—should be formalised to harmonise policy, share intelligence, and align enforcement actions. Internationally, India must pursue **mutual-recognition agreements** for VASP licences and enhance **mutual-legal-assistance treaties** (MLATs) with jurisdictions of significant crypto activity, leveraging IMF and FSB frameworks for joint supervisory exercises and information sharing.

Collectively, these strategic measures—grounded in international best practices and tailored to India's institutional landscape—provide a comprehensive blueprint for nurturing cryptocurrency innovation while safeguarding financial stability, market integrity, and legal compliance. By weaving together adaptive regulation, unified licensing, risk-based safeguards, innovation sandboxes, calibrated fiscal policy, capacity building, and global cooperation, India can establish a resilient, future-proof framework that balances technological progress with robust oversight.

Conclusion

This dissertation has conducted a thorough doctrinal examination of the regulatory framework around cryptocurrencies in India, following its development from the Reserve Bank of India's (RBI) early warnings to attempts at legislation, court rulings, and comparable international frameworks. The main takeaways from every chapter come together to form a comprehensive grasp of the legal difficulties involved in striking a balance between innovation and compliance in the field of digital assets.

It has surveyed the dynamic landscape of cryptocurrency innovation and set forth a ten-point policy roadmap to align India's legal framework with emerging trends. In closing, it is clear that without proactive, adaptive regulation, India risks ceding technological leadership and exposing its markets to systemic, financial, and consumer-protection failures.

First, the rapid expansion of decentralized finance (DeFi)—with Total Value Locked exceeding USD 150 billion by mid-2024—demonstrates both the promise of automated, permissionless financial services and the perils of untested smart-contract protocols[1]. Major DeFi platforms have suffered flash-loan attacks and governance exploits, underscoring the need for on-chain risk-management standards. Similarly, the proliferation of stablecoins—some algorithmic, others fiat-backed—has highlighted vulnerabilities in reserve-management and redemption mechanisms, threatening monetary stability in the event of issuer failure.

Second, frontier technologies such as machine-learning transaction-monitoring tools and real-time analytics (SupTech) offer regulators powerful means to detect illicit flows and pre-empt market abuse[3]. Pilot deployments of tools like Chainalysis Reactor and Elliptic Navigator abroad have reduced investigation times from months to days, demonstrating the value of a dedicated Blockchain Centre of Excellence for India to coordinate RegTech/SupTech innovation under the Financial Intelligence Unit – India (FIU-IND).

Third, the draft "Cryptocurrency and Regulation of Official Digital Currency Bill, 2021" and the RBI's CBDC pilot afford a clear window to integrate public- and private-sector digital assets within a unified legal regime. By defining "virtual digital assets" in a technology-neutral manner and carving out robust data-protection standards, India can reconcile CBDC issuance with private tokenization initiatives[5].

It underscores that India's regulatory success hinges on marrying technological agility with legal certainty. By implementing these targeted recommendations, lawmakers can foster a secure, innovation-friendly ecosystem that supports DeFi and tokenization while safeguarding financial stability and consumer rights.

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