

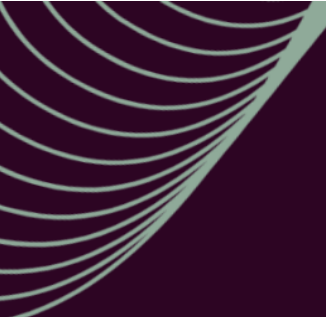


PREMJI INVEST

ASSESSING FINANCIAL ASSET TOKENISATION IN INDIA'S EMERGING WEB3 ECOSYSTEM

A Discussion Paper

January 2026



DIGITAL INDIA FOUNDATION

Digital India Foundation (DIF) is an independent public policy think tank working at the intersection of technology, governance, and society. DIF is led by Dr Arvind Gupta, former CEO of MyGov, a Member of the National Advisory Council of the Open Network for Digital Commerce (ONDC), and a Trustee on the Board of the National Pension System Trust, appointed by the PFRDA.

Over the years, DIF has undertaken sustained research on emerging technologies and Digital Public Infrastructure, with a strong focus on financial innovation, data governance, platform regulation, and online money gaming.

Through detailed reports, consultation papers, and closed-door policy engagements, DIF has contributed to shaping informed regulatory discourse across multiple sectors. Notably, DIF's research has been cited in parliamentary deliberations, including in the Lok Sabha, reflecting its relevance to real-world policymaking and regulatory outcomes.

This body of work positions DIF as a trusted partner in advancing asset tokenisation and allied financial technologies in a manner that is institutionally sound, regulatorily robust, and aligned with public interest objectives.

PREMJI INVEST

Premji Invest (PI) is a leading global investment firm with a charter to back emerging and disruptive technologies, address sizeable market opportunities and nurture the spirit of entrepreneurship. PI invests in both private and public markets. Its private investments include early-stage, growth equity, and buyouts, with focus areas spanning financial services, technology, consumer, industrials, and healthcare. The returns generated by PI primarily support the work of Azim Premji Foundation, a non-profit that works to improve the lives of the underserved and underprivileged in society.

Since 2006, PI has made over 160 investments, including category-defining platforms in e-commerce, fintech, market infrastructure, and life sciences. The investment firm consistently supports technologies that democratize access to credit, commerce, and essential services within strongly regulated environments, by working with key investment portfolio companies, such as National Stock Exchange and SBI General Insurance.

Along with leading global investors, Premji Invest is a founding member of India Deep Tech Investment Alliance that is focused on mobilizing over USD 1 billion in strategic deep tech sectors. This approach underscores PI's strategy to combine patient capital, policy engagement, and ecosystem building at scale, including in deep tech, generative AI, and regulated financial infrastructure.

PI is committed to be a constructive, long-term partner in building a compliant, innovation-led tokenization ecosystem that can responsibly unlock fractional ownership, improve liquidity, and deepen capital formation, thereby supporting India's next phase of inclusive, technology-led economic growth.

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
AIF	Alternative Investment Fund
AMC	Asset Management Company
AMFI	Association of Mutual Funds in India
CCIL	Clearing Corporation of India Ltd.
CDSL	Central Depository Services (India) Ltd.
CSD	Central Securities Depository
CSGL	Constituent Subsidiary General Ledger
DeFi	Decentralised Finance
DEX	Decentralised Exchange
DLT	Distributed Ledger Technology
DvP	Delivery versus Payment
ETF	Exchange-Traded Fund
FBIL	Financial Benchmarks India Pvt. Ltd.
FIMMDA	Fixed Income Money Market and Derivatives Association of India
FMIA	Financial Market Infrastructure Act (Switzerland)
G-Secs	Government Securities
IFSCA	International Financial Services Centres Authority
KYC	Know Your Customer



LLP	Limited Liability Partnership
MAS	Monetary Authority of Singapore
MMF	Money Market Fund
NAV	Net Asset Value
NDS-OM	Negotiated Dealing System – Order Matching
NFO	New Fund Offer
NSE / BSE	National Stock Exchange / Bombay Stock Exchange
NSDL	National Securities Depository Ltd.
OTC	Over-the-Counter
PPM	Private Placement Memorandum
RBI	Reserve Bank of India
RTA	Registrar and Transfer Agent
RTGS	Real-Time Gross Settlement
SCRA	Securities Contracts (Regulation) Act, 1956
SEBI	Securities and Exchange Board of India
SPV	Special Purpose Vehicle
T+2 / T+3	Trade Date plus 2 or 3 days (settlement cycle)
VCC	Variable Capital Company
VDA	Virtual Digital Asset



1. Context

Blockchain provides a distributed, tamper-resistant ledger that allows low-trust actors to coordinate securely through cryptographic verification. Its programmability enables automated workflows and consistent policy enforcement.

