

PREFACE

It is a matter of immense pleasure to write the preface to this collection of articles and essays on diverse themes in Corporate and Commercial Laws. We, at the National Law Institute University (NLIU) have, over the years, continuously endeavored to promote legal research on contemporary legal issues in the field of corporate, commercial, and business laws. In pursuance of this aim, the Centre for Business and Commercial Laws (CBCL), in collaboration with one of India's leading law firms, Trilegal, is proud to organise the 11th edition of the NLIU-Trilegal Summit on Corporate and Commercial Laws, 2026.

The previous editions of the Summit focused on key issues pertaining to, inter alia, mergers and acquisitions, securities, and insolvency and bankruptcy laws, and witnessed participation by students from various law universities across the country. This Summit, in continuation of its successful legacy, expands upon the development of all areas of corporate and commercial laws, particularly key developments in the field of AI and Data Protection. With a record number of submissions, this year, the Summit seeks to provide an accessible platform to law students across the country to discuss, debate and learn various dimensions of Corporate and Commercial Laws.

The Eleventh Edition of NLIU-Trilegal Summit on Corporate and Commercial Laws 2026 is pleased to present this book. After a rigorous review, fifteen papers have been selected for publication in this book.

From Risk Capital to Regulatory Capital: Reconstitution of Venture Capital under India's New AIF Regime examines how reforms to the Alternative Investment Fund framework have shifted venture capital funds from risk allocators to regulatory gatekeepers. Due to directives issued by the Securities and Exchange Board of India (SEBI), fund managers now bear expanded compliance, due diligence, and reporting burdens, effectively treating regulatory ambiguity as disqualifying risk. The paper argues that this transformation discourages investment in legally uncertain but innovative sectors in India, fosters defensive investing, and may drive capital offshore. It proposes a "Regulatory Risk Safe Harbour" to balance enforcement with venture capital's core risk-bearing function.

Algorithmic Trading and Market Manipulation: The Need for SEBI's Oversight in Crypto Exchanges warns that India's unregulated crypto markets let algorithmic abuses, wash-trading, spoofing, pump-and-dump and cross-platform arbitrage, threaten retail investors and price discovery. The paper finds tax and judicial measures insufficient and recommends placing crypto exchanges under SEBI to use its surveillance infrastructure and enforcement powers. It urges tech-driven surveillance (machine learning, blockchain audit trails), targeted legislative changes, and international cooperation, citing regulatory models in the United States, European Union and United Kingdom to protect investors while preserving innovation in India.

The GCC Paradox: BOT Models as staged acquisitions explains that Build-Operate-Transfer (BOT) and hybrid Global Capability Centre (GCC) models are not simple outsourcing arrangements. In reality, they often function like gradual acquisitions, where foreign companies effectively control employees, intellectual property, and operations even before formally taking ownership. This creates confusion about who bears responsibility under labour, foreign exchange, tax, and data laws in India. The authors suggest treating BOT structures more like phased M&A deals, with clearer contracts, escrow mechanisms, and better data and AI governance to reduce legal uncertainty and regulatory risk.

When Prices Don't Move: Index Manipulation under PFUTP argues that India's PFUTP framework, long focused on "artificial prices" in individual stocks, is ill-suited to index-dominant derivatives. Analyzing interim order in the Jane Street matter and the reasoning of SEBI, it shows how manipulative schemes can target the index settlement reference during expiry windows, using timed, cross-market trades and asymmetric payoffs, without leaving persistent distortions in any single scrip. The paper urges refocusing protection on settlement-reference integrity while preserving legitimate arbitrage through scheme-based inference and clear limiting principles.

From Prohibition to Architecture: Re-Designing Compliance in India's Alternative Investment Fund Regime argues that recent steps taken by SEBI and the RBI have made India's AIF framework more restrictive than intended. Instead of relying on flexible, disclosure-based regulation, the system has moved toward broad prohibitions that create uncertainty and make it

harder for funds to operate smoothly. The paper suggests a more practical solution: build compliance directly into fund structures through model agreements, clearer co-investment rules, better foreign-exchange safeguards, stronger LP governance tools, and a regulatory sandbox for Category II AIFs. This approach aims to protect investors while keeping the AIF ecosystem commercially viable in India.

Gold Without a Guardian: Indian Digital Gold Market's Regulatory Vacuum explains that India's booming digital-gold market runs in a regulatory void: opaque pricing and hidden spreads, unclear vaulting and fractional-ownership practices, weak delivery terms, and no effective grievance forum expose retail buyers to serious counterparty risk. The paper warns of run-risk and delivery shortfalls, contrasts bank-backed models in Turkey/Indonesia, and urges a banking-led solution under the RBI (Reserve Bank of India), using the Gold Monetization Scheme to create regulated "gold current accounts" that restore transparency, custodial standards, and consumer protection in India.

Too Systemic to Trust? Re-Examining Direct Participation of Commercial Banks in Category III AIFs argues that India's ban on commercial banks investing directly in Category III AIFs prioritizes exclusion over supervision, driven by depositor-protection and evergreening fears. The paper shows the risks are real but manageable. Banks can participate safely through proportionate safeguards, ring-fencing, strict bans on borrower-linked investments, exposure caps, strategy-based eligibility, time-locked investments, and enhanced capital/monitoring, rather than outright prohibition. Implementing supervised entry would spread institutional capital, limiting concentration in Categories I–II, and better align market development with financial-stability goals.

Piercing the Wrong Veil: Reconciling the Control Conundrum in India's SBO Regime with Global Commercial Reality evaluates India's Significant Beneficial Ownership rules, highlighting how enforcement conflates professional management with actual ownership by holding multinational CEOs liable through subjective interpretations of control. Analyzing policy intent, adjudication orders, and comparative international frameworks, the paper shows that this expansive interpretation ignores executive power's derivative nature, diverging from global practices treating

management identification as a fallback. The paper argues that punishing professional capacity deters foreign investment. Therefore, the Ministry must adopt the FATF's cascading test, define explicit safe harbours, establish Advance Rulings, and introduce a White List, balancing transparency with governance to avoid penalizing stewards and chilling investment.

The IBC's Blind Spot: A Case of Value Erosion of IP-Centric Firms in CIRP evaluates India's Insolvency and Bankruptcy Code, highlighting how asset-neutral valuation, lack of specialized expertise, and confidentiality deficiencies systematically undervalue intellectual property. Analyzing statutory gaps alongside US and UK regimes, the paper shows that cost-based approaches fail to capture IP's income-generating potential, suppressing bidder confidence and distorting recoveries. The paper argues that IP undervaluation is structurally embedded, destroying value in IP-centric insolvencies. Therefore, the IBBI and legislature must recognize IP as a distinct asset class, mandate income-based valuation methodologies, and introduce confidentiality safeguards to balance procedural efficiency with economic realities, preventing value-destructive mechanisms that undermine strategic creditor recoveries.

Data, Dominance, and Denial of Market Access in Digital Ecosystems examines Competition Law's response to data-driven exclusionary behaviour across integrated markets, noting that traditional frameworks and consent remedies fail against architectural data extraction. Analyzing WhatsApp/Meta alongside EU, US, and emerging market jurisprudence, it shows that dominance in zero-price markets causes exclusionary effects in adjacent monetized markets via asymmetric data control. As market power operates through data architecture to foreclose rivals, regulators should recognize input foreclosure under Section 4(2)(c) of the Competition Act. Targeted remedies like functional unbundling or structural separation balance flexibility without over-expanding doctrine, shielding data power, or unifying distinct markets.

Tokenization as an Alternative to Securitization: Buzzword Hype or the Real Finance Revolution? evaluates tokenization against traditional securitization. Securitization faces complexity, information asymmetry, and inefficiencies; tokenization lacks legal architecture and liquidity. The paper reveals tokenization acts as an enabling layer whose automated settlement and fractional ownership fail without off-chain legal recognition. Technological segregation cannot substitute a

Special Purpose Vehicle's (SPV) legal personality and bankruptcy remoteness. Policymakers must integrate tokenization into existing securitization models, creating a "Securitization 2.0" framework. Here, tokens representing SPV-issued securities balance innovation with safeguards to avoid illusory liquidity, regulatory arbitrage, and systemic vulnerabilities from unanchored digital constructs.

Code, Cartels and Culpability: Algorithmic-Pricing & Antitrust examines antitrust challenges posed by AI pricing algorithms, highlighting how autonomous learning models facilitate tacit collusion and personalized pricing without human communication. Analyzing digital cartels, predictable agents, and data-driven discrimination, it shows that interactive systems exploit consumer biases to reach supra-competitive outcomes, evading traditional scrutiny. The paper argues that algorithmic pricing is a phenomenon where conventional antitrust tools cannot address machine-mediated coordination. Therefore, regulators must implement innovations like a Technical Leniency Protocol and Algorithmic Personalisation and Data Protection Standard to balance technological capabilities with transparency safeguards, avoiding unchecked digital cartelization, deliberate consumer misperception, and systematically eroding surplus.

The D-Linked Dilemma with DVT: Tackling Killer Acquisitions Through Data Threshold evaluates the Deal Value Threshold in India, highlighting its limitation in capturing Killer Acquisitions where companies acquire asset-light, nascent entities holding strategic data escaping monetary limits. Analyzing comparative frameworks and the Google Flipkart cases, it proves that traditional valuations fail as zero price products generate immense competitive value through engagement and data assets. The paper argues acquisitions involving unique data will continuously evade scrutiny under pure size frameworks. Consequently, regulators must define data, utilize the Business Reporting Method, and introduce data-specific thresholds to balance regulatory safeguards, preventing unchecked market consolidation and antitrust regulatory evasion.

Cross-Market Manipulation in India from the Lens of Jane Street's Interim Order examines regulatory challenges under SEBI Regulations, highlighting how traders exploit market linkages via uneconomic trades to artificially distort prices and extract profits elsewhere. Analyzing comparative U.S. and Indian jurisprudence alongside the Jane Street order, the paper identifies a

convergence on using circumstantial evidence, trading patterns, and economic rationality to detect abuse. It argues that complex algorithmic strategies threaten price discovery. Therefore, SEBI must codify manipulation indicia into formal guidance, introduce enhanced algorithmic audits, and adopt multipronged profitability analysis to balance deterrence with preserving liquidity for legitimate institutional market making.

Overlooked Vehicles: Recovering Regulatory Protection for Angel Funds Under Revised Angel Framework examines the status of angel investors under India's revised Alternative Investment Regulations, revealing how intensified compliance thresholds fail to recalibrate vital safeguards. Analyzing foundational legislative frameworks and foreign jurisdictions like Singapore and the UK, the paper highlights that mandatory lock-ins, strict accreditation, and institutionalisation without deal-level protections decrease liquidity and widen information gaps. The regime treats angels as institutional investors while leaving them unprotected during early-stage exposure. Consequently, SEBI must reconceptualize accreditation, retain deal-specific disclosures, and introduce conditional liquidity mechanisms like escrows. This safely balances regulatory feasibility with substantive fairness, preventing severe capital suppression.

We extend our heartiest congratulations to all the authors whose papers have been chosen for publication in this book. We express our sincere gratitude to our Chancellor, Hon'ble Justice Shri Sanjeev Sachdeva, the Chief Justice of the High Court of Madhya Pradesh, for his invaluable encouragement, guidance, and support in our endeavour. We extend our heartfelt thanks to our Vice-Chancellor, Prof. (Dr.) S. Surya Prakash, for his steadfast support, insightful guidance, and continuous encouragement in our academic pursuits. We wish to express our gratitude towards our Chairperson, Prof. (Dr.) Ghayur Alam for his constant support, guidance and inspiration. Our deepest gratitude goes to Trilegal for their significant contribution and support in organising the 11th Edition of the Summit. It would not have been possible to organize the summit without the constant support, guidance and motivation of the firm.

— **TEAM CBCL**

MESSAGE FROM TRILEGAL'S DESK

As we convene for the 11th edition of the NLIU–Trilegal Summit on Corporate and Commercial Laws 2026, we take pride in the remarkable journey of a platform that has, over the years, become a distinguished forum for intellectual engagement. Having completed a decade of sustained dialogue and scholarship, the Summit now stands not merely as an annual event but as a legacy initiative, one that exemplifies the power of meaningful collaboration between academia and legal practice. The enduring partnership between Trilegal and National Law Institute University, Bhopal, reflects a shared vision: to cultivate research-driven thought leadership while equipping young legal minds with perspectives that transcend the classroom.

The corporate and commercial legal landscape continues to evolve at an unprecedented pace. Rapid technological disruption, increasing regulatory sophistication, cross-border economic integration, and the growing emphasis on governance and sustainability have reshaped the contours of legal practice. In such a dynamic environment, the modern corporate lawyer must combine doctrinal clarity with commercial awareness, strategic foresight, and adaptability. Platforms such as this Summit play a vital role in preparing students to meet these demands.

Over the years, the NLIU - Trilegal Summit has consistently bridged the gap between theory and practice. By encouraging rigorous research in areas such as M&A, Public and Private Equity, Competition Law, Insolvency and Bankruptcy Law, Securities Law, Technology Law, and other emerging domains, it has fostered analytical depth and practical insight among participants. The intellectual rigour displayed by students across editions is a testament to the growing sophistication of corporate law scholarship in India. Equally significant is what this Summit represents for law students: an opportunity to engage directly with practitioners, to test ideas against real-world complexities, and to contribute meaningfully to ongoing legal discourse. Many alumni of earlier editions have since transitioned into impactful roles within the profession, and it is heartening to witness how this platform has shaped their academic and professional trajectories.

As we mark this 11th edition, we reaffirm our commitment to this unique academia-corporate partnership, which continues to serve as a pathbreaking example of collaborative legal education in the country. The consistency, credibility, and quality of this initiative are the result of sustained

institutional support and dedicated effort. On behalf of Trilegal, I extend our sincere gratitude to the Hon'ble Vice Chancellor for unwavering guidance and encouragement. I also thank the esteemed faculty members and the Centre for Business and Commercial Laws, whose commitment has ensured the Summit's continued excellence year after year.

We look forward to this edition carrying forward the legacy of rigorous scholarship, meaningful dialogue, and professional inspiration. My heartfelt congratulations and best wishes to all participants.

—YOGESH SINGH

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MESSAGE FROM THE CENTRE FOR BUSINESS AND COMMERCIAL LAWS (CBCL)

The Centre for Business and Commercial Laws (CBCL) at the National Law Institute University was founded in 2008 with the objective of encouraging rigorous research and thoughtful engagement in the fields of corporate and commercial law. Over the years, the Centre has steadily grown in vision and impact, consistently seeking new ways to deepen academic dialogue and respond to the changing needs of the business and legal community. In keeping with this commitment, we are delighted to present the 11th NLIU–Trilegal Summit Book, a curated collection of writings that reflect contemporary thinking on the legal questions shaping commerce today.

This volume captures the dynamic and adaptive character of corporate and commercial law. As markets evolve and transactions become increasingly complex, both domestically and globally, the law continues to respond with innovation and reform. In recent years, the field has undergone significant shifts that have reshaped regulatory approaches and market practice alike. Through this publication, we aim to highlight that sense of movement and transformation, showcasing scholarship that engages meaningfully with the realities of today’s business landscape.

This edition features a thoughtfully selected set of essays spanning securities regulation, banking and finance, mergers and acquisitions, competition law, and other emerging areas of importance. Each contribution has undergone a meticulous three-stage review process conducted by our editorial teams in collaboration with Trilegal. This process was designed to ensure that the selected papers combine doctrinal strength with practical insight. We warmly congratulate the authors for their dedication and intellectual effort, and for contributing research that resonates with practitioners, regulators, and academics alike.

We take immense pride in carrying forward the legacy of the previous leadership of the Centre, whose unwavering efforts have been instrumental in shaping the Summit into what it is today. As we celebrate a decade of academic excellence, we extend our heartfelt gratitude to Trilegal, whose indispensable guidance and support over the past ten years have been pivotal in the continued success of the Summit and the resulting publication. Their commitment to fostering an environment of analytical thinking and result-oriented research is inspiring.

We remain deeply grateful to the Hon'ble Vice Chancellor, Prof. (Dr.) S. Surya Prakash, and to our esteemed Chairperson, Prof. (Dr.) Ghayur Alam, for their steadfast support and encouragement. Their mentorship continues to inspire us to uphold the highest standards in our work. Finally, we express our warmest gratitude to the dedicated general body of CBCL, whose relentless efforts and commitment to uphold the highest standards of academic discourse have been the cornerstone of our success. Their unwavering dedication to the seamless organization of the Summit is heart-warming and, more importantly, indispensable for the resounding success of this edition.

With immense pride, we present the compilation of articles from the 11th NLIU-Trilegal Summit on Corporate and Commercial Laws, 2026. We hope this edition sparks meaningful dialogue, informs practice, and contributes to ongoing policy discussions in India and beyond. We are eagerly anticipating insightful feedback from our esteemed readers.

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FROM RISK CAPITAL TO REGULATORY CAPITAL: RECONSTITUTION OF VENTURE CAPITAL UNDER INDIA'S NEW AIF REGIME

-Qazi Ahmad Masood*

ABSTRACT

Recent reforms to India's Alternative Investment Fund ("AIF") framework are widely characterised as a tightening of compliance standards aimed at addressing misuse, regulatory arbitrage, and governance failures. While this characterisation is accurate, it is analytically incomplete. This paper advances the central claim that the new AIF Regime has affected a silent but fundamental transformation in the legal identity of venture capital in India. Venture capital AIFs are no longer treated merely as allocators of risk capital; instead, they are increasingly positioned as de facto regulatory sentinels tasked with ex ante screening, allocation policing, and regulatory risk management on behalf of the State.

The paper argues that this transformation has occurred not through express legislative mandate, but through cumulative regulatory design choices implemented via delegated legislation and regulatory circulars. These choices shift regulatory risk downstream from public authorities to private market actors. By rendering regulatory ambiguity an impermissible investment risk, the regime reorders the venture capital risk universe, systematically disadvantaging frontier innovation that necessarily operates in legal grey zones while favouring compliance-predictable business models.

Structurally, it first establishes the classical legal role of venture capital as a risk-allocation institution. It then analyses the New AIF Regime as a functional reclassification of venture capital, followed by a doctrinal examination of venture capital's unacknowledged conversion into a private regulatory actor. Next demonstrates how the regime redefines acceptable risk, before analysing its systemic innovation consequences in India. A comparative analysis of the United States, European Union, United Kingdom, Singapore, Hong Kong, and Cayman Islands highlights India's distinctive regulatory posture. Finally, the paper proposes a Regulatory Risk Safe Harbour to recalibrate duties and liability.

Keywords: Alternative Investment Funds (AIF), Regulatory Capital, Venture Capital, Regulatory Risk Safe Harbour, Proxy steering.

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I. INTRODUCTION

Recent reforms to India’s Alternative Investment Fund (“AIF”) framework are commonly described as a necessary tightening of compliance in response to regulatory misuse.¹ Dominant commentary frames these changes in familiar terms: enhanced KYC and AML obligations, stronger governance standards, and corrective action following instances of abuse.² While these descriptions are accurate, they are analytically incomplete. They overlook a deeper and more consequential development, one that fundamentally alters the legal and economic role of venture capital in India.

This paper advances the central claim that the New AIF Regime has silently reconstituted venture capital funds from allocators of risk capital into de facto regulatory sentinels of the Indian financial system.³ This transformation is not the result of an explicit legislative declaration, but of cumulative regulatory design choices that shift regulatory risk from the State onto private market actors. Venture capital funds are now required to vet investor provenance, assess downstream regulatory exposure, prevent regulatory arbitrage, and function as first-line compliance filters.⁴ These are not incidental compliance obligations; taken together, they amount to delegated regulatory responsibility.