Financial markets may be entering another phase of architectural evolution. When linked with tokenised assets, digital identifiers, and cryptographic credentials, blockchain technology is being explored for becoming a unifying infrastructure layer for next-generation public and financial systems. These possibilities align with India's efforts toward interoperable digital systems.

2. What Is Asset Tokenisation?

Tokenisation records ownership claims on a programmable ledger, enabling digital transfer and automation. A token, in this context, represents a transferable claim recorded on a programmable ledger.

2.1 Key Features of Tokenised Systems

Tokenisation typically aims for the following features¹:

- **Fractionalisation:** Allows large, indivisible assets (e.g., real estate, infrastructure debt) to be broken into smaller units, enabling broader investor participation and diversified ownership.
- **Programmability:** Embeds operational rules, compliance checks, or servicing conditions directly into the token via smart contracts.
- **Composability:** Enables modular logic to be reused or linked across products.
- **Atomicity:** Ensures that multi-step transactions (e.g., payment + transfer of ownership) occur as an indivisible unit, reducing counterparty and settlement risk.

Taken together, these features also imply greater trust at the infrastructure level. When implemented on distributed ledger technology, tokenised systems rely on shared validation and cryptographic

¹ Itai Agur, Germán Villegas-Bauer, Tommaso Mancini-Griffoli, and Maria Soledad Martinez Peria. "Tokenization and Financial Market Inefficiencies", *Fintech Notes* 2025, 001 (2025), accessed 12/01/2025, <https://doi.org/10.5089/9798400298905.063>

assurance rather than unilateral control. As noted by NITI Aayog², data recorded on a blockchain cannot be altered without peer consensus and transactions are authenticated through cryptographic mechanisms, strengthening the integrity and auditability of asset records.

2.2 Different Models of Tokenisation

A key consideration in tokenisation is the question of how ownership is represented and transferred. Traditional investment funds rely on off-chain fund share registers maintained by administrators, which serve as the authoritative record of ownership. Tokenisation introduces the possibility of maintaining these registers on a blockchain, either as a mirror, a parallel record, or as the sole authoritative source.

In the Project Guardian Funds Framework³, three general archetypes of tokenised fund share register forms were discussed, which encompass four specific models:

Model	Authoritative Register	How Ownership Works	When It's Used
1. Digital Mirror	Off-chain (traditional register only)	On-chain record is just a mirror, not legally binding.	Early exploration; no change to fund structure.
2A. Digital Twin-Distributor	Off-chain (fund register lists distributor/nominee)	Distributor keeps an on-chain sub-register of ultimate investors; tokens reflect beneficial ownership.	Distributors offering tokenised access without modifying the fund.
2B. Digital Twin-Feeder Fund	Feeder fund register is on-chain; master fund stays off-chain	Investors hold tokens in a new tokenised feeder fund that invests into the traditional master.	Managers adding a tokenised access route without altering the master fund.

² NITI Aayog. (2020). *Blockchain: The India strategy*. Government of India. https://www.niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf

³ Monetary Authority of Singapore. *Project Guardian: Operationalising Tokenised Funds*. Singapore: MAS, 2025. <https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/guardian/project-guardian-operationalising-tokenised-funds.pdf>

3. Digital Native	Fully on-chain	Smart contracts handle subscription, transfer, and redemption; tokens are the legal record.	For managers ready for end-to-end tokenised fund operations.
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Table 1: Different Models of Tokenisation

Tokenisation is opening new possibilities across financial and real-world systems. In capital markets, tokenised bonds, mutual funds, private credit, and structured products enable programmable compliance, fractional ownership, and atomic settlement. Commodities like gold and oil are being tokenised for easier collateralisation and global transfer, while stablecoins and tokenised deposits are emerging as programmable cash for 24/7 settlement and liquidity optimisation.