Historically, venture capital has been structured around the acceptance of uncertainty. Its legal function was to absorb commercial failure and portfolio volatility, while regulators intervened primarily ex post, through disclosure norms, fraud enforcement, and systemic safeguards. The New AIF Regime departs from this model. By prohibiting regulatory ambiguity as an acceptable investment risk, it recalibrates what kinds of innovation are fundable. Early-stage ventures operating in regulatory grey zones, fintech, AI-health, climate finance, are systematically disadvantaged, while compliance-predictable models are implicitly favoured. Regulation thus begins to steer innovation outcomes without expressly acknowledging that role.

¹ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, LAD- NRO/GN/2012 - 13/04/1126 reg. 2 (1) (b).

² Securities and Exchange Board of India, Consultation Paper on Review of Regulatory Framework for AIFs (January, 2023) available at: < https://www.sebi.gov.in/reports-and-statistics/reports/jan-2023/consultation-paper-on-review-of-regulatory-framework-for-aifs_68469.html >.

³ n 1, regs 4(g), 9, 20.

⁴ Securities and Exchange Board of India, *Revised Regulatory Framework for Angel Funds under the AIF Regulations* (Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128, 10 September 2025).

The paper argues that this unarticulated shift creates a doctrinal imbalance. Venture capital funds are subjected to heightened regulatory duties without corresponding safe harbours or deference for good-faith judgment. The result is defensive investing, excessive documentation, and incentives for capital migration outside the domestic AIF framework.⁵ To address this imbalance, the paper proposes a Regulatory Risk Safe Harbour that preserves oversight while restoring venture capital's core risk-bearing function.

II. VENTURE CAPITAL AND THE LAW OF RISK: THE CLASSICAL ALLOCATION MODEL

Venture capital has historically been understood, both in law and in policy, as a specialised mechanism for allocating and absorbing risk rather than regulating it. Its defining economic function is to channel capital into enterprises characterised by high uncertainty, limited information, and unproven business models. Legal frameworks governing venture capital evolved around this premise: that uncertainty is not a defect to be eliminated *ex ante*, but a feature intrinsic to early-stage innovation that markets, rather than regulators, are best positioned to price.⁶

At its core, venture capital performs three interrelated risk-allocation functions.⁷ First, it absorbs commercial risk by funding ventures with a high probability of failure but outsized potential returns. Second, it internalises information asymmetry, investing despite incomplete disclosures, evolving technologies, and opaque regulatory pathways. Third, it manages portfolio risk through diversification and the power-law distribution of returns, accepting that a small number of successes will compensate for widespread failure. Law and policy have traditionally accommodated these features by refraining from imposing rigid *ex ante* constraints on investment decision-making.

This tolerance was not accidental. Early-stage innovation often precedes legal categorisation. New technologies and business models, whether in finance, health, labour platforms, or climate solutions, frequently emerge before regulators have fully articulated applicable rules. Legal

⁵Deloitte India, 'AIF Regulatory Changes and Structuring Implications' (*Deloitte India*, 11 July 2024) < <https://www2.deloitte.com/in/en/pages/financial-services/articles/aif-regulatory-updates.html> >.

⁶ US Securities and Exchange Commission, *Exemptions for Advisers to Venture Capital Funds* (Release No IA-3222, 22 June 2011) 685–90.

⁷ Ronald J Gilson, 'Engineering a Venture Capital Market: Lessons from the American Experience' (2003) 55 *Stanford Law Review* 1067, 1068–72 < <https://law.stanford.edu/publications/engineering-a-venture-capital-market/> >.

systems therefore allowed venture capital to operate in spaces of regulatory indeterminacy, relying on market discipline. The implicit assumption was that the social value of innovation justified exposure to uncertainty, including regulatory uncertainty. Crucially, regulators did not expect venture capital funds to anticipate, interpret, or enforce regulatory compliance on behalf of the State.⁸ Their obligation was to act in the best interests of their investors, not as custodians of broader regulatory objectives.

This classical allocation model reflects a deeper legal intuition: that venture capital is a private ordering institution whose legitimacy flows from allowing informed risk-taking. Courts and regulators implicitly recognised that imposing heavy ex ante compliance burdens would distort investment behaviour, favour incumbents, and deter experimentation. As a result, venture capital law developed around flexibility, proportionality, and deference to commercial judgment, with regulatory oversight calibrated to avoid chilling legitimate risk-taking.

Therefore, the normative baseline against which contemporary regulatory developments must be assessed. Under the classical model, venture capital is not a first line of regulatory defence but a facilitator of economic experimentation. Any departure from this model, particularly one that reassigns regulatory functions to venture capital funds, constitutes a fundamental shift in legal design. Understanding what venture capital is “supposed to be” under law is essential to evaluating whether recent regulatory changes merely refine the system or transform its underlying logic. This model was implicitly recognised by regulators through regulatory silence rather than regulatory endorsement.

III. THE NEW AIF REGIME AS A FUNCTIONAL RECLASSIFICATION OF VENTURE CAPITAL.

The recent SEBI interventions amount to more than incremental tightening: they effect a functional reclassification of venture-capital AIFs from private risk allocators into entities that must perform discrete regulatory functions on behalf of the State.⁹ SEBI’s October 8, 2024 circular imposes explicit, transaction-level duties on managers and key management personnel (KMPs) to conduct “specific due diligence” designed to prevent the circumvention of sectoral laws (including

⁸ Securities and Exchange Board of India, *Concept Paper on Alternative Investment Funds* (SEBI, 2012) paras 2.1–2.3.

⁹ n 2.

restrictions tied to banks, NBFCs and land-border investor rules). That language departs from classic KYC/AML rhetoric and frames investor-screening as an instrument of regulatory enforcement rather than mere investor protection.¹⁰

Investor due diligence under the new regime therefore functions as regulatory screening. Managers must probe beneficial ownership, group affiliations, source-of-fund linkages and potential circumvention vectors, tasks conventionally associated with banking AML controls or public-authority vetting. SEBI's guidance, reinforced by commentary from practitioners and the press, signals that large or sensitive investors require heightened scrutiny and, in some cases, pre-clearance (e.g., investors from countries sharing a land border with India). In practice, this converts onboarding into a gatekeeping exercise that filters which investors may participate in schemes, an *ex ante* policing role.

Co-investment rules introduced in 2025 formalise a second axis of reclassification. Regulation 17A and the accompanying framework require co-investment vehicles (CIVs) and shelf placement memoranda, mandate separation of bank and demat accounts, and impose prescriptive disclosure and governance requirements for each CIV. These measures transform allocation mechanics, previously managed by contractual practice and fund governance, into a regulated architecture aimed at ensuring fairness and preventing preferential treatment. The upshot is that allocation decisions and side-pools are no longer purely commercial choices; they are regulated acts with attendant filing, disclosure and governance costs.

KMP accountability is the third pillar of this reclassification. SEBI's regulatory texts explicitly place affirmative responsibilities on managers and named KMPs to satisfy the due-diligence mandate; managers are required to establish internal processes, maintain records, and be able to demonstrate compliance.¹¹ This practice substitutes managerial judgement and governance for direct regulatory action, effectively deputising private actors to execute parts of the regulator's enforcement strategy.

¹⁰ Securities and Exchange Board of India, *Circular on Specific Due Diligence of Investors and Investments of AIFs* (8 October 2024) paras 2–4, Circular No.: SEBI/HO/AFD/AFD-POD-1/P/CIR/2024/135.

¹¹ Nishith Desai Associates, 'SEBI Tightens Due Diligence Norms for AIFs' (*Nishith Desai Associates Client Alert*, October 2024) < <https://www.nishithdesai.com/information/news-storage/news-details/article/sebi-tightens-due-diligence-norms-for-aifs.html> >.

Operational overlays, custodian reporting and dematerialisation obligations, reinforce the reclassification by creating audit-grade traceability of holdings and flows. SEBI’s demat/custodian guidelines and master circular require custodianship, reporting on significant holdings, and reconciliations that make AIFs operationally analogous to other supervised intermediaries. Those obligations increase the evidentiary burden on managers and make the gatekeeper function auditable and enforceable.

Together these elements instantiate what this paper terms “delegated regulatory responsibility”: a regulatory design in which the State offloads ex ante screening, allocation policing and flow-monitoring onto market intermediaries without a commensurate statutory redefinition of their role or protective doctrines.¹² The doctrinal significance is twofold. First, it alters the identity and incentives of VC funds, making them first-line regulators in practice. Second, it raises normative and legal questions about fairness, liability and the appropriate scope of private enforcement: duties originally conceived to protect investors are now being repurposed to enforce a broader public regulatory agenda.

IV. VENTURE CAPITAL AS PRIVATE REGULATOR: THE UNACKNOWLEDGED LEGAL INNOVATION.

The New AIF Regime represents an unacknowledged legal innovation: it deputises venture capital funds as private regulators, a role historically reserved for a narrow class of institutions whose structure and function justify regulatory gatekeeping. While the law has long relied on private actors to perform certain regulatory functions, this reliance has been carefully circumscribed and institution specific. The extension of such functions to venture capital funds marks a qualitative departure from established regulatory design.¹³

Traditionally, private regulatory gatekeepers have included banks, auditors, credit rating agencies, and stock exchanges. Each of these actors performs ex ante screening or monitoring functions that serve public regulatory objectives. Banks are obligated under AML and counter-terror financing regimes to police the provenance of funds; auditors are required to verify financial statements to

¹² Securities and Exchange Board of India Act, 1992 (15 of 1992) s 11.

¹³ Securities and Exchange Board of India, *Circular on Accredited Investors and Large Value Funds* (SEBI Circular dated 8 December 2025).

protect market integrity; exchanges surveil trading activity to prevent market abuse.¹⁴ Crucially, these entities share structural characteristics that make gatekeeping viable: they are repeat players, operate on standardised information, function at scale, and are institutionally embedded within regulatory architectures that provide clear mandates, detailed rules, and calibrated safe harbours.

Venture capital funds, by contrast, are structurally misaligned with regulatory policing. Their economic value lies precisely in their ability to make discretionary, forward-looking assessments about unproven technologies, regulatory trajectories, and market adoption. They are also competing to deploy capital quickly in dynamic markets. These features, which are essential to the venture capital model, are fundamentally at odds with the caution, standardisation, and proceduralism that effective regulatory gatekeeping demands.

Despite this misalignment, the New AIF Regime, through cumulative obligations relating to investor due diligence, co-investment governance, and KMP accountability, imposes on VC funds a duty not merely to avoid misconduct, but to demonstrate regulatory scepticism. Liability exposure no longer turns solely on fraud, misrepresentation, or bad faith. Instead, managers risk regulatory consequences for failing to anticipate or prevent potential circumvention of laws by investors or portfolio structures. This represents a novel form of liability for “insufficient scepticism”: an expectation that private actors will identify and mitigate regulatory risk *ex ante*, even where the applicable legal position may itself be unsettled.¹⁵

What makes this development particularly significant is that it has occurred without explicit articulation. Neither statute nor formal policy statements openly declare venture capital funds to be regulatory intermediaries. Yet, in substance, this is the role they are being asked to perform. The transformation is put into effect through circulars, reporting requirements, and accountability mechanisms that collectively shift enforcement burdens downstream.¹⁶

This therefore demonstrates that the New AIF Regime is not an instance of routine financial regulation. It is an instance of institutional role conversion, in which venture capital funds are quietly repurposed as instruments of regulatory enforcement. Recognising this transformation is

¹⁴ John C Coffee Jr, ‘Gatekeepers: The Professions and Corporate Governance’ (2006) 84 Boston University Law Review 301, 308–12.

¹⁵ Securities and Exchange Board of India Act, 1992 (15 of 1992) s 11, 15HB.

¹⁶ *ibid*; n 1.

essential, because treating it as mere compliance tightening obscures the deeper legal question: whether an institution designed to embrace uncertainty can, or should, be made responsible for policing it on behalf of the State.

V. FROM CAPITAL RISK TO REGULATORY RISK: REORDERING THE VENTURE CAPITAL RISK UNIVERSE.

The New AIF Regime does not meaningfully diminish risk in the venture capital ecosystem. Rather, it reorders the hierarchy of risks that venture capital funds are legally permitted to assume. This reordering is subtle but profound. By privileging certain forms of uncertainty while prohibiting others, the law reshapes venture capital behaviour not through direct investment mandates, but through the redefinition of acceptable risk.

Venture capital traditionally operates across three distinct categories of risk. Commercial risk refers to the possibility that a business model may fail due to lack of product-market fit, execution challenges, or competitive pressure. Market risk captures broader fluctuations in demand, capital availability, and macroeconomic conditions. These risks have long been understood as intrinsic to venture investing and are not only tolerated but expected. By contrast, regulatory risk concerns uncertainty regarding the applicability, evolution, or interpretation of legal rules governing new technologies or business models.¹⁷ Historically, this category was not treated as disqualifying. Venture capital's economic function included pricing regulatory uncertainty alongside commercial and market risk.

The New AIF Regime disrupts this equilibrium by transforming regulatory risk into a legally impermissible category of exposure. Through enhanced due diligence obligations, anti-circumvention mandates, and accountability frameworks, venture capital funds are now expected to pre-filter regulatory ambiguity ex ante. Investments that hinge on unsettled legal classifications or evolving policy positions are no longer merely high-risk; they become compliance liabilities. In effect, regulatory ambiguity becomes the forbidden risk, a form of uncertainty that venture capital funds must avoid, irrespective of its commercial promise.

¹⁷ Organisation for Economic Co-operation and Development, 'Regulatory Policy and Innovation' (*OECD Publishing* 2010) 11–14 < <https://www.oecd.org/gov/regulatory-policy/innovation.htm> >.

This shift has disproportionate consequences for frontier innovation, which almost invariably inhabits regulatory grey zones. Fintech ventures challenge existing distinctions between lending, payments, and banking.¹⁸ AI-health startups operate at the intersection of medical regulation, data protection, and algorithmic accountability. Climate-tech financial instruments often sit between environmental regulation and financial markets. In each case, innovation precedes legal consolidation. If venture capital is required to invest only where regulatory pathways are already clear, then the law systematically favours incremental innovation over transformative experimentation.

Crucially, this outcome is not a neutral by-product of better compliance. It reflects a normative regulatory choice about how uncertainty should be distributed between public regulators and private capital. By shifting regulatory risk downstream to venture capital funds, the State effectively offloads the cost of legal indeterminacy onto private actors. Venture capital managers must internalise not only the risk of being wrong about markets, but the risk of being wrong about the law's future trajectory. This is a fundamentally different burden, one that alters investment incentives and risk calculus.

The reordering of the venture capital risk universe therefore functions as an implicit form of industrial policy. Without banning any sector or technology outright, the New AIF Regime reshapes the funding landscape by making certain forms of innovation legally unattractive to fund. Law thus operates not merely as a constraint, but as a selector of innovation pathways. Understanding this redefinition of acceptable risk is essential to appreciating how regulatory design, even when formally neutral, can recalibrate the direction and nature of technological development. Nothing in SEBI's mandate requires this hierarchy of risks; it is a regulatory choice.¹⁹

¹⁸ Reserve Bank of India, *Discussion Paper on Fintech Regulation* (2023) available at < <https://www.rbi.org.in/> >.

¹⁹ Securities and Exchange Board of India, *Circular on Revised Regulatory Framework for Angel Funds under AIF Regulations* (Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128, 10 September 2025).

VI. INNOVATION STEERING BY PROXY: SYSTEMIC CONSEQUENCES IN THE INDIAN CONTEXT.

The reordering of venture capital risk under the New AIF Regime would have consequences in any jurisdiction. In India, however, its effects are systemically amplified by the country's institutional and market structure. Delegating regulatory functions to venture capital funds in this context operates as a form of implicit innovation policy, steering capital and entrepreneurial effort without explicit legislative choice or public debate.

India's governance architecture is characteristically regulatory-first and policy-driven.²⁰ Unlike jurisdictions where courts play a central role in resolving regulatory ambiguity through litigation and precedent, India relies heavily on executive regulation, circulars, and delegated legislation. Regulatory uncertainty is therefore not quickly resolved through adjudication; instead, it persists until clarified by the regulator itself. In such an environment, requiring venture capital funds to pre-emptively assess and mitigate regulatory ambiguity places them in an especially precarious position. They must make legal judgments in a system where the law is fluid, discretionary, and often clarified only after market practices have evolved.

At the same time, India's early-stage innovation ecosystem is highly dependent on domestic alternative investment funds. Unlike in the United States or parts of Europe, where venture capital markets are deep, diversified, and geographically mobile, Indian startups rely disproportionately on SEBI-registered AIFs for seed and Series A financing.²¹ Domestic AIFs are not merely one source of capital among many; they are the principal institutional conduit through which early-stage risk capital flows. Consequently, changes in AIF behaviour have cascading effects across the startup ecosystem.

In this regulatory configuration, venture capital investment behaviour becomes the functional conduit through which regulatory caution is translated into de facto industrial policy, as funding flows are systematically redirected toward compliance-predictable sectors and away from frontier innovation without any explicit legislative choice or policy declaration. Within this ecosystem, venture capital compliance behaviour becomes a powerful vector through which regulatory

²⁰ Abhinav Chandrachud, *Republic of Rhetoric: Free Speech and the Constitution of India* (2017) Penguin, 36–39.

²¹ Regulation (EU) No 596/2014 on Market Abuse (Market Abuse Regulation), arts 16–17 < <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R0596> >.

preferences shape innovation outcomes. When VC funds internalise regulatory risk as a primary constraint, they adjust investment strategies accordingly. Sectors characterised by regulatory clarity and established compliance pathways, enterprise software, traditional SaaS, regulated financial services, become more attractive. Conversely, sectors operating in legal grey zones, fintech infrastructure, AI-driven health solutions, climate-finance instruments, face heightened funding friction. Over time, this reallocation of capital influences not only which startups succeed, but which kinds of startups are formed in the first place.

The result is innovation steering by proxy. Without issuing sectoral bans or formal industrial policy directives, the State indirectly channels innovation toward compliance-predictable domains by embedding regulatory screening within venture capital decision-making. This mechanism is subtle, decentralised, and largely invisible in policy discourse, yet its effects are durable and far-reaching. In the Indian context, where venture capital is concentrated, regulatory discretion is high, and alternative capital pathways are limited, this form of proxy steering carries especially high stakes for the trajectory of technological and economic development. This steering occurs without parliamentary debate or policy declaration

VII. DUTIES WITHOUT DEFERENCE: THE DOCTRINAL INCOMPLETENESS OF THE NEW AIF REGIME.

A defining feature of the New AIF Regime is the asymmetric expansion of regulatory duties imposed on venture capital funds without a commensurate recalibration of liability standards or protective doctrines. This imbalance renders the regime doctrinally incomplete. While SEBI has substantially widened the scope of obligations borne by AIF managers and key management personnel (KMPs), it has not articulated standards of deference, safe harbours, or presumptions of good faith that typically accompany such delegated responsibilities in other regulatory contexts.²² The result is a regulatory design that demands heightened vigilance while offering little protection for reasonable judgment.