Beyond finance, tokenisation is being applied to academic credentials, trade documents, supply-chain financing⁴, real estate, and digital registries, improving authenticity, portability, and transparency. These developments show how tokenisation can modernise ownership and streamline trust across digital infrastructure.

This paper focuses on financial assets, where regulatory and institutional complexity create distinct design considerations. For analysis, we group tokenised financial assets into two buckets: debt instruments and pooled or private capital vehicles.

- **Bucket 1 - Debt Instruments:** This includes government securities (G-Secs), corporate bonds, debentures, commercial paper, and other fixed-income products that follow standardised issuance, trading, and settlement flows within regulated market infrastructure.
- **Bucket 2 - Pooled and Private Capital Vehicles:** This category includes mutual funds, alternative investment funds (AIFs), real estate investment trusts (REITs), infrastructure investment trusts (InvITs), and bespoke private market structures such as Special Purpose Vehicles (SPVs) and Limited Liability Partnerships (LLPs). These instruments aggregate capital from multiple investors and often involve non-standardised servicing and redemption flows.

⁴ The “Deep Tier Financing Solution” launched by the Indian Banks’ Digital Infrastructure Company illustrates the use of blockchain-based tokenisation in supply-chain financing, wherein MSME supplier invoices are converted into digital tokens representing receivables. These tokens enable lenders to fund lower-tier suppliers based on the creditworthiness of anchor firms, extending affordable credit beyond Tier-1 to Tier-2 and Tier-3 MSMEs while supporting risk management across the supply chain. https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=61033

By structuring the analysis around these two buckets, the paper aims to capture key differences in how tokenisation might intersect with issuance, custody, trading, servicing, and exit mechanisms across asset classes.

3. India's Financial Market Infrastructure: The Institutional Stack

Tokenisation must align with India's existing financial infrastructure and regulatory mandates. In India, the architecture of capital and money markets is deeply institutionalised, governed by distinct regulatory mandates and well-defined legal frameworks. Understanding the roles of key regulators, market infrastructure institutions, and distribution layers is essential to evaluating how and where tokenisation might integrate, overlap, or challenge current systems. This section outlines the institutional foundations of India's financial markets to frame the structural context within which tokenised models would operate⁵.

Layer	Key Actors	Role
Regulators	Securities and Exchange Board of India (SEBI), Reserve Bank of India (RBI), International Financial Services Centres Authority (IFSCA)	SEBI governs securities and market institutions; RBI oversees money markets, G-Secs, Foreign Exchanges (FX), and payments; IFSCA regulates all financial services in GIFT City. ⁶
Market Infrastructure	National Stock Exchange (NSE), Bombay Stock Exchange (BSE), NSE Clearing Corporation Ltd. (NSCCL), Indian Clearing Corporation Ltd. (ICCL), Clearing Corporation of India Ltd. (CCIL), National Securities Depository Ltd. (NSDL), Central Depository Services (India) Ltd. (CDSL).	Trading, clearing, settlement, and demat record-keeping. ⁷

⁵ SEBI. 2020. Booklet on Securities Market Understanding From Investor's Perspective. Booklet. Ipft. [https://investor.sebi.gov.in/pdf/reference-material/languages/english/SM%20Booklet_English%20-%20Final%20\(Low\).pdf](https://investor.sebi.gov.in/pdf/reference-material/languages/english/SM%20Booklet_English%20-%20Final%20(Low).pdf)

⁶ Ibid.

⁷ Ibid.



Issuers & Products	Government, Corporates, Asset Management Company (AMCs), AIFs, SPVs	Issue debt, equity, mutual funds, AIF units, and private market instruments under SEBI/RBI/Companies Act frameworks. ⁸
Distribution	Distributors, Registrar and Transfer Agent (RTAs), custodians, online platforms	Investor onboarding, record-keeping, transaction processing, and compliance.

Table 2: India's Financial Market Infrastructure: The Institutional Stack

India's financial markets operate within clearly defined regulatory mandates and a specialised institutional stack. Regulatory and market institutions define the operating environment for securities, settlement, and custody. Tokenised models must fit within these established roles.

The market infrastructure that supports these regulators consists of exchanges (NSE, BSE) for trading, clearing corporations (NSCCL, ICCL, CCIL) for risk management and settlement, and depositories (NSDL, CDSL) for the legal record of ownership

4. Tokenisation Across the Financial Asset Lifecycle: Functional Challenges and Systemic Implications

Tokenisation intersects with each layer of financial market infrastructure in distinct ways. Its design choices reflect regulatory oversight, operational trust, and asset-class-specific workflows.

As tokenisation evolves globally, it's clear that its interaction with financial market infrastructure is more layered than the common narrative of "disintermediation" implies. Distributed ledger technology (DLT) may offer the technical capacity to reduce intermediaries, but real-world implementations show that decisions about architecture are rarely only about technology. In practice, design choices hinge on regulatory oversight, investor protection, operational trust, and the functional value that tokenisation adds to each layer of the financial lifecycle. Moreover, different asset classes engage with market infrastructure in different ways.

4.1 Issuance

⁸ Ibid.

Debt Instruments: Government securities are issued via RBI auctions and accessed primarily by institutional investors. Corporate bonds follow a separate path through merchant bankers and exchange listings. This process is tightly integrated with stock exchanges, registrars, and central depositories. While issuance is standardised, it remains highly intermediated.

Pooled and Private Capital Vehicles: For mutual funds and pooled investment products, issuance takes the form of scheme launch (via New Fund Offer (NFOs)), while AIFs and private SPVs issue units through private placement memoranda or contractual frameworks. Disclosure and onboarding are central to this phase; however, the structure and investor base vary significantly.

Case Study: Franklin Templeton's Tokenised U.S. Government Money Market Fund⁹

A US Government Money Market Fund was tokenised with the public blockchain acting as the official share register under U.S. Securities and Exchange Commission (SEC) no-action relief. Tokens move only between whitelisted wallets, while subscriptions, redemptions, and compliance remain off-chain. The model modernises transfer agency functions without altering the fund's structure or governance. It provides a template for India to digitise mutual fund registers while keeping existing regulatory and operational processes intact.

4.2 Custody and Holding

Debt Instruments: Custody for G-Secs and corporate debt is handled via demat accounts maintained by NSDL/CDSL or CSDL accounts with RBI.

Pooled and Private Capital Vehicles: In pooled vehicles, RTAs maintain records, while custodians serve institutional AIFs. In private funds or SPVs, ownership is often tracked through legal agreements and offline records, making transparency and transferability more complex.

⁹ Franklin Templeton. "Tokenized Money Market Funds: The Bridge to a New Financial Infrastructure." Franklin Templeton, January 2025.

<https://www.franklintempleton.com/articles/2025/disruption/tokenized-money-market-funds-the-bridge-to-a-new-financial-infrastructure>

Case Study: SIX Digital Exchange (SDX), Switzerland¹⁰

SDX operates as a regulated digital exchange and central securities depository that records securities natively on a permissioned DLT. The on-chain ledger serves as the sole legal register, enabling unified issuance, custody, and real-time settlement. By integrating all post-trade functions within a controlled infrastructure, SDX demonstrates how tokenisation can streamline fragmented custodial and registry workflows. Its institutional model is relevant to India's multi-layered depository, RTA, and clearing corporation ecosystem.

4.3 Trading and Liquidity

Debt Instruments: Trading of G-Secs happens primarily on the RBI's Negotiated Dealing System - Order Matching (NDS-OM) platform, while corporate bonds often trade Over-the-Counter (OTC) via Request for Quote (RFQ). These markets are functional but relatively illiquid, especially in the retail segment.¹¹

Pooled and Private Capital Vehicles: Mutual fund units are redeemed through AMCs, limiting secondary liquidity. AIFs, private equity vehicles, and co-investment platforms operate with limited secondary transferability by design, with unit transfers occurring through controlled, investor- and manager-approved processes rather than open-market mechanisms.

Case Study: Project Guardian, Tokenised Fund Trading Pilot (Singapore)

Under Monetary Authority of Singapore (MAS) supervision, regulated institutions issued and traded tokenised fund units on permissioned DLT with embedded eligibility, transfer, and settlement rules, and simulated tokenised cash enabled programmed Delivery versus Payment (DvP) settlement among pre-approved investors. The pilot showed how traditionally non-tradable units, such as mutual funds or AIF interests, can obtain controlled secondary liquidity without weakening investor safeguards. The approach offers a sandbox model for India to test limited-liquidity

¹⁰ Bank for International Settlements. *Blueprint for the Future Monetary System: Improving the Old, Enabling the New*. BIS, June 2022. <https://www.bis.org/publ/othp35.pdf>.