The expansion of duties is explicit and multi-layered. Managers and KMPs are now required to conduct enhanced investor due diligence aimed at preventing circumvention of unrelated regulatory regimes, to maintain detailed documentary records of compliance processes, and to

²² n 1, regs 9, 20.

oversee allocation, co-investment, and custody arrangements with a level of scrutiny previously associated with regulated intermediaries. These duties go beyond traditional fiduciary obligations to investors. They impose affirmative public-law responsibilities, effectively requiring private actors to anticipate and mitigate regulatory risk on behalf of the State.

What is missing, however, is procedural deference, a recognition that regulatory judgment exercised in good faith, following prescribed procedures, should not attract ex post sanction merely because outcomes later appear imperfect. In comparable legal contexts, courts and regulators have developed doctrines that insulate reasonable decision-making from hindsight review. The business judgment rule in company law, auditor reliance defences in securities regulation, and good-faith safe harbours in banking supervision all reflect an understanding that excessive second-guessing distorts behaviour. No equivalent protection exists under the New AIF Regime. Managers face potential exposure not only for misconduct, but for failing to be sufficiently sceptical or cautious in the face of regulatory ambiguity.

This absence of deference produces predictable behavioural consequences. Faced with open-ended liability and unclear standards of review, venture capital funds rationally adopt defensive compliance strategies. Investment decisions are accompanied by excessive documentation designed to demonstrate diligence rather than to improve substantive judgment. Transactions that raise novel regulatory questions are avoided, regardless of their commercial merit. Co-investment structures are simplified or abandoned to minimise compliance risk. These behaviours are not aberrations; they are logical responses to a regime that penalises mis judgment without distinguishing it from malfeasance.

Over time, defensive behaviour translates into risk aversion and capital migration. Funds gravitate toward sectors with settled regulatory frameworks and away from frontier innovation. Where regulatory risk cannot be eliminated, capital is routed through offshore structures or non-AIF vehicles that fall outside the most stringent oversight. Ironically, this undermines the stated objectives of the AIF framework itself. The regime was designed to promote transparency, integrity, and the growth of a robust domestic alternative investment ecosystem. By incentivising avoidance rather than engagement, it risks pushing capital and innovation into less transparent or less regulated channels.

The doctrinal contradiction is therefore clear. The New AIF Regime relies on venture capital funds to perform quasi-regulatory functions yet treats their judgments as if they were subject to strict liability. It demands scepticism without offering deference, vigilance without protection. Such a design is internally inconsistent. Effective delegation of regulatory responsibility requires not only duties, but also clearly articulated limits on liability. Without this balance, the regime erodes the very risk-taking capacity that venture capital is meant to supply, weakening both innovation outcomes and the regulatory framework's own effectiveness.

VIII. COMPARATIVE REGULATORY POSITIONS AND THEIR INNOVATION IMPLICATIONS

A comparative examination of venture capital regulation across the United States, the European Union, the United Kingdom, Singapore, Hong Kong, and Cayman Islands reveals that India's New AIF Regime occupies a distinct and unusually interventionist position. While all jurisdictions grapple with balancing investor protection and market integrity against innovation, India stands apart in the extent to which it delegates regulatory screening and enforcement functions to venture capital funds themselves. This divergence is not merely one of degree, but of regulatory design and institutional role assignment.

In the United States, venture capital regulation is premised on the idea that VC activity is fundamentally different from traditional asset management. The Investment Advisers Act carves out a bespoke venture capital adviser exemption (Rule 203(l)-1), allowing VC managers to avoid full registration provided they meet definitional criteria.²³ The regulatory emphasis is placed on fiduciary duties and anti-fraud enforcement, not *ex ante* regulatory policing. While AML and sanctions laws apply, VC managers are not tasked with preventing circumvention of unrelated regulatory regimes. Regulatory uncertainty is thus treated as an inherent feature of innovation, not a disqualifying risk. This design preserves space for frontier experimentation while relying on *ex post* enforcement to address abuse.²⁴

²³ US Securities and Exchange Commission, *Exemptions for Advisers to Venture Capital Funds* (Release No IA-3222, 22 June 2011) 685–87.

²⁴ *ibid* 694–96.

The European Union, through the Alternative Investment Fund Managers Directive (AIFMD), adopts a more interventionist stance but remains structurally distinct from India.²⁵ AIFMD regulates managers rather than funds, imposing extensive duties relating to risk management, reporting, depositary oversight, and conflicts of interest. However, the EU model emphasises harmonisation and systemic risk containment, not deputization of managers as regulatory sentinels. Investor due diligence is largely embedded within AML frameworks, not framed as a tool to prevent circumvention of sector-specific laws. Importantly, the EU regime is accompanied by proportionality principles and well-developed depositary and reliance doctrines, which calibrate liability and mitigate defensive behaviour.

The United Kingdom, while retaining AIFMD post-Brexit, is actively reconsidering its proportionality. Regulatory consultations indicate a move toward a graduated regime that differentiates between systemic managers and genuinely venture-stage funds.²⁶ This reflects an explicit recognition that excessive ex ante compliance can distort early-stage capital formation. The UK approach thus illustrates an important contrast: heightened duties are increasingly paired with context-sensitive deference, limiting their chilling effect on innovation.²⁷

In Singapore, venture capital regulation is explicitly designed to enhance the city-state's attractiveness as a global fund hub. The Variable Capital Company (VCC) framework offers structural flexibility, while the Monetary Authority of Singapore focuses on licensing, AML/KYC compliance, and supervisory guidance rather than intrusive allocation or investor-screening mandates.²⁸ Regulatory expectations are clearly articulated, and managers benefit from predictable supervisory engagement. Crucially, Singapore does not require VC funds to pre-emptively police regulatory arbitrage or downstream legal compliance beyond standard AML obligations. Innovation risk is thus preserved as a legitimate investment domain.

Hong Kong adopts a similar approach. The Securities and Futures Commission regulates private equity and VC managers primarily through licensing and conduct rules, supplemented by AML

²⁵ Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers [2011] OJ L174/1, recitals 2–5 available at: < <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0061> >.

²⁶ Alternative Investment Fund Managers Regulations 2013 (UK) (SI 2013/1773).

²⁷ Financial Conduct Authority, Discussion Paper DP23/2: 'Updating and Improving the UK Regime for Asset Management' (February 2023).

²⁸ Monetary Authority of Singapore (MAS), Singapore as a Global Asset Management Hub (*Policy Statement*, 2022); Securities and Futures Act 2001 (Singapore), ss 82–99.

and disclosure obligations. Co-investments and side arrangements are governed through conflicts management and transparency rather than mandatory structural segregation. As in Singapore, the regulatory model relies on ex post supervision and enforcement, not ex ante deputization of funds as regulatory gatekeepers.²⁹

The Cayman Islands, a leading offshore fund domicile, represents the opposite end of the spectrum. Under the Private Funds Law, registration, audit, and valuation obligations exist, but the jurisdiction deliberately avoids substantive interference with investment decision-making. Cayman's role in global VC structuring underscores a key practical implication: where domestic regimes impose heavy, uncertain, or asymmetric burdens, capital and fund structures migrate to jurisdictions offering clarity and predictability.³⁰

Against this backdrop, India's New AIF Regime is distinctive. SEBI's investor due diligence circular explicitly requires managers to prevent circumvention of other regulatory regimes, including banking, FDI, and geopolitical restrictions. Regulation 17A formalises co-investments through CIVs, mandating separate vehicles, accounts, and disclosures. Dematerialisation and custodian reporting requirements impose operational burdens uncommon in early-stage VC globally. Most significantly, these obligations are imposed without articulated safe harbours or standards of deference for reasonable regulatory judgment.

The practical implication is a regulatory-gatekeeper effect unique to India. VC managers must internalise regulatory risk not merely as a background constraint, but as a primary determinant of fundability. In a market where early-stage capital is concentrated in domestic AIFs and jurisdictional arbitrage is limited, this reallocation of risk has systemic consequences.³¹ It biases capital toward compliance-predictable sectors, discourages frontier innovation, and incentivises offshore structuring, outcomes that undermine the stated objectives of building a robust domestic alternative investment ecosystem.

Comparative analysis therefore strengthens the central argument: India has not merely tightened VC regulation but has reassigned regulatory responsibility in a way unmatched by peer

²⁹ Securities and Futures Ordinance (Cap 571), ss 114–116.

³⁰ Private Funds Act (2020 Revision) (Cayman Islands), ss 3–5.

³¹ Organisation for Economic Co-operation and Development, 'Global Investment Structures and Fund Domiciliation' (2022) 22–25.

jurisdictions. The absence of corresponding safe harbours renders this reassignment doctrinally incomplete. International experience suggests that effective regulation of venture capital requires not only duties, but also calibrated deference. Without such recalibration, India risks converting venture capital from an engine of innovation into an instrument of regulatory risk management, at significant cost to long-term technological and economic development.

IX. RECALIBRATING VENTURE CAPITAL REGULATION: THE CASE FOR A REGULATORY RISK SAFE HARBOUR

If the New AIF Regime continues to treat venture capital AIFs as first-line regulatory sentinels, Indian law must complete this regulatory design by explicitly recognising and protecting good-faith regulatory judgment. At present, the framework expands the duties of venture capital funds and their managers without articulating the standards by which such judgment will be evaluated or the limits of liability for reasonable error. This asymmetry renders the regime doctrinally incomplete. A Regulatory Risk Safe Harbour is therefore necessary not to dilute regulation, but to stabilise it.³²

A Regulatory Risk Safe Harbour would operate as a principled limitation on ex post regulatory second-guessing. Its core function would be to shield venture capital AIFs, managers, and key management personnel from liability arising solely from reasonable regulatory misjudgments, if they have followed prescribed processes in good faith. The safe harbour would not absolve misconduct. Rather, it would draw a critical distinction between deliberate circumvention of law and good-faith decision-making in conditions of legal ambiguity. In doing so, it would recognise a reality that the New AIF Regime itself has created: that venture capital managers are now expected to assess and internalise regulatory risk as part of their investment function.

The operation of such a safe harbour must be grounded in procedural compliance rather than substantive outcomes. Protection would flow from demonstrable adherence to recognised due diligence frameworks, including documented investor provenance checks, beneficial ownership analysis, and source-of-fund reviews. It would require contemporaneous records showing that regulatory issues were identified and deliberated upon, and that decisions were taken through established governance mechanisms such as investment committees or compliance oversight by

³² HM Treasury, ‘Review of the UK Alternative Investment Fund Managers Regime’ (2023) paras 2.12–2.18.

key management personnel. Where managers have relied on professional advice, such reliance should be recorded and treated as evidence of good faith. Importantly, the inquiry would focus on the quality of the process followed at the time of decision-making, not on whether the regulator subsequently adopted a different interpretation.³³

At the same time, the safe harbour must be clearly bounded to preserve the integrity of regulatory enforcement. It should not apply in cases involving fraud, misrepresentation, wilful blindness to obvious regulatory red flags, or bad-faith structuring intended to circumvent legal requirements. Nor should it protect systemic non-compliance or the falsification of records. By explicitly carving out these limits, the safe harbour would strengthen rather than weaken oversight, ensuring that enforcement resources are directed toward genuinely culpable conduct instead of reasonable disagreement in unsettled regulatory terrain.

Comparative regulatory experience strongly supports this approach. In the United States, venture capital advisers operate within a framework that combines lighter registration requirements with robust fiduciary and anti-fraud enforcement, underpinned by long-standing judicial deference to good-faith business judgment. The European Union and the United Kingdom impose extensive obligations on alternative investment fund managers, but these duties are tempered by proportionality principles and reliance doctrines that limit hindsight liability. Singapore and Hong Kong emphasise licensing, supervisory engagement, and clarity of expectations, providing managers with predictable regulatory boundaries. In each of these jurisdictions, delegated responsibility is accompanied by calibrated protection for reasonable judgment. India's regime, by contrast, imposes comparable or greater duties without articulating comparable deference.

Introducing a Regulatory Risk Safe Harbour would therefore align Indian AIF regulation with international best practices while remaining sensitive to domestic concerns about misuse and circumvention. More importantly, it would restore coherence to the New AIF Regime. By assuring venture capital funds that diligent, good-faith regulatory assessment will not be punished simply because regulatory views evolve, the safe harbour would reduce defensive investing and excessive documentation. This, in turn, would preserve venture capital's ability to fund frontier innovation while maintaining high standards of integrity and accountability. In doctrinal terms, the safe

³³ n 23, 694–96.

harbour does not dismantle the regime; it completes it by reconciling expanded regulatory duties with the economic function venture capital is meant to serve.

X. CONCLUSION

This paper has argued that India's New AIF Regime marks a structural, rather than incremental, shift in the legal identity of venture capital. By design and effect, the regime reconstitutes VC AIFs from institutions that primarily allocate risk capital into private regulatory sentinels tasked with ex ante screening, allocation policing, and regulatory risk management. This transformation has not been explicitly acknowledged in statute or policy, yet it decisively reshapes how venture capital operates, what risks it may assume, and which forms of innovation it can support.

The central insight of this analysis is that the regime does not eliminate risk; it redistributes it. Commercial and market risks remain permissible, even encouraged, while regulatory ambiguity is rendered impermissible. This reordering of the venture capital risk universe is not neutral. It embeds regulatory preferences into investment decision-making and thereby steers innovation outcomes by proxy. In the Indian context, where early-stage capital is concentrated within domestic AIFs, regulatory discretion is high, and jurisdictional exit is limited, this proxy steering acquires systemic significance. Venture capital behaviour becomes a transmission mechanism through which regulatory caution translates into sectoral innovation patterns, often disfavouring frontier technologies that necessarily operate ahead of settled law.

Comparative analysis reinforces the distinctiveness of India's approach. Other major jurisdictions impose regulatory duties on fund managers, but they temper those duties with proportionality, procedural deference, and clearly articulated safe harbours. Where private actors are asked to perform gatekeeping functions, the law recognises the need to protect good-faith judgment from hindsight review. India's New AIF Regime departs from this equilibrium. It expands duties without calibrating liability, producing predictable behavioural responses: defensive investing, excessive documentation, and the migration of capital and structures outside the domestic regulatory perimeter. These outcomes are not pathologies of market resistance; they are rational adaptations to doctrinal incompleteness.

Therefore, the problem with the New AIF Regime is not that it seeks to strengthen oversight, but that it does so without completing the legal architecture necessary to sustain the role it assigns to

venture capital. If VC AIFs are to function as regulatory gatekeepers, the law must explicitly recognise the nature of the task and provide corresponding protection for reasonable regulatory judgment. A Regulatory Risk Safe Harbour is the doctrinal mechanism through which this balance can be restored. By anchoring liability to procedural compliance and good faith, while preserving enforcement against fraud and bad faith, it would reconcile investor protection with innovation capacity.

Ultimately, the choice facing Indian regulators is not between regulation and innovation, but between explicit calibration and silent distortion. Without recalibration, the New AIF Regime risks transforming venture capital into a compliance-constrained allocator of capital, undermining its economic function and India's long-term innovation objectives. With doctrinal completion, however, the regime can achieve its stated goals while preserving venture capital as a vehicle for productive risk-taking in an uncertain future.

ALGORITHMIC TRADING AND MARKET MANIPULATION: THE NEED FOR SEBI'S OVERSIGHT IN CRYPTO EXCHANGES

- Paras Verma and Harshit Bhadani*

ABSTRACT

India has turned into one of the leaders in the cryptocurrency markets this year, but there is still no comprehensive regulatory framework, which puts investors at risk of market manipulation. Algorithms used to conduct automated trading in cryptocurrency markets have grown exponentially in the past few years and present volatility and cross-platform arbitrage as some of the risks of manipulation. Wash trading, spoofing, and pump-and-dump are some of the manipulation Techniques that can be used in the current framework and reduce investor confidence and distort valuation. The judicial practices and the regulations in the field of taxation in the Finance Act of 2002 are signs of growing awareness of the cryptocurrencies, yet these safeguards do not solve the problems related to the wrongdoing in the markets. Conversely, the United States, the European Union and the United Kingdom show that regulators across the world are bridging these loopholes of regulation through modifying anti-fraud regulations or event establishing special regimes. India ought to enact legislation that will enable SEBI to regulate crypto exchanges to minimize market manipulation. The advanced surveillance infrastructure of SEBI with statutory mandate of the SEBI Act makes it the most appropriate to deal with algorithmic abuse of digital assets. The article suggests a legal framework by adopting changes in the governing body of the Securities Contracts (Regulation) Act to allow SEBI to exercise its powers over the cryptocurrencies. It further emphasizes the significance and necessity of technology-based surveillance, inter-country collaboration with the nations, and awareness of the investors to catalyze the introduction of cryptocurrencies in India. Finally, the article ends by stating that the cryptocurrency market in India can turn into an arena of uncontrollable manipulation unless SEBI intervenes, which would create the required strike of balance between innovation and market equity.

Keywords: Algorithmic Trading, Market Manipulation, Investor Protection, Cryptocurrency, Securities Regulation

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I. INTRODUCTION

The Jane Street Case, in which SEBI had frozen \$580 million of the purported returns on algorithmic strategies with expiry sessions, shows the market distorting nature of complex trading models and how such models can take advantage of retail investors. These risks now arise over the cryptocurrency ecosystem of India, where algorithmic trading pattern is increasing as the industry reaches regulatory vacuum.

India has acquired a significant share in global cryptocurrency landscape. According to Chainalysis's 2023 Global Crypto Adoption Index,³⁴ India has led in cryptocurrency adoption and is expected to have 107.3 million users and will produce 6.4 billion in revenue by 2025.³⁵ However, this incredible growth has been coupled with grave fears of market manipulation especially in the algorithmic trading activities as in the case of Jane Street. The combination of automated trading algorithm with an uncontrolled crypto-space is a new challenge to fairness in the market and investor protection.

The cryptocurrency regulatory system of India remains incomplete. In the case of Internet and Mobile Association of India v. Reserve Bank of India,³⁶ the Hon'ble Supreme Court held that Indian Banks are allowed to service crypto exchanges. The ruling however, lifted the ban but failed to create a special regulator of the industry. Consequently, crypto assets are subject to paying 30 per cent of tax on gains as stipulated in the Finance Act, 2022, but are not subject to the jurisdiction of SEBI or any securities regulator. At present, no Indian law exists which obliges crypto exchanges to screen insider trading, impose surveillance on the market, or record on suspicious transactions.

This article argues that SEBI supervision is urgently required in crypto exchanges. It looks at the trading mechanics of algorithmic trading in crypto markets, the most frequent methods of market manipulation, the current regulation situation in India, and puts it into perspective of global trends in the U.S., EU, and U.K. The paper concludes that market integrity in India is by law and

³⁴ Team C, 'The 2023 Global Crypto Adoption Index: Central & Southern Asia Are Leading the Way in Grassroots Crypto Adoption' (*Chainalysis*, September 3 2025) <<https://www.chainalysis.com/blog/2023-global-crypto-adoption-index/>>.

³⁵ Pande S and Gupta A, 'The Evolution of Cryptocurrency in India: Challenges, Opportunities, and Future Prospects' (2025) 6 *International Journal of Research Publication and Reviews* 7032 <<https://doi.org/10.55248/gengpi.6.0325.12121>>.

³⁶ *Internet and Mobile Association of India v Reserve Bank of India* 2020 SCC OnLine SC 275.

experience the natural custodian of SEBI, and suggests a framework of extending jurisdiction of crypto markets at the same time ensuring the balance of innovation and investor protection.