¹¹ Reserve Bank of India, Institute for Development and Research in Banking Technology. *Blockchain: The India Strategy – Towards Enabling Ease of Business, Ease of Living and Ease of Governance*. Hyderabad: IDRBT, 2017. https://static.investindia.gov.in/s3fs-public/2020-06/OVER13062020_FF0CC640BA0CC434C83A1E847B4FB3FD6.PDF

frameworks for pooled products.

4.4 Settlement and Clearing

Debt Instruments: Government securities settle via CCIL and RTGS; listed debt clears through exchange clearing houses. These flows are efficient but dependent on sequential processes and central counterparty structures.¹²

Pooled and Private Capital Vehicles: Settlement timelines vary. Mutual funds often follow T+2 cycles, while private fund agreements dictate their own exit and distribution terms.¹³

Case Study: JPMorgan Onyx- Tokenised Repo and Intraday Settlement Infrastructure¹⁴

Onyx enables repos using tokenised collateral and JPM Coin for instant DvP settlement on a permissioned DLT. Smart contracts automate margining, expiry, and collateral mobility, removing batch-based processes and reducing intraday liquidity risk. The model illustrates how tokenised cash and securities can support continuous settlement and more efficient collateral flows, aligning with India's interest in wholesale CBDC experimentation and RTGS modernisation.

4.5 Servicing and Valuation

Servicing involves payouts, valuations, record updates, and compliance.

Debt Instruments: For government and corporate bonds, servicing primarily involves coupon payments and periodic valuation. Servicing processes remain manual and batch-based, creating limited real-time flexibility.

Pooled and Private Capital Vehicles: Mutual funds calculate Net Asset Value (NAV) daily, with fund accountants and RTAs managing investor allocations, redemptions, and compliance reports. In private structures like AIFs or real estate investment vehicles, valuations are typically less frequent and

¹²NSE Clearing Limited. "Settlement Cycle – Capital Market."

<https://www.nseclearing.in/clearing-settlement/capital-market/settlement-cycle>

¹³Ibid.

¹⁴Kinexys by J.P. Morgan and Apollo. *Project Guardian: Portfolio Management Powered by Tokenization*. 2023.

<https://www.jpmorgan.com/kinexys/documents/portfolio-management-powered-by-tokenization.pdf>

more bespoke, relying on appointed valuers, auditors, and legal agreements. These layers introduce additional friction, particularly in off-cycle events like partial exits or capital distributions.

As tokenisation matures, this servicing layer presents an opportunity for automation and programmability such as enabling interest distribution, NAV calculation, and asset rebalancing to occur through pre-coded logic rather than manual intervention.

Case Study: Ondo Finance- Tokenised Yield Distribution and Smart Servicing¹⁵

Ondo issues tokenised representations of conservative fixed-income strategies, with smart contracts automating interest accrual, pricing updates, and payouts. Oracle feeds provide benchmark data, enabling event-driven servicing without manual interventions. The model demonstrates fully programmable yield distribution and automated back-office operations, relevant for India's mutual fund and AIF ecosystem, where NAV computation and corporate actions remain manual and fragmented.

4.6 Reporting and Compliance

Debt Instruments & Pooled Vehicles: Disclosures are submitted periodically to SEBI, RBI, and tax authorities. This involves multiple systems and intermediaries, with heavy reliance on manual reconciliation.

Case Study: MAS: Real-Time Regulatory Reporting from DLT¹⁶

MAS piloted real-time, API-based access to DLT transaction data, enabling automated compliance and reducing reconciliation burdens. By embedding reporting logic within the transaction layer itself, the model illustrates regulatory visibility that does not rely on periodic filings. For India, this offers a pathway for SEBI and RBI to streamline surveillance and reporting through integrated tokenised infrastructures.

¹⁵ Ondo Finance. "Ondo USD Yield (OUSG): Tokenized Exposure to U.S. Treasuries." Ondo Finance Documentation. <https://docs.ondo.finance>.