II. UNDERSTANDING ALGORITHMIC TRADING IN CRYPTOCURRENCY MARKETS

The trading decisions are primarily based on two variables namely what to purchase or sell and when to purchase or sell it. Traders make this decision based on two methods, which are fundamental analysis and technical analysis. Wholesale analysis of the profits and financial situation of individual companies is done to ascertain whether the company is over or underpriced. Evaluation of the price-to-earnings ratio (**P/E ratio**) is one of such methods. In case of the P/E ratio being too high, then this is the sign that the stock might be overpriced and will fall and in case of being too low, then the stock might be underpriced and will go up. Technical analysis however is more price chart and pattern oriented on the foreseeing of future pattern unlike the other that is price oriented which is faster and simpler to apply. Algorithms trading is based primarily on technical analysis, and it involves computer-mediated readings and trading activities.

Automatic trading of financial transactions as a result of pre-established rules and instructions is known as algorithmic trading. These rules are meant to decide on the timing of an order, the price at which an order is to be carried out, the speed of the trade and the trading venue to be employed.³⁷ The primary three categories of trading algorithms include: First, the execution algorithms that concentrate on implementing the orders that are already determined by a portfolio manager and these are put into practice in an efficient manner. Secondly, Electronic market makers (high-frequency trading, HFT) algorithms post bid and ask prices all day long and need to provide liquidity to the market and maintain a smooth and orderly market. Finally, a profit-seeking algorithm that does not only execute orders through quantitative means but also decides how to execute the said trades. An example of such a profit-seeking algorithm is arbitrage trading where one buys and sells the same, or related assets in different markets to make a profit by taking

³⁷ 'Algorithmic Trading - an Overview | ScienceDirect Topics' <<https://www.sciencedirect.com/topics/economics-econometrics-and-finance/algorithmic-trading>> accessed 5 January 2026.

advantage of price differences. The purpose is to achieve a small low risk gain by playing on these gaps, applying models and quick implementation before the price interacts.³⁸

The regulatory gap is widened when doing it in the light of the peculiarities of crypto trading. Cryptocurrency markets are 24/7 unlike the stock exchange and are distributed on various platforms, with poor liquidity and transparency. Arbitrage trading between exchanges is mostly not a threat, but in this case, it is destabilising, as unsupervised code cannot detect the existence of inefficiencies. To this, there is the high volatility of electronic money such as Bitcoin and Ether. Circuit breakers and Integrated Market Surveillance System (IMSS) of Securities regulate volatility in securities and can identify manipulative trades within the securities in real time. The crypto markets lack these protections which culminates into cascading stop-loss of massive, systematic orders, causing steep declines or surges in a few minutes, which unfairly affect the retail investors. These concerns are supported by the empirical data. This disjuncture underscores the susceptibility of investors, as well as the urgent requirement to widen the jurisdiction of SEBI on digital assets in accordance with the statutory requirement of the SS12A of SEBI Act. Therefore, even though algorithmic trading of securities is overseen and supervised, its move into the crypto-market has generated an analogous market where previously used methods of manipulation are translated into a new market filled with unregulated framework.

III. MARKET MANIPULATION TECHNIQUES IN CRYPTO EXCHANGES.

The cryptocurrency exchanges are prone to market manipulation techniques. The cryptocurrency market has become more and more a testing ground where investors can experiment with manipulative practices to affect investor confidence and distort price discovery. In contrast to the conventional securities market, the crypto exchanges in India operate in a rather unregulated environment. The absence of a regulatory framework has enabled practices that pose a great degree of vulnerability to the retail investors and market integrity.

The most obtrusive and the most used manipulation technique is the pump-and-dump schemes. In the process of co-ordinated trading, groups of traders drive the price of tokens up only to dump

³⁸ Burgess N and Saïd, ‘An Introduction to Arbitrage Trading Strategies’ (2023) Business School, Oxford University < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4420232 > accessed 5 January 2026.

them at the highest possible price and leave the retail traders with losses.³⁹ The Supreme Court in the case of *N. Narayanan v. SEBI*,⁴⁰ made clear that the intention of the Section 12A of the SEBI is to eliminate market manipulations which may negatively impact on the investor confidence. However, as all cryptocurrencies are not treated as such in the Indian laws, such protections are not applicable to them at this point, which creates a huge loophole in the enforcement process.

Wash Trading is also another such practice that has found its way to the crypto markets with a new vigour. The practice consists in transacting similar buy and sell orders of the same asset in order to give the impression of increased trading. The judgment in *SEBI v. Rakhi Trading Ltd.* held that pre-arranged trades designed to show losses through rapid reverse transactions cannot be treated as genuine trades.⁴¹ While the reasoning applies logically, crypto markets complicate detection because of pseudonymous addresses, fragmented exchange platforms, and the absence of reporting obligations on exchanges. Due to this, much of the volume of trading is attributed to wash trading, oftentimes quoted as more than 70 percent on unregulated venues.⁴²

Spoofing and layering have become fast growing types of market manipulation, wherein an order is placed without an intention of a real trade, in order to mislead other market participants, as well as to provide a false impression of demand or supply. The current 2023 securities market rules by SEBI acknowledge the disruptive basis of such behavior and provide penalties, including temporary trading bans.⁴³ However, the same does not extend to cryptocurrency exchanges since they fall outside the scope of SEBI regulation.

³⁹ Xu J and Livshits B, 'The Anatomy of a Cryptocurrency Pump-and-Dump Scheme' (2018) arXiv.org < <https://doi.org/10.5555/3361338.3361450> > accessed 5 January 2026.

⁴⁰ *N. Narayanan v Securities Exchange Board of India* (2013) 12 SCC 152.

⁴¹ *Securities Exchange Board of India v Rakhi Trading Ltd.* (2018) 13 SCC 753.

⁴² Lin W and others, 'Crypto Wash Trading' (2021) 1 National Bureau of Economic Research < <https://cowles.yale.edu/sites/default/files/2022-11/cryptowashtrading040521-crypto-wash-trading.pdf> > accessed 5 January 2026.

⁴³ Securities and Exchange Board of India - Master Circular on Surveillance of Securities Market, < https://www.sebi.gov.in/legal/master-circulars/mar-2023/master-circular-on-surveillance-of-securities-market_69244.html > accessed 5 January 2026.

IV. CURRENT REGULATORY FRAMEWORK IN INDIA

Regulatory bodies have taken different stances against digital assets and this causes a patchwork of inconsistent regulation that could be termed as half recognition and constant suggestions of reform; hence, the regulation of cryptocurrencies in India is ambiguous. The same environment has also created opportunities of technological innovation and put continuous risks to the participants of the market.

Since the 6 April 2018 circular of the Reserve Bank of India prohibited all functioning of the entities supervised by it to transact or provide services related to the cryptocurrencies businesses.⁴⁴ This order essentially disconnected crypto exchanges to the formal banking network, which limited their capability to interact with the financial system.

This standpoint has been altered completely with the ruling of the Supreme Court in the case of *Internet and Mobile Association of India v. Reserve Bank of India*.⁴⁵ A three-judge bench, headed by Justice Rohinton Fali Nariman declared RBI circular to be unconstitutional due to disproportionality. The Court held that the RBI did not prove strong cases of damage to regulated bodies and therefore the ban did not comply with Article 19(1)(g) of the Constitution which guaranteed the freedom of conducting business. This led to the start of cryptocurrency trading and the reinstatement of the availability of banking services.

The Finance Act, 2022, was the first act that acknowledges the cryptocurrencies in India. The meaning of Virtual Digital Assets in Section 2(47A) of the Income Tax Act,⁴⁶ was that of cryptographically generated tokens, codes, or numbers that represent a store of value or a unit of account. This definition includes cryptocurrencies and non-fungible tokens (NFTs) and particularly excludes Indian and foreign currencies.

⁴⁴ Reserve Bank of India, Prohibition on dealing in Virtual Currencies (VCs) <<https://www.rbi.org.in/commonman/english/scripts/Notification.aspx?Id=2632>> accessed 5 January 2026.

⁴⁵ *Internet and Mobile Association of India v Reserve Bank of India* MANU/SC/0264/2020.

⁴⁶ Income Tax Act, 1961 (43 of 1961) s 2 (47A)

<https://incometaxindia.gov.in/_layouts/15/dit/pages/viewer.aspx?grp=act&cname=cmsid&cval=102120000000079557> accessed 5 January 2026.

Section 115BBH of the Act imposes a flat rate of 30 percent tax on the income obtained as a result of transfer of VDAs,⁴⁷ which are subject to deduction of the cost of acquisition, and losses are not allowed to offset the other income. Section 194S of the Act states a 1% tax required deduction at source (**TDS**) on VDA transactions above 10,000 rupees annually for businesses and 50,000 rupees for individuals.⁴⁸ Though these provisions are set up as financial measures, it is the first step of the state towards legalizing digital assets in India.

In May 2024, SEBI suggested a multi-regulatory framework that would fragment control powers to the agencies that already exist.⁴⁹ Under this framework, crypto assets that are deemed to be similar to securities and the issue of initial stability would be under the control of SEBI, and insurance and pension-linked products would be controlled by IRDAI and PFRDA, with the grievances of investors being covered by the consumer protection laws. Such a proposal diverges from a more conservative position of the RBI, which considers the existing cryptocurrencies offered by the private market to be a challenge to the financial stability and advises against the effects that such practices have on the financial stability of the country and the voluntary adherence to the model of peer-to-peer.

The Foreign Exchange Management Act, 1999 (**FEMA**) adds further complexity to cross-border crypto dealings. Although the Liberalised Remittance Scheme (**LRS**) allows up to USD 250,000 of outbound remittances annually, there is no explicit mention of cryptocurrency purchases, and it causes confusion.⁵⁰ The violations in the Foreign Exchange Management (Export of Goods and Services) Regulations, 2015, include the use of LRS funds for foreign transactions or receipt of payments based on crypto for exports.

This framework reveals that regulation in India is to balance innovation with the protection of the investor. Nonetheless, the cryptocurrency in India still requires an extensive regulation. The flow

⁴⁷ PANDA B, 'Taxation Of Virtual Digital Assets' < <https://nadt.gov.in/writereaddata/MenuContentImages/TAXATION%20OF%20VIRTUAL%20ASSETS638701452732833757.pdf> > accessed 5 January 2026.

⁴⁸ Guidelines On TDS Under Section 194S Of ITA Simplified < <https://cleartax.in/s/tds-under-section-194s-of-income-tax-act> > accessed 5 January 2026.

⁴⁹ Securities and Exchange Board of India, Master Circular for Investment Advisers (2025) <https://www.sebi.gov.in/legal/master-circulars/jun-2025/master-circular-for-investment-advisers_94821.html>

⁵⁰ Reserve Bank of India, Liberalised Remittance Scheme, <<https://www.rbi.org.in/commonperson/english/scripts/FAQs.aspx?Id=1834>>.

indicates that India is heading towards regulated structure instead of direct ban, paving the way to more digital assets regulation.

V. COMPARATIVE ANALYSIS WITH OTHER JURISDICTIONS

India is not alone in confronting crypto-market abuse. Around the world, other regulators are also making regulations to control this abuse.

In the U.S., both the SEC and CFTC have acted against crypto abuse. Multiple tokens are treated as securities by the SEC, and cases of fraud and insider trading have been filed by them, though it mainly relies on its general anti-fraud rule (Rule 10b-5). However, the CFTC sees major cryptocurrencies as commodities and uses its powers under sections 6 and 9 of the Commodity Exchange Act to deal with fraud and manipulation in crypto trading.⁵¹ In *Coscia v. United States*,⁵² high-frequency trader Michael Coscia was convicted for spoofing under the Commodity Exchange Act. His algorithms placed large fake orders to trick the market and profit from the reactions. Another similar case is against Ryan N. Cole,⁵³ in which the SEC found he used spoofing in thinly traded options; he was banned from trading and ordered to pay penalties. Another major case is of *SEC v. Wahi* (2024–25), which dealt with insider trading in crypto.⁵⁴ Even though this case does not deal primarily with algorithmic manipulation, it tells us how U.S. law is being stretched to cover abuses in crypto markets. In short, U.S. regulators hold that crypto trading is subject to anti-fraud laws just like any other market and have already used traditional tools to sanction crypto manipulations.

The European Union (EU) has passed Markets in Crypto-Assets (MiCA) regulation in 2023 to create uniform market rules for crypto-assets that were not previously regulated by any financial service legislation. The primary aim of MiCA is to protect investors and ensure market integrity

⁵¹ CFTC Orders Coinbase Inc. to Pay \$6.5 Million for False, Misleading, or Inaccurate Reporting and Wash Trading (CFTC) < <https://www.cftc.gov/PressRoom/PressReleases/8369-21> >.

⁵² *Coscia v United States* 951 F.3d 872 (7th Cir. 2020).

⁵³ ‘How One Trader’s Spoofing Scheme Cost Him \$357K in Penalties’ (*Financial and Business News, Finance Magnates*, August 12 2025) <<https://www.financemagnates.com/forex/regulation/how-one-traders-spoofing-scheme-cost-him-357k-in-penalties/>>.

⁵⁴ Anna Pinedo, ‘Prosecutors Record First-Ever Conviction for Spoofing – A New Era of Trading Enforcement’ (*Mondaq*, 3 November 2015) < <https://www.mondaq.com/unitedstates/commoditiesderivativesstock-exchanges/443920/prosecutors-record-first-ever-conviction-for-spoofing39-a-new-era-of-trading-enforcement> > accessed 13 September, 2025.

in crypto trading.⁵⁵ Title VI of MiCA, which contains articles 86-92, mainly covers the provisions on market abuse, which prohibit insider dealing, unlawful disclosure of inside information, and market manipulation in crypto-assets that are not already financial instruments.⁵⁶ It also requires the crypto-asset service providers (**CASPS**) to have systems in place to prevent and detect market abuse. MiCA mandates the disclosure of the trading volumes, bids/asks, depth of the order book, public availability of the trading data, and the system to render suspicious activity as reportable to competent authorities.

These proposals were proceeded with in legislation by the United Kingdom government, in November 2024, which sought to place some crypto assets under the regulation of the Financial Conduct Authority (**FCA**) through the proposed “market abuse regime proposed for cryptoassets” and through the FCA Discussion Paper DP24/4 on Admissions and Disclosures.⁵⁷ According to the proposed UK regime, trading crypto trading venues admitted to trading will comply with rules to identify unusual trading patterns, have surveillance facilities, and disclosure requirements. Although, as of today, there are less reported instances of algorithmic spoofing or cross-platform arbitrage within the crypto industry under the legal regulations of the U.K. it is clearly stated that companies should ensure that their algorithmic/automated systems do not generate unfair and misleading market results.

The international market is experiencing a definite movement where regulators do not want to leave crypto markets as the Wild West. They are, instead, incorporating crypto into the existing law frameworks on market-abuse, or are developing new crypto-specific rules based on these. This sets a roadmap that India can use: it would be unusual that India markets regulator prohibited algorithmic manipulation in the equities markets but allowed it to continue in the crypto markets. The experience of the U.S. indicates that the manipulators of digital resources can be subjected to liability according to securities/commodities law; MiCA and MARC demonstrate that the legislation can specifically cover crypto without halting the innovation process. In both instances,

⁵⁵ ‘Markets in Crypto-Assets Regulation (MiCA)’ < <https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/markets-crypto-assets-regulation-mica> >.

⁵⁶ Barzentewicz M and De Gândara Gomes A, ‘Crypto-Asset Market Abuse under EU MiCA’ (2024) European Journal of Risk Regulation, < <https://www.cambridge.org/core/journals/european-journal-of-risk-regulation/article/cryptoasset-market-abuse-under-eu-mica/FDC11EC096728B9EF1097A5346F0EF27> >.

⁵⁷ ‘DP24/4: Regulating Cryptoassets – Admissions & Disclosures and Market Abuse Regime for Cryptoassets’ (FCA, September 12, 2025) < <https://www.fca.org.uk/publications/discussion-papers/dp24-4-regulating-cryptoassets>>.

market integrity is the driving theme: misdemeanours are illegal despite the technological veneer of the asset. The dilemma of India at that, is not about the need to come up with new principles, but rather which regulator should be responsible.

VI. NEED FOR SEBI OVERSIGHT AND ITS BENEFITS

The regulation of crypto markets in India is very challenging as trading volumes and the complexity of financial products increase. In all the available institutional options in India, the Securities and Exchange Board of India (SEBI) is the most suitable regulator for crypto oversight. SEBI has three core advantages as a crypto-market regulator; it has a broad statutory mandate for investor protection, has technical expertise in surveillance, and a ready legal basis to treat crypto tokens as securities under current law. Simultaneously, a crypto regulation framework needs to be subtle, and such a coordination approach with other financial regulators should help in the absence of jurisdictional overlaps and regulatory arbitrage.

SEBI was created (1992) with the express goal “to protect the interests of investors in securities and to promote the development of, and to regulate the securities market.”⁵⁸ Chapter IV-VA of the Act that vests its powers is that it prohibits manipulative or deceptive trading, insider trading and ensures that intermediaries are provided with fair practices. For example, Section 12A of the SEBI Act prohibits manipulative and deceptive devices in the trading of securities.⁵⁹ SEBI also issues regulations that require exchanges and brokers to adopt order-tagging, algorithm testing, risk-limits, record-keeping and disclosures and all are geared towards curbing abuse. This market fairness mandate does not exist in any other Indian regulator. In the RBI Act, on the other hand, RBI has the ability to control banking and currency and not securities. The chief interest of the Finance Ministry is the fiscal policy and the formulation of legislation; there is no continuous control apparatus in the trading abuse. To conclude, the statutory charter of SEBI is the only statutory one that directly addresses the issue of protection against fraud and manipulation of trading markets.

SEBI and stock exchange have years of working experience on creating high speed trading surveillance infrastructure. NSE, BSE and SEBI work based on real time monitoring systems that

⁵⁸ Securities and Exchange Board of India, About SEBI, < <https://www.sebi.gov.in/about-sebi.html> >.

⁵⁹ Securities and Exchange Board of India Act, 1992 (15 of 1992).

are used to identify red flag brokerage across derivatives and equities. SEBI has further compelled tagging to all algorithmic orders and the exchanges should give their approval to the algorithms that are to be used beforehand, an indicator that it is very powerful in regulating this.

These competencies can be directly applied to crypto markets where such issues as spoofing and wash trading are widespread. Other agencies including RBI are monetary policy oriented and have minimal exposure to order books and trading bots. The market surveillance is not the work of the Income Tax Department and the Enforcement Directorate, which are concerned with taxes and money laundering. This positions SEBI and the exchanges in the best position to oversee crypto trading and abuse it.

Section 2(h) of the Securities Contracts (Regulation) Act, 1956 (SCRA) which defines the term securities as “The term securities includes: (i) Shares, scrips, stocks, bonds, debentures, debenture stock, or other marketable securities of a similar nature in or of any incorporated company or other body corporate.” Although the crypto tokens may not be listed directly, the law gives the government the rights to declare them as securities through a notification. It has been noted by legal commentators that the crypto might be treated as securities or derivatives under SCRA because these tokens tend to be similar to futures or speculative instruments per the laws of India. When so, SEBI would instantly have authority over the trading platforms and would be able to oversee both cryptocurrencies that assume the form of securities and initial coin offerings (ICOs). Notably, the transition needs a legislative or executive step (an amendment of SCRA or notification). However, it would not involve overhauling the securities law: instead, it would subject crypto to the existing regime.