¹⁶ Monetary Authority of Singapore. *Project Guardian: Operationalising Tokenised Funds*. Singapore: MAS, 2025 <https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/guardian/project-guardian-operationalising-tokenised-funds.pdf>

4.7 Exit and Redemption

Debt Instruments: Exits are straightforward: redemption at maturity or secondary sale if liquidity permits. Prepayment clauses and call options add complexity in some instruments.

Pooled and Private Capital Vehicles: Redemptions in mutual funds are processed on standard settlement cycles. AIFs and private funds depend on negotiated timelines, buyouts, or asset sales.

Case Study: Hamilton Lane - Programmable Redemption in Tokenised Private Credit¹⁷

Hamilton Lane's tokenised feeder fund embeds redemption windows, eligibility checks, and liquidity buffers into smart contracts. This structure supports controlled exit opportunities within long-tenor private market products while maintaining fund discipline. It demonstrates how programmable mechanics can introduce flexibility in AIF-style vehicles without compromising governance.

Across these stages, tokenisation experiments suggest not just functional upgrades, but a rethinking of how financial assets are issued, held, and transacted. The relevance to India lies in recognising where market frictions already exist, and how global pilots are navigating them, without necessarily dismantling the institutional fabric that holds markets together.

5. Regulatory Ambiguities in India

India's financial laws define intermediaries, securities, and settlement formats in conventional terms. Tokenisation sits awkwardly within existing legal definitions, creating uncertainty over jurisdiction, enforceability, and custodial responsibility.

For innovators, these ambiguities do not imply regulatory resistance, but rather highlight areas where frameworks have not yet evolved to accommodate token-native models. As a result, tokenised instruments often sit in a grey zone where multiple laws could apply or where none apply with certainty, affecting how they are issued, traded, held, taxed, and supervised. The table below outlines the key questions that remain unresolved and how they shape the feasibility and design of tokenised financial products in the Indian context.

¹⁷ CFA Institute. *Tokenization of Real and Financial Assets, Part I: Industry Landscape and Strategies*. Research and Policy Center, 2023. https://rpc.cfainstitute.org/sites/default/files/docs/research-reports/tokenization_part-i_online-1.pdf

Question	Current Ambiguity	Implication for Tokenisation
What is a token legally?	The lack of a statutory definition creates uncertainty regarding applicable laws and supervisory jurisdiction.	Multiple laws (the Securities Contracts (Regulation) Act (SCRA) ¹⁸ , the Payment and Settlement Systems Act (PSS Act) ¹⁹ , the Indian Contract Act ²⁰ , and the Transfer of Property Act) create the risk of overlapping or no applicable regulations.
Who regulates token issuance?	Depends on underlying asset: SEBI for securities, RBI for G-Secs and payment systems. But tokens may not fit cleanly.	Creates scope for regulatory arbitrage and overlapping jurisdiction.
Are tokenised securities still "securities" under SCRA?	The SCRA defines "securities" to include specified instruments as well as "other marketable securities of a like nature," but does not expressly refer to tokens. Depending on their structure, tokenised instruments may resemble traditional securities by representing ownership or indebtedness, or may derive value from underlying securities, commodities, or indices, potentially bringing them within the definition of "derivatives." The absence of explicit statutory guidance creates uncertainty as to the appropriate classification of tokens under the SCRA.	If tokenised instruments are not classified as securities under the SCRA, they fall outside SEBI's regulatory and market infrastructure framework, preventing listing, clearing, and settlement through recognised exchanges and clearing corporations. If they are classified as securities or derivatives, existing exchange-centric trading, clearing, and settlement requirements apply, many of which are not readily compatible with token-based, programmable, or peer-to-peer transfer models.

¹⁸ Government of India. *Securities Contracts (Regulation) Act, 1956*. Ministry of Law and Justice. <https://www.sebi.gov.in/acts/contractact.pdf>

¹⁹ Government of India. *Payment and Settlement Systems Act, 2007*. Reserve Bank of India. <https://www.indiacode.nic.in/bitstream/123456789/2082/4/a2007-51.pdf>

²⁰ Government of India. *Indian Contract Act, 1872*. <https://www.indiacode.nic.in/bitstream/123456789/2187/2/A187209.pdf>

Can fractional interests in shares be issued and held?	Companies Act, 2013 ²¹ does not permit holding of fractional shares; CLC (2022) has recommended amendments limited to fresh issues in demat form.	Tokenisation models relying on fractional equity remain legally uncertain, constraining issuance design and retail participation unless company law is amended.
Can depositories hold tokens?	Depositories Act recognises only dematerialised securities, not on-chain records, leading to the uncertain status of token-ledgers ²²	Tokens held on chain would exist outside the depository system, creating parallel ownership registries with no legal recognition. Investor protection mechanisms tied to depositories would not apply.
How are tokens taxed?	No dedicated provisions for tokenised securities under the Income Tax Act. India's current framework recognises only Virtual Digital Assets (VDAs), such as crypto and NFTs, which are taxed at 30% capital gains with 1% TDS on transfers. Stamp duty laws apply to physical/property and securities transfers. ²³	Classification risk between securities and VDAs creates uncertainty on capital gains, TDS, GST, and stamp duty applicability.
Can tokens be transferred cross-border?	Foreign Exchange Management Act (FEMA), 1999 regulates foreign exchange and capital account transactions. Tokenised securities could be transferred peer-to-peer globally, bypassing RBI-approved channels.	Enforcement of capital controls becomes nearly impossible if tokens are on public blockchains. Permissioned blockchains may require RBI/SEBI oversight of node operators.

²¹ Government of India. *The Companies Act, 2013*. Ministry of Law and Justice. <https://www.indiacode.nic.in/handle/123456789/2114>

²² Government of India. *Depositories Act, 1996*. https://www.indiacode.nic.in/bitstream/123456789/1955/1/A1996_22.pdf

²³ Government of India. *Finance Act, 2022* (Virtual Digital Asset Amendments). Ministry of Finance <https://incometaxindia.gov.in/news/circular-23-2022.pdf>



Do smart contracts have legal enforceability?	The Indian Contract Act, 1872, requires agreements to be enforced by parties with legal capacity. Smart contracts are code, not parties. No case law on enforceability. ²⁴	Uncertainty whether automated corporate actions (coupon payments, redemptions) via smart contracts are legally binding. Dispute resolution mechanisms are unclear.
Who is liable for custody?	SEBI custodian regulations define liability for loss or theft. For self-custodied tokens, who bears risk? If wallets are hacked, is there recourse?	Lack of custodial liability frameworks could deter institutional adoption. Retail investors may lack protection against private key loss or theft.

Table 3: Regulatory Ambiguities in India

Beyond definitional and jurisdictional issues, regulatory ambiguity also relates to how tokenisation may be introduced within India’s existing financial market infrastructure and supervisory mandates. In the absence of an established sequencing pathway, questions arise regarding the institutional locus, scope, and scale of early deployments. One possible model observed internationally is the use of narrowly defined pilots under joint regulatory oversight to examine tokenised instruments in controlled settings. Applied to the Indian context, a limited pilot for tokenised debt instruments under the Securities and Exchange Board of India and the Reserve Bank of India would allow operational assessment of custody, compliance, and programmable settlement without implicating broader policy debates on virtual digital assets, capital controls, or currency stability. Such an approach could also provide empirical insight into interoperability between distributed ledgers and existing depositories, clearing corporations, and settlement systems.

Supervisory considerations similarly extend beyond discrete risks toward the broader question of how market integrity is maintained in tokenised environments. A potential organising construct is the articulation of a Digital Market Integrity framework, encompassing qualified digital custodianship, programmable Know Your Customer and Anti-Money Laundering mechanisms, settlement finality and atomic Delivery versus Payment, and insolvency and dispute-resolution procedures for on-chain registers. The commercial feasibility of such infrastructure will depend on the incentive structure for regulated financial institutions to coordinate and invest in pre-competitive rails. Consortium-based models observed in other market infrastructure and deep-tech domains illustrate how industry

²⁴ Ibid., 13.



coordination can expand market depth and improve capital formation, while allowing regulatory authorities to retain supervisory visibility and investor protection.

5.1 Looking Ahead: Questions That Remain

- Does tokenisation require changes to core securities and depository laws, or can it be layered onto current systems?
- How should jurisdiction be allocated across token-native and hybrid models?
- How can investor protection frameworks adapt to programmable servicing and decentralised custody?
- What public and supervisory infrastructure is needed to scale tokenised finance safely?



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