In conclusion, SEBI is the sole organization that has the right to protect investors, has the experience in market monitoring and enforcement, and has a statutory foundation on the SCRA to regulate crypto. Instead, the RBI has argued that crypto is not part of its mandate and has been inclined to ban or place few restrictions, including on stablecoins. Finance Ministry might pre-eminently conduct policy arguments but it has no instrument to oversee the market on a day-to-day basis. This causes SEBI to be the logical decision to bridge the regulatory gap.

VII. WAY FORWARD

The cryptocurrency market in India is quite recent and warrants a high level of supervision since the market is growing exponentially over the past few years. To come up with a proper approach to minimizing market manipulation in algorithmic trading, it is important to use a technology-focused approach. This will have to be a robust way to reinforce the current one, yet flexible enough to respond to the demands of digital assets.

The framework of monitoring introduced by SEBI on 29 July 2025 demonstrates a move towards real-time supervision since it presupposes structured and machine-readable reporting to check compliance.⁶⁰ Although it is conjoined with blockchain-based audit trails, it may offer irreplaceable records and increase the security of the markets. Studies prove that deep learning models are more effective than the traditional systems based on rule identification in identifying irregular trades and hence can be used in digital asset markets. These are supplementary to the Master Circular 2024 of SEBI on surveillance that can be expanded to cryptocurrencies by making appropriate amendments.⁶¹

The SEBI Algorithmic Trading Framework already has some of the protective measures in place, including an approval of trading strategy, speed of execution restrictions, and traceability identifiers.⁶² The structure should take into account continuous trading cycles and cross-border settlement to include the cryptocurrencies. The proposed Crypto Assets Regulatory Authority (CARA) under the COINS Act, 2025, indicates the likelihood of consolidating the existing regulation across RBI, SEBI and the FIU-IND but government reports indicate that partial recognition is preferred to avoid systemic risks due to greater integration of crypto and finance.⁶³

Any misconduct in cryptocurrency is by definition transnational and thus global collaboration is required. The India-EU counter Terrorism Dialogue provides a platform through which the two can work together to stop the misuse of cryptos. Cryptocurrency may be used to finance terrorist

⁶⁰ Dutta B, Miglani D and Sherawat A, 'Ai-Driven Surveillance and Blockchain Integration for Insider Trading Detection: A Regulatory Framework for Sebi' (*European Economic Letters*, 2025) < <http://eelet.org.uk> >.

⁶¹ SEBI - Master Circular on Surveillance of Securities Market, available at: < https://www.sebi.gov.in/legal/master-circulars/sep-2024/master-circular-on-surveillance-of-securities-market_86929.html >.

⁶² Taxmann, 'Making Algo Trading Safer & Accessible for Retail Investors' (*Taxmann*, 20 February 2025) < <https://www.taxmann.com/post/blog/taxmanns-analysis-making-algo-trading-safer-accessible-for-retail-investors> >.

⁶³ Acharjee S, 'COINS Act 2025 to Redefine Crypto Regulation in India?' (*Suncrypto Academy*, July 22 2025) < <https://academy.suncrypto.in/coins-act/> >.

activity due to its inability to be traced and its high security level. The more recent focus on transparency in financial crime by the EU through the implementation of transaction traceability indicates the usefulness of transparency in addressing financial crime. The Indian enforcement agencies are increasingly active and are making enormous efforts, including the Enforcement Directorate, which has been involved in seizing assets worth 936 crore rupees in crypto related laundering cases and efforts under FEMA including major seizures as well as a notice to WazirX worth 2,790 crore rupees.⁶⁴ Based on these precedents, bilateral and Mutual Legal Assistance Treaties (MLATs) will prove essential as far as enhanced cooperation is concerned.

Despite the fact that international cooperation is a crucial move towards regulation, the current legislations in India are providing a beginning point to all that. The market manipulation could be solved in accordance with PFUTP Regulations, 2003 of the SEBI, and the liability of a fraudulent activity is provided in Section 12A of the SEBI Act.⁶⁵ Nevertheless, the issue of jurisdictions is to be addressed by specific changes in the form of legislative amendments to present-day realities of digital asset markets. The forthcoming policy document of the Department of Economic Affairs and CBDT discussions of taxation of the virtual digital assets will hopefully give more understanding.

The way forward with India is to rely on technology based surveillance, build stronger legal frameworks and synergistic innovation and investor. India may become one of the leading nations as a responsible regulator of cryptocurrencies without jeopardizing the security of the market and financial stability.

⁶⁴ Press Information Bureau, 'Crypto Assets Are Borderless, Require International Collaboration to Prevent Regulatory Arbitrage' (2023) < <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1896722> >.

⁶⁵ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices Relating to Securities Market) Regulations, 2003, S.O.816 (E).

VIII. CONCLUSION

Cryptocurrency market algorithmic trading has simplified the manipulation process and made it more difficult to notice. In securities markets, SEBI manage such risks, whereas in crypto trading in India, these risks are mostly unregulated and this leaves an investor vulnerable to spoofing, wash trades, and pump-and-dump schemes which can lead to losses at short notice. Regulators in the U.S., EU, and U.K. have already made the necessary moves in order to regulate the abuse of crypto-markets all over the world. As a prominent player in the cryptocurrency, India is still trailing behind. Not only its regulatory model will protect local investors but will also impact international standards.

SEBI is best placed to lead in India, having decades of experience in overseeing high-speed trading, relying on such tools as the Integrated Market Surveillance System and circuit breakers and imposing penalties on manipulation. It has already the experience to manage these issues. The other organs like the RBI or the Finance Ministry lack the market-surveillance skills. This is not aimed at preventing innovation, but rather a balance between using technology and preventing the harmful practices. The successful experience of SEBI in ensuring a balance between regulation and innovation in securities markets demonstrates that it will be able to do it in crypto as well.

In conclusion, India is supposed to apply its regulation of cryptocurrency to the pre-existing surveillance and enforcement capability of the SEBI and transform it into the specific characteristics of digital assets. It is necessary to strengthen the existing legal system with specialized changes and invest in sophisticated technological approaches such as deep learning, blockchain audit trails and the establishment of more significant international relations. Meanwhile, to establish the transparency of jurisdiction, a system such as CARA or a broader SEBI mandate will contribute to closing the existing gaps.

THE GCC PARADOX: BOT MODELS AS STAGED ACQUISITIONS

- Adwitiya Gupta and Suprava Sahu*

ABSTRACT

Global Capability Centres (GCCs) have evolved from cost-driven outsourcing units to integral components of multinational enterprises. GCCs aided in performing core functions in areas ranging from engineering, data, artificial intelligence and major other fields. This paper examines Build-Operate-Transfer (BOT) and hybrid GCC models and argues that, despite their contractual framing as service arrangements, they operate as phased business acquisitions. During the build and operate stage, the control over employees, intellectual property shifts to the foreign entity. But the legal ownership remains with the Indian service provider. Indian regulations such as Foreign Exchange Regulation, Data Protection, Taxation and Labour law continue to assess these arrangements on assumption of vendor autonomy. This further results in systematic misalignment between control and legal responsibility. The core of this paper illustrates how this mischaracterisation has the potential to cause several risks at the transfer stage of the BOT. Lastly, it concludes by proposing reconceptualization of BOTs as staged acquisition. It provides rationale behind how established merger and acquisition tools can better align legal structure with economic substance.

Keywords: Global Capability Centres, Build-Operate-Transfer, Outsourcing and Acquisition, Regulatory Risk Allocation, Phased Business Transfers, Indian Regulations.

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I. INTRODUCTION

Global Capability Centres ('GCCs') have changed over the past years from being external support units to being an essential part of multinational corporations' operations. What began as a simple back-office cost-cutting strategy has developed into a means of incorporating key business operations, such as engineering, product development, compliance, and AI-driven decision-making. India is now home to thousands of GCCs employing millions of professionals.⁶⁶ Estimates also suggest that a major share of new global R&D investments is being routed through India based captives.⁶⁷ This transformation reflects a fundamental change in the way businesses organize their ownership, control, and risk internationally.

Foreign companies that want to establish a presence in India without committing to a full-scale acquisition primarily use models for entry routes, such as Build–Operate–Transfer ('BOT') and Hybrid GCC Models. A BOT structure involves an Indian service provider who builds and operates a captive-like unit for a foreign parent. There is an inherent understanding between the parties that operations, employees, and assets may be transferred to the parent company at a later stage. In a commercial setting, BOTS are viewed as flexible and low-risk. From the parent company's perspective, they tend to appear as non-acquisitive, reversible, and operational rather than transactional.⁶⁸ It is this perception that has driven the popularity of the BOT Model.

However, there is also a deeper legal and economic tension in this arrangement. Although BOT and hybrid GCC models are designed and governed as service agreements, their economic worth seems to be closer to ownership than outsourcing. During the build and operate phases, the foreign parent typically exercises major influence over hiring, workflow, technological choices, and other major stakes. The Indian vendor who is usually independent, becomes operationally dependent on the parent. By the time a proper legal transfer occurs, most of the value of the business already is

⁶⁶ India Brand Equity Foundation, 'Global Capability Centres (GCCs) Expansion to Power 40% of India's Office Demand by FY27: Report' (*IBEF*, 21 October 2025).

⁶⁷ Zinnov and Nasscom, India GCC Landscape: The 5-year Journey Report (*Zinnov* 2024) < <https://media.zinnov.com/wp-content/uploads/2025/05/zinnov-india-gcc-landscape-the-5-year-report-2024.pdf> > accessed 7 January 2026.

⁶⁸ Cyril Amarchand Mangaldas, 'Strategic Structuring and Modelling Global Capability Centres (GCCs) in India: How to Set Up?' (*India Corporate Law*, 20 March 2024).

in the hands of the parent, just not signed on paper.⁶⁹ Control, exposure and dependency shift way before any legal ownership did.

This gap between economic reality and legal character becomes more dangerous as GCCs move beyond the routine services and towards high-risk functions. Today, Indian GCCs are developing proprietary software, training machine learning models, and processing sensitive data. A BOT that used to handle payroll or IT systems is now part of AI models across global operations.⁷⁰ Yet law continues to approach these arrangements through the lens of service providers. Labour Law, FEMA, Data protection, and even tax treatment are all structured around the inherent assumption that the Indian entity is a vendor. The result is a bundle of misallocation of regulatory and transactional risk.

This can be further explained through an example:

Consider a foreign fintech company that is entering the Indian market through a BOT arrangement to set up an analytics and AI development centre. During the operation phase, the Indian team builds fraud detection models trained on a mix of data under the parent's direction. If a data breach occurs or a regulatory inquiry is triggered, who will bear the responsibility under the India data protection law or cybersecurity law? The service contract may point to the vendor, but the operational control is in the hands of the parent. When the BOT later transitions into a captive, more gaps start to emerge. These risks are created gradually, but they matter a lot during transfer.

This paper attempts to analyse whether the BOT and hybrid GCC models are not outsourcing arrangements with an option to transfer, and instead are staged business acquisitions, in which ownership, control, and risk are knowingly separated and transferred over time. The “build”, “operate”, and “transfer” phases mirror the pre-closing earn-out periods and post-closing transitions, even though they are not technically termed as such. Treating BOTs as services leaves both parties exposed when regulatory, labour or data-related risks emerge.

Existing literature does not delve into this issue. Industry reports by NASSCOM⁷¹ and publications analyse BOT as an operational strategy which is designed to fasten market entry and talent

⁶⁹ INDUCTUS GCC, ‘Future Proofing Your GCCs, A Strategy Playbook’ (*NASSCOM Community*, 4 October 2024).

⁷⁰ EY, ‘Capability Center as a Service (CaaS): Our Solution Offering for GCCs’ (*EY*, 3 December 2025).

⁷¹ Nasscom and Everest Group, ‘The Global ER&D Shift: Evolution of Engineering Services and India’s Competitive Edge’ (7 October 2025).

acquisition. Here, the doctrinal examination of BOTs as a form of delayed or phased M&A is missing.

The paper seeks to fill the gap. It recategorizes BOT and hybrid GCC models based on their function rather than contractual terminologies. It shows how Indian labour law, FEMA and data protection misallocate risk because they are applied to what is assumed to be an outsourcing arrangement. Finally, it proposes a redesigned BOT playbook that borrows from M&A practice. Using tools such as condition precedent, escrows, and phased ownership mechanisms to align the legal structure with commercial reality.

By reframing the BOT model GCC as a staged acquisition hiding in plain sight, the paper argues that what appears to be an operational choice, is rather a deal structure with significant and unpriced legal consequences.

II. THE MYTH OF THE “CAPTIVE SERVICES” BOT

The Build-Operate-Transfer model offers a realistic solution to offshore risks by allowing multinational companies to enter India’s talent and infrastructure ecosystem faster.⁷² Along with several advantages observed by the companies, one major benefit is immediate talent arbitrage through partnered recruitment and capability transfer rather than independent team building. As compared to other risky alternatives to acquisitions, this outsourcing arrangement is considered low risk.⁷³

However, this model reveals a fundamental misalignment with the outsourcing logic. The commercial intent for BOT adoption aligns more with the acquisition logic than with outsourcing principles. Usually, a firm intending to outsource services prioritises output efficiency and vendor replaceability, specifically mentioning deliverables, negotiating service levels, and retaining the option to switch providers without structural disruption.⁷⁴ In contrast, BOT arrangements are chosen because the multinationals get to influence all factors and decisions from the inception.

⁷² Srivardhini K Jha and Anilesh Seth, ‘Global Capability Centres: Emerging Opportunities and Challenges’ (2025) *IIMB Management Review* 37 100595, < doi:10.1016/j.iimb.2025.100595 >.

⁷³ Economic Times, ‘Revamping of BOT model is tactical move to attract private capex: Ind-Ra’ (*Economic Times Online*, 21 May 2024).

⁷⁴ B Aubert, J-F Houde, M Patry and S Rivard, ‘Characteristics of IT Outsourcing Contracts’ (2003) 36th Annual Hawaii International Conference on System Sciences.

These factors include power to influence factors ranging from organisational design to hiring decisions. Therefore, this faster entry route is not merely a way towards the enhancement of efficiency, but it acts as a mechanism to internalise an operating capability within limited timelines. This encompasses a salient feature of acquisition. Another key advantage of this model is the reduced regulatory compliance in the beginning stages of the project. While the regulatory requirements are not eliminated, they get postponed to a later date when the project is at the stage of transfer. This is formally characterised as a service transition rather than a transaction event.

Once the BOT moves forward to the hiring stage, the logic of talent arbitrage further exposes the mischaracterisation of BOT being treated as outsourcing. Outsourcing of vendors often help in achieving advantages like labour pooling and redeployment flexibility. On the other hand, BOT vendors constitute dedicated teams to meet with client's long-term business strategy.

Clients usually take part in hiring and performance related standards similar to their own. They also restrict vendors from moving these employees to other clients. This structure doesn't look much like service delivery, rather it resembles an acqui-hire or earn-out in M&A where the key employees are aligned with the buyer before ownership formally changes. Therefore, what is called a "service" phase is a step towards internalising talent and capability in real time.

The contractual aspect of BOT adds another factor for supporting the argument that they are incorrectly classified as outsourcing. The Master Service Agreements documenting BOTs are supported by Service Level Agreements and detailed transition frameworks. Even though these instruments take the formal language of services procurement, the essence extends much beyond what is required to ensure service quality. Clients over time retain close control over the organisation controls that resemble ownership rights more than ordinary customer oversight.

SLAs further highlight the divergence from outsourcing logic. Instead, only focussing on output, they track stability and other factors related to transition readiness. This not only shows the concern with service delivery; it also demonstrates that they actively assess whether the operation is capable of being absorbed into the client's internal structure.⁷⁵

⁷⁵ Stephanie Overby, Lynn Greiner and Lauren Gibbons Paul, 'What is an SLA? Best practices for service-level agreements' (*CIO Online*, 21 June 2024) < <https://www.cio.com/article/274740/outsourcing-sla-definitions-and-solutions.html> > accessed 7 January, 2026.

Transition and step-down clauses demonstrate most clearly that BOTs are designed as acquisitions. These clauses are not exit tools. They laid out a transfer plan from day one. They also rule how knowledge moves and how pricing changes as the client slowly takes control. This looks similar to milestone-based closings in M&A deals where control shifts in stages once the conditions are met.

The term “*right to transfer*” used in the clauses provides strength to this point. Though it is drafted cleverly to avoid words like “sale” or “business transfer”, it allows the clients to take over employees, intellectual property, and infrastructure at pre-agreed value. Vendors seldom have room to renegotiate. When seen from a M&A perspective, it is not genuine optionality and instead is more of a delayed acquisition.

At doctrinal levels, calling BOTs outsourcing fails again. Outsourcing has the intrinsic character that makes it seem like the vendor is autonomous and can be replaced without causing any harm to the client’s core operation.⁷⁶ BOTs function on the opposite of these assumptions. Vendor replaceability is completely removed in BOTs.

Further, team design deepens this dependence. Employees develop knowledge, internal relationships and technical expertise specifically tied to the client, not the vendor. Employment benefits like bonus and guaranteed transition rights ensure continuity through the transfer. These factors resemble employee retention in acquisitions.

Therefore, BOTs design shows deliberate and irreversible dependency. Outsourcing is about flexibility and exit whereas BOTs are eventual ownership. Treating BOTs as service contracts enable outcomes resembling acquisition, without triggering Indian business transfer regulations, misallocating labour, foreign exchange and data protection risks.

⁷⁶ Craig D Lair, ‘Outsourcing and the Risks of Dependent Autonomy’ (2019) SAGE Open 9(2) 2158244019845177, < doi:10.1177/2158244019845177 >.

III. BOTS AS A STAGED BUSINESS TRANSFER

The easiest way to understand the BOT and hybrid GCC models is by examining what happens over time. When viewed as a whole, BOT arrangements closely resemble phased business transfers instead of any outsourcing relationship. The build, operate and transfer stages mirror familiar stages in M&A, even though they are not recognised as such in law. This section tries to show how control, risk, and economic exposure change long before any change in legal ownership.

A. Build Phase

The build phase is also called the preparatory services period. In practice, it is the moment where the foundations of a future business are laid. At this stage, decisions around infrastructure are rarely neutral. The foreign parent often specifies the city and even the building. These choices are riven by talent pools, data security requirements, and long-term plans, not by the vendor's independent business interests. Reports by EY and KPMG on GCC set-ups note that foreign parents increasingly insist on physical segregation, and parent-approved IT stacks even during BOT arrangements.⁷⁷ The Indian vendor may sign the lease and employ the staff, but the strategic choices are according to the priorities of the parent.

The hiring pattern also illustrates this shift. Senior managers, architects and product leads are commonly interviewed or directly approved by the foreign parent. In many BOT arrangements, employment offers are based on the parent's global compensation scheme, rather than the vendor's internal pay bands. Over time, factors like reporting lines and performance metrics align with the parent rather than the service provider. This is not mere coincidence but a way to make future integration frictionless.

Early IP and workflow design further deepen this. During the build phase, the team designs internal tools, process maps, and product architecture that are specific to the parent's business. In AI-driven GCC, this often includes early-stage models, training data curation, and experimentation.⁷⁸ Even

⁷⁷ KPMG, 'GCCs in India: Key Tax Insights' (KPMG, 2025) < <https://kpmg.com/in/en/insights/2025/09/gccs-in-india-key-tax-insights.html> > accessed 7 January 2026.

⁷⁸ Dua Associates, 'In Brief: Emergence and Transformative Evolution of GCCs in India' (Dua Associates, January 2025) <<https://www.duaassociates.com/wp-content/uploads/2025/02/In-Brief-Evolution-of-GCCs-in-India-January-2025.pdf>> accessed 25 December 2025.

where contracts declare that IP vests with the vendor until transfer, the economic value of that IP cannot be separated from the parent's systems and strategic direction.

In legal terms, which phase creates control without any title? The parent exercises influence over assets that it does not possess yet. At the same time, the parent also assumes economic exposure without formal ownership. If the project fails, reputational and operational damage accrues to the parent and not the vendor. This is very similar to the pre-closing integration in M&A transactions, where the acquirers begin by aligning systems, teams, and processes before the proper completion. Indian law, however, does not recognize this phase as legally significant. It remains categorised as service provision, even though the underlying dynamics already resemble acquisition planning.

B. The Operate Phase

The operate phase is where the outsourcing fiction is most visible. By this point, the GCC functions as an internal arm of the parent's organisation and still sits on the vendor's balance sheet.

Parent dependence increases at this point. Business-critical workflows migrate to the BOT unit. Institutional knowledge starts building locally. Global teams begin to rely on the India-based GCC for continuity and speed. NASSCOM and Zinnov reports⁷⁹ have documented how mature BOT units often handle entire product modules, making an exit unviable even before any formal transfer is considered. By this phase, service fees often start to diverge from market-facing outsourcing benchmarks. Industry commentary notes a tendency towards cost-aligned or low-margin prices, where BOT arrangements are designed to transition into captives. This also reflects the parties' shared expectation of future internalisation. This pricing logic is widely acknowledged in practice and has attracted attention in transfer pricing analyses of BOT structures.

From a structural point, it signals that the relationship is no longer a genuine service arrangement. As the dependency between the parties increases, the vendor starts to become operationally hollow. Its role shifts from an independent service provider to a legal entity holding employees and leases. Strategic discretion narrows. Exit options start to diminish. In several publicly discussed BOT transitions involving technology multinationals, vendors have exited the relationship entirely post-transfer.

⁷⁹ GCCs 3.0: Spotlight on Digital Partnerships, New Delivery Models & Future Skills, (NASSCOM-Zinnov, 2019).

This phase creates a “*shadow ownership*”. The parent in the title does not own the entity, but it controls its purpose, output, and future. This is similar to earn-out periods in M&A transactions, where the seller retains legal ownership for a time. Buyers also exercise significant operational control which also controls the future acquisition dreams.⁸⁰ It also creates a parallel carve-out transaction, where management control shifts ahead of formal ownership to ensure continuity. But again, Indian law does not treat this phase like an acquisition. Regulatory responsibility, labour compliance, and data fiduciary obligations remain misaligned with actual control.

C. Transfer Phase

The transfer phase is typically described in BOT documentation as a transition or handover. This characterization is misleading.

There is employee migration, IP novation and systems handover. Employees move either through the resignation and rehire system or tripartite transfer arrangements. IP rights are assigned or licensed. IT systems, security credentials, and internal governance structures are aligned with the parent’s global framework. From an economic perspective, the business also changes hands. Indian courts have long recognised that the substance of a transaction matters more than its form in determining whether a business transfer has occurred. Slum sale-related cases, such as *CIT v. Artex Manufacturing Co.*⁸¹, and other interpretations under the Income Tax Act, highlight the transfer of an undertaking as a going concern. In BOT transfers, what is transferred is not a bundle of discrete assets, but a functional operational unit that is complete with workforce and embedded processes.

As per the UK law under the Transfer of Undertakings (Protection of Employment) Regulations,⁸² employee protections are triggered when a business or service provision changes hands in substance, even though the legal structure avoids a formal transfer. The approach focuses on continuity of economic activity rather than contractual labels. While Indian labour law does not

⁸⁰ Bagri, P., Prakash, Y., Ray, A., & Khandelwal, P. (2024), ‘Evolution of Global Capability Centers (GCCs) in India: Lessons for Setting Up, Scaling, and Transforming Businesses’, Indian School of Business WP Forthcoming, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4921764> accessed 25 December 2025.

⁸¹ *CIT v Artex Manufacturing Co* (1997) 227 ITR 260 (SC).

⁸² Transfer of Undertakings (Protection of Employment) Regulations 2006, SI 2006/246 (as amended).

adopt TUPE, Section 25FF of the Industrial Disputes Act⁸³ reflects a similar concern with continuity of service when an undertaking is transferred.

BOT transfers resemble a hive off where a business unit is carved out and transferred to another entity. They also resemble indirect acquisitions where control shifts through contractual and operational mechanisms rather than share purchases. In each case, legal systems recognise that ownership may be staggered, but risk cannot be deferred. Calling this phase a “transition” minimises its legal significance. It is not a post-service adjustment but a combination of stages of the acquisition process. Treating it otherwise explains why disputes around employee continuity, tax, and regulatory liability often surface only after transfer, when corrective structuring is no longer possible.

On considering all the phases together, they form a coherent acquisition narrative. Control is established early, dependence increases over time, and ownership formalises towards the end. The delay is strategic. It allows parties to manage regulatory friction, but it does not change the underlying economic position. By analysing BOTs as strategic business transfers rather than an outsourcing arrangement, the upcoming section shows why Indian legal regimes trigger to allocate responsibility accurately and why risk always resurfaces at the point of transfer.

IV. SYSTEMIC RISK MISALLOCATION CAUSED BY TREATING BOTS AS OUTSOURCING

Indian law misallocates risk in BOT and hybrid GCC structures by classifying them as outsourcing arrangements. The economic substance of BOT and hybrid GCC closely resembles staged mergers or acquisitions. This differed classification allows transactions that create ownership like exposure to proceed without the legal safeguards that normally apply to business transfers. As a consequence, a lot of statutory requirements are bypassed. The risks do not disappear; they remain and surface later.

⁸³ Industrial Disputes Act, 1947 (14 of 1947) s 25FF.

A. The Fragility of Voluntary Transfers in Labour Law

Section 25FF of the Industrial Disputes Act,⁸⁴ a transfer of an ‘undertaking’ requires statutory protections unless continuity of service and equivalent conditions is provided. Courts have reiterated that this test is substantive, not formal. The Supreme Court has defined an “*undertaking*” as a running business unit, extending to partial transfers where management control shifts as well.⁸⁵

BOT Models rely on a resign and rehire base, where employees are said to “voluntarily” leave the vendor and join the client’s GCC. This logic is legally fragile. Evidence here shows that transfer coincides with a shift in control. Courts have been willing to disregard formal consent and treat the move as a business transfer. Recent labour tribunal decisions in BOT-like IT transitions have upheld claims for continuity of service, gratuity, and back wages. These liabilities arise precisely because the transaction was never recognised as a transfer at the outset.

B. Deferred Control and Indirect FDI Risk under FEMA

Foreign Exchange law regulates not only equity ownership but also control exercised through contractual rights.⁸⁶ BOT structures grant the foreign principal decisive influence over hiring, IP, Pricing and operations during build and operate phases. Essentially, this reflects pre-closing control in M&A transactions.

Yet FEMA reporting and pricing rules are triggered only when equity formally changes hands. This leads to regulatory blind spots. Even without the equity ownership, the foreign entity may start exercising influence through contractual rights such as control over IP, approvals for key managerial hiring, operational directions, and step down or exit clauses. These controls result in effective control, even though legal ownership remains unchanged.

FDI is usually recognised during the final transfer stage of a BOT arrangement, when the business is sold through a slump sale to foreign-owned subsidiary. By this point, foreign control is often already firmly in place. Delaying the compliance with FDI only at the end tends to underestimate regulatory risks. This situation is exacerbated in sectors with strict limits or approvals such as

⁸⁴ *ibid.*

⁸⁵ *Pipraich Sugar Mills Ltd v Pipraich Sugar Mills Mazdoor Union* AIR 1957 SC 95; *Workmen of J Tilak & Sons (P) Ltd v J Tilak & Sons (P) Ltd* (1974) 1 SCC 23 (SC).

⁸⁶ Department for Promotion of Industry and Internal Trade (Ministry of Commerce and Industry, Government of India), *Draft Press Note: FDI Regulatory Framework* (Press Note No 2010, September 2025) < <https://www.dpiit.gov.in/static/uploads/2025/09/898bd96803e8b0fef3b34d3350d0525e.pdf> >.

defence technology and media. Delayed recognition can lead to violations of sectoral caps, pricing norms and entry routes under FEMA.

The RBI's Cross Border Merger Regulations, 2018,⁸⁷ provides guidance in dealing with this gap. These regulations acknowledge that control and business value can move across borders gradually, rather than through a single transaction. They require regulatory compliance even when transfers are phased or indirect. With the same basis, BOT structures that slow down the shift of control to a foreign entity should attract FEMA scrutiny earlier than the formal transfer stage.

BOT arrangements also raise overlapping regulatory issues, including asset transfers, business transfers, and eventual FBI.⁸⁸ Indian regulators have increasingly examined cases where indirect foreign investment is presented as simple outsourcing. Despite such actions, BOT transactions are still commonly viewed as service contracts. This leaves regulatory risks insufficiently addressed.

C. Functional Fiduciary Override in Data and AI BOT Structures

As per the Digital Personal Data Protection Act, 2023⁸⁹ ('**DPDPA**'), a clear distinction is drawn between a data fiduciary and a data processor. A data fiduciary decides the purpose and means of processing personal data and is responsible for safeguards, audits, and breach notifications. A processor, on the other hand is expected to act only on the fiduciary's instructions. In theory, this distinction appears neat.⁹⁰ In practice, BOT models in AI-heavy GCCs often blur this line.

During the operate phase of BOT arrangements, vendors are not merely executing instructions. In AI driven projects vendors decide how data is selected and how algorithms are designed. This plays critical role in shaping the purpose and means of processing. As a result, vendors play the role of joint or co-fiduciaries, even though the contract mentions them as processors. This discrepancy between the contractual language and actual control creates compliance risks.

⁸⁷ Reserve Bank of India, Foreign Exchange Management (Cross Border Merger) Regulations 2018, Notification No FEMA 389/2018-RB.

⁸⁸ Nishith Desai Associates, Step by Step Practical Guide on the Issues Involved in Outsourcing Transactions (PLC Cross-Border Outsourcing Handbook 2007/08) < https://www.nishithdesai.com/Content/document/pdf/Step_by_Step_practical_guide_on_the_issues_involved_in_outsourcing_transactions.pdf > accessed 25 December 2025.

⁸⁹ Digital Personal Data Protection Act, 2023 (22 of 2023).

⁹⁰ DPDP Consultants, 'Data Fiduciary vs Data Processor: Key Differences Under the DPDP Act 2023' (*DPDP Consultants*, 11 November 2025) < <https://www.dpdconsultants.com/newsletter.php?id=9&title=data-fiduciary-vs-data-processor-key-differences-under-the-dpdp-act-2023> >.

Further during the operate phase, trained models and datasets are often developed before any formal transfer of the business or assets. Since the DPDPA does not clearly address ownership of outputs during incubation, disputes can arise if a data subject seeks erasure under Section 8(6)⁹¹ after the original purpose is claimed to be fulfilled, or if foreign principal seeks to commercialise the model before transfer. Another concern includes cybersecurity obligations. CERT-In Directions require certain service providers to report cyber incidents within six hours. In BOT structures, the control is divided as to the vendors detecting incidents while the principal directing responses. This division has the tendency to delay reporting and trigger cascading violations.

Recent enforcement trends have shown the imposition of heavy penalties on vendors labelled as processors for breaches arising from their discretionary control over AI data.⁹² It shows that BOT models are no longer viewed as simple outsourcing, yet the associated data and cyber risks remain largely unpriced at the structuring stage.

D. Tax and Indirect Tax: The Slump-Sale Risk Hidden Behind “Services”

Tax Law relies on economic substance rather than contractual basis. Section 50B of the Income Tax Act taxes⁹³ slump sale as capital gains on net worth, which is very different from taxing service income. BOT models treat the build and operate phases as “services” even as teams, systems and IP are building long term value for the client.

Further, in the transfer stage, vendors are often paid on a cost plus basis during the operate phase, even though they contribute to the creation of valuable intangibles such as proprietary workflows, software and teams. Tax authorities have increasingly challenged this mismatch, treating these contributions as DEMPE functions and adjusting service fees to reflect the real economic value created. Another concern arises with the GST exemption of the transfer of a going concern only when a complete and independent business is transferred. In case of BOT contracts are rarely structured this way. Intellectual property is carved out, employees move separately, and handovers

⁹¹ n 89, s 8(6).

⁹² Economic Times, ‘India records highest average cost of a data breach at INR 220 million in 2025: IBM report’ (*Economic Times CISO Online*, 11 August 2025) < <https://ciso.economictimes.indiatimes.com/news/data-breaches/india-records-highest-average-cost-of-a-data-breach-at-inr-220-million-in-2025-ibm-report/123227861>>.

⁹³ Income-tax Act 1961 (43 of 1961) s 50B.

are described as “transition services.” This fragmented drafting allows tax authorities to split the transaction into taxable supplies, attracting GST at standard rates on individual components.

Courts have protected genuine going-concern transfers, but BOT-style documentation weakens that protection. These risks remain unpriced because the arrangement is treated as outsourcing. When recharacterized as a business transfer, tax liabilities surface suddenly, after the value has already shifted.

V. THE FALSE COMFORT OF OUTSOURCING PROTECTIONS

Service agreements in BOT/GCC models largely depend on indemnities, representations & warranties (‘R&Ws’) and SLAs to manage risks. However, these tools are designed for episodic service delivery. These tools fail when the deal delivers a staged business transfer. Practitioners recognise this disconnect as outsourcing clauses allocate short term operational risk, while BOTs generate long-term ownership risk that substantiates only after control and capability have shifted.

A. Indemnities Expire Prematurely

In outsourcing contracts, indemnities cover third-party claims during the service term and survive for limited periods.⁹⁴ This structure assumes that risk peaks during service delivery and declines post that. However, BOTs do not follow the same logic. The most complex liabilities such as labour claims under section 25FF⁹⁵, FEMA⁹⁶ recharacterization, tax reassessments, and data fiduciary breaches, often surface years later, once the GCC has assumed operations and regulatory scrutiny intensifies.

Yet, indemnity survival is tied to the termination of services. Even though the termination is precisely the moment when ownership risk begins for the buyer. Courts have upheld indemnity caps in pure service contracts but have differentiated it from business transfers where contractual clauses cannot waive statutory exposure. This results into the buyers inheriting liabilities with no

⁹⁴ Micah D Miller, *Is it Really Over? Contract Provisions that Survive Termination and Why* (Freeman Law Firm, 30 August 2023) available at: < <https://freemanlaw.com/is-it-really-over-contract-provisions-that-survive-termination-and-why/> >.

⁹⁵ n 83.

⁹⁶ Foreign Exchange Management Act, 1999 (42 of 1999).

recourse, while the vendor has already exited or been operationally carved out. M&A transactions address this timing mismatch through longer survival periods, escrows and insurance.⁹⁷

B. Representations and Warranties miss upcoming risks

Outsourcing R&Ws are backward looking. They confirm compliance with law, ownership of assets, and absence of disputes.⁹⁸ BOTs create risk through how the relationship unfolds. Problems arise when control and operational dependence deepen over time. Service style R&Ws do not address whether the build and operate phase will lead to a legally clean transfer. Questions like whether employee continuity risks are managed and whether indirect FDI triggers are avoided are not addressed. There is no escrow or holdback to secure future compliance. As a result, post-transfer breaches fall entirely on the buyer, even though they are structurally induced by the BOT model itself.

C. SLAs collapse at the point of transfer

SLAs are meant to regulate performance while the vendor controls delivery. Once the transfer begins, SLAs lose relevance. The GCC inherits systems, teams, and IP as they stand, without any obligation on the vendor to remediate legacy issues.⁹⁹ The rooted knowledge gaps, unvested IP and continuity risks surface after SLAs have ceased to operate. This leads to risks that are often managed in M&A transactions by earn outs and closing conditions.¹⁰⁰

Therefore, outsourcing tools manage vendor default, not capability transfer. BOTs require deal-law protection such as escrows, forward looking covenants, and survival calibrated to risk maturity. Without reclassifying BOTs as phased acquisitions, the ownership risks will continue to grow.

⁹⁷ Jeffrey Chapman, Jonathan Whalen and Benjamin Bodurian, Representations and Warranties Insurance in M&A Transactions' (*Harvard Law School Forum on Corporate Governance and Financial Regulation*, 11 December 2017) <<https://corpgov.law.harvard.edu/2017/12/11/representations-and-warranties-insurance-in-ma-transactions/>>.

⁹⁸ Himesh Thakur, Fazl Askari and Vaibhav Mishra, 'Limitation of Liability Clauses and Their Applicability in India: A Judicial Perspective' (*PSL Advocates & Solicitors*, 13 February 2025) <https://www.pslchambers.com/article/limitation-of-liability-clauses-and-their-applicability-in-india-a-judicial-perspective/>.

⁹⁹ 'Representations and Warranties in M&A Agreements: A Strategic Guide for Sellers' (*Linden Law Partners*, 8 months ago) <<https://lindenlawpartners.com/representations-and-warranties-in-ma-agreements-a-strategic-guide-for-sellers/>>.

¹⁰⁰ *ibid.*

VI. A REDESIGNED BOT PLAYBOOK

If BOT and hybrid GCC arrangements are understood as functionally staged acquisitions, then the obvious next question is not if they are risky, but why they continue to be structured like ordinary outsourcing contracts. There is more to the strength of service-law arguments in BOT documentation than just a drafting habit. It is instead an attempt to create ownership like exposure long before any legal title is transferred. A redesigned playbook must therefore start from a simple shift, which is that BOTs must be structured as a phased M&A transaction from the very start, and they should not be retrofitted into an acquisition logic at the point of transfer.

A. Treating BOTs as Staged Acquisition From Day-One

The very first change needs to be conceptual. Instead of viewing the transfer as a maybe future event, BOTs should be treated as transactions where acquisitions are the base case, subject to timing and performance conditions. Once this is accepted, familiar M&A tools become not only relevant but necessary.

For example, conditions precedent. In a traditional service agreement, regulatory compliance is treated as an operational obligation, breach of which attracts contractual remedies.¹⁰¹ In a staged acquisition framework, compliance with labour law, data protection obligations, cybersecurity directives, and FEMA regulations should be elevated to acquisition-like conditions. For example, employee contracts aligned with Section 25FF continuity requirements or clean data mapping under the DPDP Act should not be just conditions but conditions tied to the progression between the BOT phases.

Step-in rights also need to be changed as they are often drafted narrowly in BOT contracts as business continuity safeguards. In a phased M&A structure, step-in rights operate as early control rights, which are similar to interim management control in acquisitions. This is particularly important in AI-driven GCC, where any delays in incident reporting under the CERT-In directions or failure in model governance can lead to immediate regulatory and reputational harm. Escrow mechanisms and deferred consideration logic further align BOTs with acquisition structures. Instead of flat termination payments or limited indemnities, parties can use compliance-linked

¹⁰¹ Verbruggen P, 'Private regulatory standards in commercial contracts: Questions of compliance', (2017) R Brownsworth, R A J Van Gestel & H-W Micklitz (eds), *Contract and regulation: A handbook on new methods of law making in private law*, Handbooks of Research Methods in Law series, Edward Elgar, Cheltenham, pp. 284-322.

escrows that serve the transfer phase. Earn-out style mechanisms, tied not to revenue but to regulatory health, employee retention, and IP clarity in carve-outs and staged acquisitions, where uncertainty is managed through pricing.

B. Choosing the Right Structural Vehicle

Once we start to see BOTs as phased acquisitions, the choice of which legal structure to follow stops being a tax decision and becomes a core risk decision. In simple terms, the structure you have decides who really controls the business while the “acquisition” is still unfolding.

A wholly owned subsidiary works best when the foreign parent already knows that the GCC will become permanent and an integrated part of the group. This is usually the case for AI-led engineering centres or global R&D hubs. For example, several large technology companies that began with BOT-style arrangements in Bengaluru or Hyderabad have eventually shifted to critical engineering and data science teams into WOS once those teams started building core products rather than providing support. In such cases, early ownership of IP and clear data control matter more than short-term flexibility. A WOS allows the parent to treat the GCC as an internal unit from the start, even if operations are initially supported by a service provider.

Limited Liability Partnerships work a bit differently. LLP can make sense at a much earlier and narrower stage. Consider a foreign bank setting up a small reporting unit in India through a BOT, with a team of 30 professionals and limited exposure to sensitive customer data. An LLP here offers flexibility, lower compliance costs, and easier exit if the model does not scale. This structure starts to show strain as the unit grows. Once headcount increases or the team begins generating valuable IP or handling data, the LLP becomes a weak foundation. Restrictions around foreign investment, difficulties in transferring partnership interests, and uncertainty around downstream restructuring make LLPs not a good choice for BOTs that are expected to mature into full captives.

Between these two come Joint ventures and hybrid equity BOTs. These structures are often used where the service provider brings something the apprentice cannot easily replicate, like sector-specific expertise or specialised talent. For example, a life sciences compliance entering India through a BOT may rely on a local partner with experience in clinical data management. In such cases, retaining a minority stake post-transfer may make commercial sense. But this is precisely where deal discipline matters. Minority retention should not be treated as a casual arrangement or

goodwill gesture. Exit rights and deadlock mechanisms must therefore be drafted with the same care seen in private equity investments, not led to loosely worded service contracts.

If we see it like this, structure is no longer a technical choice made at the end of the process. It is an early indication of what the BOT is truly intended to become. Getting it wrong does not just create a compliance issue but also distorts control and complicates transfers. It also increases the risk the very moment the “non-acquisitive” BOT reveals itself as an acquisition.

C. Data and AI Governance as Deal Architecture

We can see that BOT models have outgrown their outsourcing origins by seeing how they handle data and AI. Traditional BOT contracts usually treat IP as something that can be neatly assigned at the point of transfer. That assumption may have worked when GCCs were limited to back-office processing or routing IT support. It breaks down entirely once the centre begins training models, refining algorithms, or embedding itself into the parent’s product roadmap.

In AI-driven GCCs, value does not come at a single moment. It accumulates gradually through data selection, model tuning, and continuous workflow optimization across the build and operate phases. Global practice in technology acquisitions already recognises this. In countries such as the US, the acquirers use phased IP vesting precisely because critical know-how is developed before formal closing.¹⁰² Applying a similar approach to BOTs is not novel, it is overdue.

A new BOT structure needs phased IP vesting. Foundational elements created during the build phase, such as system architecture, should vest in the parent from the very start, with the service provider retaining limited, purpose-bound usage rights. Any improvements developed during the operation phase can then be vested on a conditional basis, linked to compliance targets, audit requirements, or successful employee transitions. This mirrors how acquirers handle IP created during earn-out periods or pre-closing integration in technology carve-outs, and it significantly reduces disputes at the point of transfer.

Here, clarity around the AI model and data ownership is equally important. Many GCCs now work with mixed datasets that include customer information from various jurisdictions. In such settings,

¹⁰² Prashant R Dahat and Puneet Satbir Yadav, ‘Intellectual Property: The Dominant Force in Future Commercial Transactions Comprising Mergers and Acquisitions’ (2010) SSRN Electronic Journal <<https://doi.org/10.2139/ssrn.1591182>> accessed 7 January 2026.

uncertainty over whether GCC is acting as a data fiduciary or merely a processor under the DPDP Act is not a technical detail. It goes directly to valuation, regulatory exposure, and post-transfer liability internationally. Acquirers increasingly insist on detailed data documentation in cross-border AI deals to ensure that trading data can be lawfully reused after closing. BOT structures should adopt a similar technique.

This is the point where data governance must be treated as part of the deal and not just a compliance requirement. Model ownership clauses should be supported by clear data mapping schedules, audit rights, and an incident response framework aligned with CERT-In's reporting timelines. Without this, a parent may find itself legally responsible for breaches in systems it does not yet formally control, a risk that is usually underestimated in BOT documentation.

Finally comes breach liability mapping. Service contracts typically rely on broad indemnities that expire soon after transfer, often capped at a multiple of fees.¹⁰³ The approach is open to risks such as data breaches, employee claims that may surface years later. M&A practice recognises risk and prices it accordingly through survival periods, escrows, and ring-fenced liability buckets. Applying these tools to BOTs allows parties to allocate risk honestly rather than pretending it does not exist.

D. What Needs to Change in Practice

None of these changes requires new legislation or regulatory intervention. They require a shift in how corporate lawyers frame the transaction. BOTs must stop being drafted as service arrangements that ultimately result in transfer and start being treated as acquisitions that unfold over time.

As GCCs take a central role in innovation, data governance, and AI development, the cost of getting this wrong increases. Re-characterizing BOTs as a phased acquisition is not a radical move. It's a practical decision that stems from the similarity in risks already managed in global deal practice. More importantly, it is the only way to bring legal structure back in line with commercial reality.

¹⁰³ Jorge L Contreras, 'Representations, Warranties and Indemnification' in *Intellectual Property Licensing and Transactions: Theory and Practice* (Cambridge University Press 2022) 280.

VII. CONCLUSION

The analysis portrays that GCC has grown ahead of its traditional role as a mere cost-efficient support unit. Today, they are at the heart of how multinational enterprises design products, develop technology, and manage data-intensive operations. India's rapid emergence as the preferred destination for these centres has only accelerated this growth. As the GCCs expand in scale mainly in areas such as AI, engineering, and R&D, the legal framework governing their structure and transfer is being tested in ways they were never designed for.

BOT and hybrid GCC models have played a central role in this expansion. They have offered foreign enterprises a low risk pathway into India. This has allowed operations to be established quickly without the formalities of acquisition. Yet, as this paper shows, the perception no longer holds. Economically and operationally, BOTs function as an acquisition over time. Control, talent, IP and regulatory exposure migrate to the parent long before any legal ownership. Treating these arrangements as outsourcing contracts therefore minimizes the risk rather than containing it.

The growth of AI and data further sharpens this problem. When GCCs train models, handle sensitive datasets, questions of ownership, liability, and governance cannot be postponed until the point of transfer. The regulations regarding labour, FEMA, and data protection increasingly impose consequences to control and influence, not just formal title. As enforcement under these frameworks becomes more active, the cost of mischaracterising BOTs will rise correspondingly.

The core claim of the paper is not that BOT models are flawed. It is that they are misunderstood. Once recognised as staged business acquisitions, BOTs can be structured more honestly, using well-established tools from M&A practice to allocate risk and price uncertainty. Doing so does not complicate transactions but clarifies them.

BOTs are not just decisions taken for easy operations. They are deal structures hiding in plain sight. Recognising them as such is no longer optional; it is essential for aligning legal form with commercial reality.

WHEN PRICES DON'T MOVE: INDEX MANIPULATION UNDER PFUTP

- Adamyia Rawat*

ABSTRACT

Indian market-manipulation doctrine under the SEBI (Prohibition of Fraudulent and Unfair Trade Practices) Regulations has historically been organised around a scrip-centric understanding of harm, in which liability is anchored to the creation of “artificial prices” or distortive price effects in individual securities. This orientation presumes that manipulation manifests through observable irrationality at the level of constituent prices. The rise of index-linked derivatives markets, however, has unsettled this assumption by enabling strategies that engineer settlement outcomes without generating persistent or visible distortion in any single security.

This paper examines SEBI’s July 2025 interim order in the Jane Street proceedings as an enforcement inflection point that exposes the limits of classical PFUTP logic. Rather than relying on price distortion, intent, or disclosure breaches, the order constructs manipulation through an evidentiary grammar centred on settlement-window concentration, asymmetric derivative payoff exposure, and cross-market coordination. The paper argues that, taken seriously, this reasoning implicitly re-specifies the object of regulatory protection: from individual security prices to the integrity of index settlement references.

The paper proceeds in four steps. It first reconstructs the doctrinal roots of PFUTP’s scrip-centric bias and explains why traditional manipulation tests struggle in index-dominant markets. It then offers a close, analytical reading of the Jane Street interim order to show how SEBI infers manipulative design without price irrationality or moralised intent. Building on this enforcement practice, the paper develops a doctrinal reconstruction that treats the index settlement value as a protected regulatory object and identifies settlement-window targeting as the core manipulative wrong. Finally, it articulates limiting principles that distinguish legitimate index arbitrage from abusive settlement engineering and examines the implications for exchange surveillance, SEBI’s institutional competence, and adjudicatory discipline.

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The paper concludes that reference-price integrity provides a defensible and bounded interpretive orientation for PFUTP, preserving enforcement credibility while avoiding doctrinal over-reach in complex, derivatives-led markets.

Keywords: Unfair trading practices, Index Manipulation, price distortion, cross-market manipulation.

I. INTRODUCTION

Index-dominant derivatives markets have reconfigured the Indian securities market's enforcement geometry without formally displacing the doctrinal vocabulary through which manipulation is still prosecuted.¹ The PFUTP regime still articulates fraud and unfairness through scrip-centred predicates: transactions that create a false or misleading appearance of trading, and transactions that manipulate the price of "a security".² The implied object of harm, and the implied logic used to prove the same, remain correspondingly scrip-centric: manipulation is somehow only identified through an artificial price (or artificial trading conditions) in an identifiable security, sustained or patterned enough to be delicately separated from ordinary volatility.³

Index derivatives unsettle those premises because the index is not itself a traded asset; it is a calculated reference price embedded in exchange settlement design. Final settlement for index futures and options is tied to the index's closing value in the normal market, with payoffs determined by that reference rather than by holding any constituent scrip.⁴ In this infrastructure,

¹ Securities and Exchange Board of India, 'Consultation Paper on Measures to Strengthen the Index Derivatives Framework for Increased Investor Protection and Market Stability' (*SEBI*, 30 July 2024) <https://www.sebi.gov.in/reports-and-statistics/reports/jul-2024/consultation-paper-on-measures-to-strengthen-the-index-derivatives-framework_85279.html> accessed 12 November 2025; Securities and Exchange Board of India, 'Interim Order in the matter of Index manipulation by Jane Street Group' (*SEBI*, 3 July 2025) <https://www.sebi.gov.in/enforcement/orders/jul-2025/interim-order-in-the-matter-of-index-manipulation-by-jane-street-group_95040.html> accessed 12 November 2025; Jayshree P Upadhyay, 'Indian regulator proposes phased restructuring of indexes with derivatives contracts' Reuters (18 August 2025) <<https://www.reuters.com/sustainability/boards-policy-regulation/indian-regulator-proposes-phased-restructuring-indexes-with-derivatives-2025-08-18/>> accessed 10 December 2025.

² Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations 2003 (PFUTP Regulations) regs 3, 4(1), 4(2)(a), 4(2)(e); Sandeep Parekh and Manal Shah, 'PFUTP Regulations – Background, Scope and Implications of 2020 Amendment' (*BCAJ Online*, January 2021) <<https://bcajonline.org/journal/pfudp-regulations-background-scope-and-implications-of-2020-amendment/>> accessed 15 November 2025; *SEBI v Rakhi Trading (P) Ltd* (2018) 13 SCC 753 (SC), 20–24; *Ketan Parekh v SEBI* (2006) 7 SCC 1 (SC), 31–34.

³ *Rakhi Trading* (n 2), 20–27; *Ketan Parekh* (n 2) 31–36; *Nirmal Bang Securities (P) Ltd v SEBI* (SAT, Appeal No 54 of 2003, 31 May 2004).

⁴ NSE Clearing Ltd, 'Settlement Price – Equity Derivatives' (*NSE Clearing*, 7 May, 2024) <<https://www.nseclearing.in/clearing-settlement/equity-derivatives/settlement-price>> accessed 7 December 2024;

interference can be brief but legally significant: steering the settlement reference over short windows may drive the economics of the strategy even if no individual constituent shows a lasting “distortion” when examined on its own. The enforcement object becomes the integrity of a reference price, produced mechanically through index construction and exchange settlement methodology, rather than the “true” price of any single security.

SEBI’s interim order dated 3 July 2025 in the Jane Street matter can be read as an enforcement-level inflection within this inherited framework.⁵ Issued under SEBI’s direction-making and interim protective powers,⁶ it alleges repeated strategies in which large index-option exposures were paired with concentrated, time-segmented trading in index constituents (across cash and futures) around settlement windows, so that the index close moved in a direction that locked in derivative payoffs. The doctrinal stress is not merely factual complexity; it is the causal and conceptual task of translating constituent-level trading into a settlement-reference outcome, and then into a PFUTP-cognisable interference; without collapsing the inquiry back into a requirement of persistent “artificial prices” in particular scrips.

The paper argues that PFUTP manipulation analysis has remained structurally scrip-centric even as manipulability has migrated to reference prices, and that the Jane Street interim order reveals a shift in the operative object of harm; from price-effect logic to reference-price integrity. The 2018 amendment to Regulation 4(2)(e), expressly extending the manipulation rubric to “reference price” and “bench mark price”, provides the textual basis for this shift, but the jurisprudence has yet to work through its analytical implications seriously.⁷ The paper proceeds by recovering the “artificial price” inheritance in classical PFUTP reasoning (and its reliance on pattern-based

National Stock Exchange of India Ltd, ‘Equity Derivatives Contract Specifications’ (NSE) <https://www.nseindia.com/static/products-services/equity-derivatives-contract-specifications> accessed 8 December 2025.

⁵ *Interim Order (Jane Street)* (n 1); National Stock Exchange of India Ltd, ‘SEBI directions in the matter of Index manipulation by Jane Street’ (*Circular, Ref No 494/2025, 21 July 2025*) <<https://nsearchives.nseindia.com/content/circulars/INVG69234.pdf>> accessed 10 December 2025; Securities and Exchange Board of India, ‘Update on the Jane Street Interim Order’ (*Press Release PR No 45/2025, 21 July 2025*) <https://www.sebi.gov.in/media-and-notifications/press-releases/jul-2025/update-on-the-jane-street-interim-order_95491.html> accessed 10 December 2025.

⁶ Securities and Exchange Board of India Act, 1992 (15 of 1992) ss 11(1), 11(4), 11B.

⁷ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) (Amendment) Regulations 2018 (31 December 2018) (PFUTP Amendment Regulations 2018) (amending PFUTP Regulations reg 4(2)(e), effective 1 February 2019).

inference),⁸ isolating the structural assumptions that make single-security tests appear exhaustive, and then using the Jane Street interim order to show how settlement-reference targeting forces a re-specification of what PFUTP is protecting in an index-dominant derivatives market.

This paper does not argue that index derivatives markets are inherently prone to manipulation, nor does it advance a generalised critique of aggressive expiry-day trading or sophisticated hedging strategies. It does not seek to convert PFUTP into a fairness-based conduct code, to rest liability on outcome magnitude or ex post profitability, or to displace the centrality of inference and structure in Indian market-abuse adjudication. Its claim is narrower. The paper examines how PFUTP’s inherited scrip-centric logic becomes analytically incomplete in settlement-referential markets, and how SEBI’s Jane Street interim order implicitly reconstructs the object of regulatory protection around reference-price integrity rather than persistent constituent-level distortion. The analysis is therefore confined to the doctrinal consequences of treating settlement references as legally salient prices, and to the limiting principles required to distinguish parity-enforcing arbitrage from settlement-window interference within PFUTP’s existing framework.

II. CLASSICAL PFUTP DOCTRINE AND ITS SCRIP-CENTRIC BIAS

A. Artificial Price as the Implied Object of Harm

The PFUTP Regulations are drafted as an enforcement grammar for manipulation that is legible in the trading record of a security.⁹ Their definitional core, especially “fraud”, is decoupled from classical deceit and from proof of subjective *mens rea*. “Fraud” extends to any act, omission or concealment “whether in a deceitful manner or not”, if it is deployed “in order to induce” dealing in securities.¹⁰ The elasticity which is at work here is functional: it permits adjudication to treat

⁸ *Rakhi Trading* (n 2).

⁹ Sahil Mohd, ‘Stock Market Manipulation’ (*SSRN*, June 2021) <<https://papers.ssrn.com/abstract=3903191>> accessed 14 December 2025; Securities and Exchange Board of India, ‘SEBI (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations, 2003 (last amended on 28 June 2024)’ (*SEBI*, 28 June 2024) <https://www.sebi.gov.in/legal/regulations/jun-2024/sebi-prohibition-of-fraudulent-and-unfair-trade-practices-relating-to-securities-market-regulations-2003-last-amended-on-june-28-2024-_84781.html> accessed 9 December 2025; *Rakhi Trading* (n 2), 20–24.

¹⁰ PFUTP Regulations (n 2) reg 2(1)(c).

market abuse as interference with the informational content of market prices, rather than as conventional misrepresentation.

Within that grammar, “artificial price” operates as the implied object of harm even where orders are framed as targeting “false appearance”. Regulation 3 prohibits any manipulative device or scheme “in connection with dealing in securities”;¹¹ Regulation 4(1) treats a practice as fraudulent or unfair if it “operates as a fraud or deceit upon any person” in connection with securities dealing.¹² The doctrinal move is to treat market-generated prices as the medium through which inducement occurs: the law polices inducement by policing price integrity.

Furthermore, it must be noted that Regulation 4(2)(a) targets dealings that creates a “false or misleading appearance of trading”; Regulation 4(2)(e) targets “manipulation of the price of a security”, including influencing a “reference price or benchmark price”.¹³ Classical PFUTP reasoning often reads these clauses as contiguous rather than alternative.¹⁴ The “appearance” limb matters because manufactured activity supplies price-relevant signals, liquidity, depth, momentum, and the resulting price is treated as the false statement to which the market responds.

Therefore, one can rightly say that, on the basis of scrip-centricity, that manipulation is proved through the trading tape of the security: abnormal price/volume movements, repeated order matching, end-of-day prints, reversals, concentration, and other patterns from which intention to influence price is inferred. The practical consequence is that doctrinal “artificiality” is operationalised as deviation in the security’s own price-formation record, and the case is built by aligning intention to effect through the tape itself.

Supreme Court doctrine has long reinforced this approach to proof: *N. Narayanan* frames securities regulation as preserving market integrity against the “creation of artificiality”;¹⁵ *Kishore R Ajmera* authorises inference-based proof on a preponderance standard, with coordination

¹¹ PFUTP Regulations (n 2) reg 3.

¹² PFUTP Regulations (n 2) reg 4(1).

¹³ PFUTP Regulations (n 2) regs 4(2)(a), 4(2)(e).

¹⁴ Parekh and Shah (n 2); AA Gupte, ‘Probing into the Novel Methods of Market Manipulations in the Age of AI and Machine-Learning’ (2024) (*Indian Journal of Integrated Research in Law*) <<https://ijirl.com/wp-content/uploads/2024/08/PROBING-INTO-THE-NOVEL-METHODS-OF-MARKET-MANIPULATIONS-IN-THE-AGE-OF-AI-AND-MACHINE-LEARNING.pdf>> accessed 12 November 2025.

¹⁵ *N Narayanan v Adjudicating Officer SEBI* (2013) 12 SCC 152 (SC).

inferred from the “totality of attending facts and circumstances”.¹⁶ The result is a manipulation doctrine whose proof structure presumes that the legally salient harm will be visible as a deformation in the price or trading record of the security.

B. Doctrinal Friction in Index-Constituent Strategies

This single-security model becomes strained when the legally salient “price” is not a scrip quotation but a settlement reference produced by index rules and derivatives specifications. In index-linked derivatives markets, settlement is merely an infrastructural output: an index closing value derived from an aggregation methodology rather than from one order book. SEBI’s exchange-traded derivatives framework, for example, ties index derivative settlement to the index closing price computed using the last half-hour VWAP of the index constituents.¹⁷

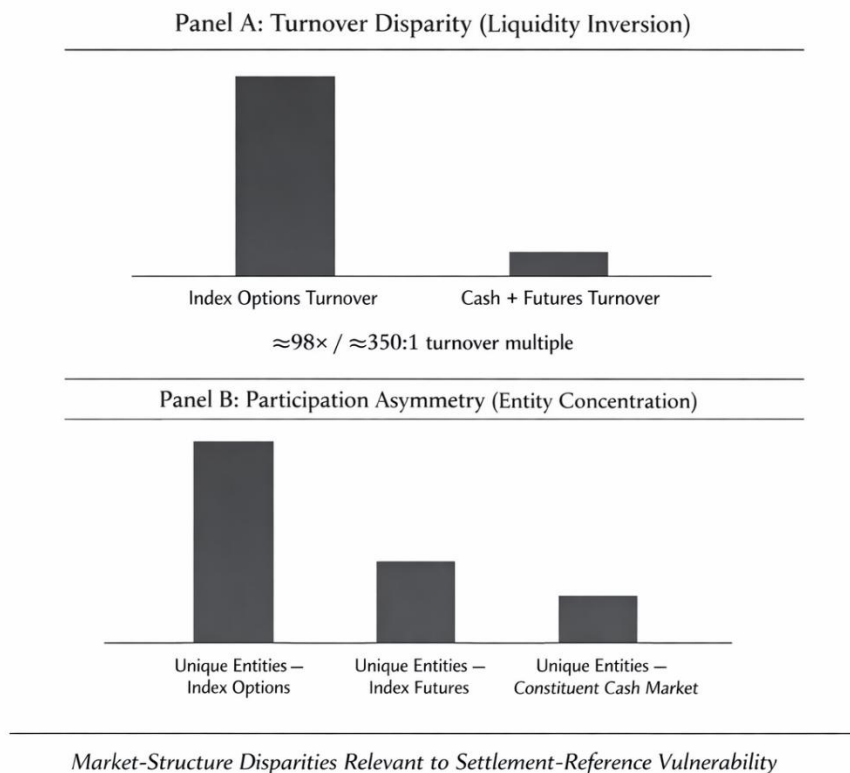
Classical PFUTP reasoning, however, remains organised around whether a constituent security exhibited “abnormal” or “artificial” movement. It presumes that manipulation will either dislocate the scrip price from an implied competitive level or generate a visible discontinuity, matched orders, circular trades, sudden spikes, sufficient to bear the inference of artificiality. Settlement-window strategies are engineered to evade those proxies: they can be temporally compressed, executed across multiple liquid constituents, and reversed once the reference is fixed.¹⁸

¹⁶ *SEBI v Kishore R Ajmera* (2016) 6 SCC 368 (SC).

¹⁷ Securities and Exchange Board of India, *Chapter 5 — Exchange Traded Derivatives* (SEBI, October 2023) <https://www.sebi.gov.in/sebi_data/commndocs/oct-2023/Chapter-5-Exchange_Traded_Derivatives_p.pdf> accessed 10 December 2025.

¹⁸ Securities and Exchange Board of India, ‘Interim Order in the matter of Rakhi Trading Pvt Ltd’ (SEBI, 29 April 2003); *Rakhi Trading* (n 2) 20–27; *Ketan Parekh* (n 2) 31–36; Sandeep Reddy and Vachan Mishra, ‘Spoofing in Indian Markets: Dissecting SEBI’s Crackdown on PWAPL’ (*Arbitration & Corporate Law Review*, 29 June 2025) <https://www.arbitrationcorporatelawreview.com/post/spoofing-in-indian-markets-dissecting-sebi-s-crackdown-on-pwapl> accessed 11 December 2025; Gupte (n 14); Zhi-Qiang Jiang and others, ‘Trading Networks, Abnormal Motifs and Stock Manipulation’ (2012) arXiv:1301.0007 <<https://arxiv.org/abs/1301.0007>> accessed 14 December 2025; Jayshree P Upadhyay, Ira Dugal and Scott Murdoch, ‘India bars Jane Street from its securities market, citing manipulation of stock indexes’ Reuters (4 July 2025) <<https://www.reuters.com/sustainability/boards-policy-regulation/india-regulator-bars-jane-street-accessing-its-securities-market-2025-07-04/>> accessed 12 December 2025.

This doctrinal strain is not merely conceptual; it is structurally produced by the organisation of liquidity and participation across index-linked derivatives markets. In contemporary Indian markets, turnover and risk-bearing capacity are heavily concentrated in index options, while the constituent cash market that supplies the settlement inputs remains comparatively diffuse and fragmented. This inversion means that actors with dominant derivative exposure can profitably deploy temporally concentrated constituent trading to influence the settlement computation, even where no individual security exhibits persistent or conspicuous price distortion. This structural asymmetry is summarised in Figure 1 below, which contrasts turnover concentration and participation dispersion across index options, index futures, and constituent cash markets.



The problem is a mismatch between what the law treats as harm and the evidence used to show it. In an index-constituent setting, trades in individual constituents may each appear rational, yet together determine the settlement outcome. A participant may trade a basket of constituents during the computation window not to distort their standalone prices, but to influence the index close; the economic gain is realised in the derivatives book, whose exposure to small movements in the settlement reference far exceeds the cash trades used to influence it.

The Jane Street interim order is instructive because it draws this distinction in practice without presenting itself as a major shift in a doctrinal sense. SEBI’s prima facie theory is built around expiry-day sequencing and cross-segment coordination: concentrated activity in index constituents and index futures timed to the settlement window, paired with a derivatives position structured to monetise movements in the index settlement reference, followed by reversal once the reference is fixed.¹⁹ On that account, the disturbance is not a durable mispricing in any constituent, but a targeted deformation of a benchmark used to settle a far larger derivatives exposure.

However, the author does acknowledge that the tension arises from PFUTP’s inherited approach to proof. If the enquiry is confined to constituent-level artificiality, enforcement risks importing a demand for visible constituent irrationality that settlement-targeting strategies are designed to avoid. If the enquiry follows the settlement reference, classical price-effect logic must confront interference realised through timing, payoff design, and cross-market coordination while leaving the constituent price series plausibly within ordinary trading ranges. The next section identifies this as a doctrinal gap rather than a problem of evidence.

III. THE JANE STREET INTERIM ORDER AS AN ENFORCEMENT RE-ORIENTATION

A. Evidentiary Grammar of the Interim Order

SEBI’s July 2025 interim order in the Jane Street matter is best read as an evidentiary artefact. Its core labour is not to narrate an expiry-day episode, but to supply a grammar by which cross-segment conduct is rendered legally intelligible as a “device” or “scheme” within PFUTP’s open-textured prohibitions.²⁰ The order begins from market infrastructure. Index options expiry is treated as a settlement technology: a closing index value computed through exchange methodology and used to cash-settle index options positions at scale, so that the closing reference becomes the regulatory object under pressure.²¹ The order’s central move is to treat the settlement window not

¹⁹ *Interim Order (Jane Street)* (n 1).

²⁰ PFUTP Regulations (n 2) regs 3–4; *Interim Order (Jane Street)* (n 1).

²¹ n 17, Ch. 5.

as a background “market condition”, but as an analytically privileged temporal site in which interference can be inferred without a theory of persistent price distortion.

The reconstruction therefore now proceeds through a somewhat temporal decomposition. The exemplar day (17 January 2024, BANKNIFTY) is partitioned into a two-patch sequence. Patch I (09:15–11:46:59) is aggressive net purchasing in constituent cash and stock futures, ₹4,370.03 crore in aggregate, at a scale and concentration treated as capacity evidence: 15–25% of market-wide traded value in multiple BANKNIFTY constituents, and an absolute net traded value of ₹4,220.50 crore across cash and futures that SEBI contrasts with other large participants.²² Patch II reverses exposure into the close. The important of patching in this context can be understood by an approach of proof. By fixing a timing architecture, SEBI converts sequence into inference: the break-point between patches is treated as a structural hinge around which settlement exposure is built and then monetised, permitting inference from alignment rather than from disclosure breach or overtly non-genuine trading.

This temporal architecture can be accurately represented by Figure 2 as follows: -

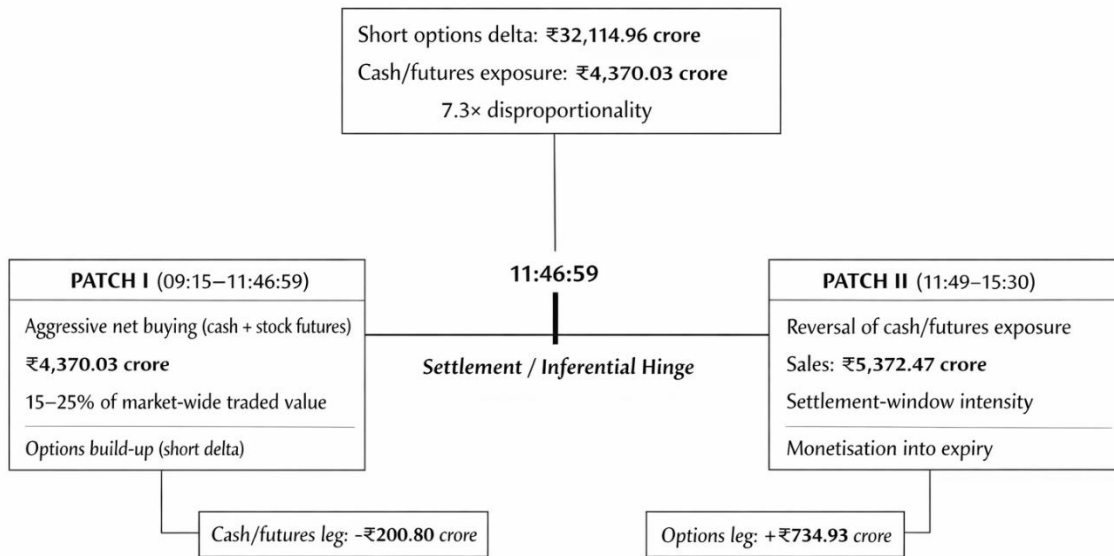


Figure 2. Temporal architecture of settlement-window trading and payoff alignment in the Jane Street interim order (exemplar day: 17 January 2024, BANKNIFTY).

²² Metropolitan Stock Exchange of India Ltd, ‘SEBI order in the matter of Index manipulation by Jane Street’ (Circular No MSE/ID/17461/2025, 4 July 2025) <<https://www.msei.in/SX-Content/Circulars/2025/July/Circular-17461.pdf>> accessed 10 December 2025.

Causation is constructed through attribution rather than econometric validation. The order’s “LTP impact” tables operate as a counterfactual device: for each constituent, SEBI isolates an aggregate last-traded-price differential attributable to the respondent’s orders (order price minus LTP at order entry, summed across above/at/below-LTP tranches), and contrasts that with “rest of market” pressure computed by subtraction. For KOTAKBANK, the respondent’s buy orders are presented as generating +₹2,603 of upward LTP impact while the rest of market is shown as exerting –₹2,622.²³ The inferential move is subtle but consequential. Instead of arguing that the scrip price became “irrational” in the abstract, SEBI argues that the respondent’s prints are the marginal component that defeats contemporaneous price pressure, and that this marginality matters because the closing reference is the settlement anchor for a much larger payoff structure.

Payoff structure functions as corroboration. At 11:46:59, the respondent’s net short delta in options is stated at ₹32,114.96 crore against a long cash/futures exposure of ₹4,370.03 crore; a 7.3x disproportionality that SEBI treats as hedge-disqualifying.²⁴ Patch II (11:49–15:30) then reverses the cash/futures leg through sales of ₹5,372.47 crore. On the exemplar day, SEBI pairs disproportionality with leg performance: the cash/futures leg allegedly realises a loss of ₹200.80 crore, while options allegedly realise ₹734.93 crore profit.²⁵ The order treats this not as subjective “motive”, but as ex post evidence of design. Cash and futures trades remain formally genuine and exchange-matched; the evidentiary point is that the loss-bearing leg becomes legible as an instrument for producing a settlement-contingent reference, rather than as a standalone directional bet needing a sustained price effect.

Two stabilisers complete the grammar. First, recurrence. The order aggregates multiple expiry-day instances, fifteen BANKNIFTY expiry days between January 2023 and March 2025, and further instances in other indices after an exchange caution, so repetition performs the work that direct evidence of pre-arrangement would otherwise do in an anonymous order-matching environment.²⁶ Second, “economic rationale” operates as an inferential hinge. Submissions are

²³ *ibid.*

²⁴ *Interim Order (Jane Street)* (n 1).

²⁵ *ibid.*

²⁶ n 22.

treated as deficient not because they fail to deny liability in form, but because they fail to supply a quantitative hedging theory capable of explaining why settlement exposure was expressed through concentrated constituent trading and timed reversals instead of through more direct index instruments. The evidentiary burden thus shifts: once the temporal and payoff architecture is shown, the absence of a coherent alternative explanation becomes part of the proof structure.

B. Inference Without “Bad Intent” or Disclosure Breach

The order’s enforcement re-orientation lies in making PFUTP liability survivable without the classical pathways of proof: pre-arranged counterparties, demonstrably non-genuine trades that fabricate volume, or an antecedent disclosure breach. PFUTP’s drafting permits device-based reasoning; Regulations 3 and 4 are framed against schemes and practices that operate as fraud upon market participants even where trading is executed through anonymous order matching.²⁷ Jane Street operationalises that latitude by relocating the object of interference. The order is not principally concerned with whether any constituent scrip price was “artificial” over a meaningful horizon; it is concerned with whether the settlement reference, produced through lawful trading forms, was targeted as the point of extraction.

That relocation reshapes the relevance of price reversion. A defence anchored in post-expiry correction presumes that manipulation is falsity in the long-run equilibrium price. SEBI’s reasoning treats manipulation as corruption of a legally relevant calculation point. Options settle by reference to the index closing value computed under exchange rules; once the settlement reference is fixed, redistributive effects crystallise, and subsequent reversion cannot undo settlement transfers.²⁸ The absence of persistent distortion in any single security is therefore not treated as exculpatory, because the order does not make persistence the condition of harm. Harm is located in the integrity of the reference price as settlement infrastructure, not in a theory of durable constituent mispricing.

Nor does the order depend on proving “bad intent” as a subjective mental state. Its inferential architecture treats intent as a function of structure: dominance (15–25% of traded value in multiple

²⁷ PFUTP Regulations (n 2) regs 3–4; *Interim Order (Jane Street)* (n 1).

²⁸ n 17.

constituents), attributed LTP impact against contrary market pressure, repeated willingness to absorb cash/futures losses, and payoff asymmetry together generate a probability space in which benign explanations must do affirmative work. This posture is doctrinally consonant with the Supreme Court’s acceptance of inference from patterns, probability, and the “totality of circumstances” in screen-based misconduct cases, where direct evidence of coordination is rarely available.²⁹ The interim order’s contribution is to specify what counts as “circumstance” in an index-dominant environment: timing concentration, settlement adjacency, and payoff asymmetry become the privileged evidentiary tokens.

The interim character of the order still matters. It proceeds on a prima facie basis and deploys preventive and restorative powers, market access restraints, impounding and escrow directions, pending final adjudication and appellate scrutiny.³⁰ Its significance, therefore, is not doctrinal finality but institutional technique: derivative payoffs are treated as evidentiary architecture, and settlement windows as legally privileged temporal sites for inference. The next section takes this technique as the doctrinal stimulus for reconstructing manipulation around reference-price integrity rather than persistent scrip-price effects.

IV. INDEX-AS-OBJECT MANIPULATION

A. The Index as a Settlement-Reference, not a Passive Aggregate

Classical PFUTP reasoning treats the “price of a security” as the primary and sufficient object of protection.³¹ That premise holds as long as “price” is conceptually unitary: a single, continuously discovered quantity in the cash market, against which other instruments merely reference and converge. Yet index-derivatives markets convert the index from a descriptive metric into regulatory infrastructure: a mechanically defined settlement-reference that crystallises payoff,

²⁹ *Ajmera* (n 16); *Rakhi Trading* (n 2); *SEBI v Kanaiyalal Baldevbhai Patel* (2017) 15 SCC 1 (SC); Sobhesh Kumar Agarwalla, Jacob Joshy and Jayanth Rama Varma, ‘High Frequency Manipulation at Futures Expiry: The Case of Cash Settled Indian Single Stock Futures’ (*IIM Ahmedabad Working Paper No 2014-02-01*, February 2014) <<https://ssrn.com/abstract=2395159>> accessed 10 December 2025.

³⁰ *Interim Order (Jane Street)* (n 1); n 6 ss 11(1), 11(4), 11B (1), 11D.

³¹ PFUTP Regulations (n 2) reg 4(2)(e); Gurjeet Singh and Pankaj Nagar, ‘A Case Study on Nutek India Limited, Regarding Deep Fall in Share Price’ (*arXiv*, 6 February 2022) <<https://arxiv.org/abs/2203.12657>> accessed 10 December 2025; GN Reddy, *Fraudulent Financial Practices and Investor Protection in the Securities Market (UGC MRP Final Report, Osmania University)* <<https://www.osmania.ac.in/UGC%20MRP%20final%20Reports2018/FFP%20AND%20IP-PROJECT%20FINAL%20REPORT.PDF>> accessed 10 December 2025.

fixes obligations, and finalises wealth transfers at a legally privileged temporal point.³² Once that infrastructural function is foregrounded, the question is no longer whether the day's constituent prices were "irrational" in any enduring sense. It is whether the settlement-reference was made to deviate from the counterfactual that would have prevailed absent targeted intervention into the settlement computation.³³ The object, therefore, shifts from "price distortion" in an individual scrip to integrity of the reference-price mechanism that clears an index-linked contract.³⁴

This reconstruction does not require importing policy conceptions of "fairness" or expanding PFUTP into an unbounded market-conduct code. It follows from the text SEBI itself inserted into the core manipulation deeming provision.³⁵ Regulation 4(2)(e), as amended on the Committee on Fair Market Conduct's recommendations, expressly treats "influencing or manipulating the reference price or bench mark price of any securities" as an included species of price manipulation.³⁶ The amendment's significance is not semantic supplementation; it is a change in the architecture of the wrong. It acknowledges that the legally salient price can be a *computed* and *designated* reference, often temporally compressed and administratively privileged, rather than the diffuse equilibrium of continuous trading. The Committee's own framing makes the point with

³² Prachi Jain, *Does the Type of Settlement Matter? Evidence from Indian Derivatives Market (IIM Indore Research Paper, 2022)* <https://nsearchives.nseindia.com/s3fs-public/inline-files/Does%20the%20type%20of%20settlement%20matter_WhitePaper.pdf> accessed 17 December 2025; 'Index Futures' (*ScienceDirect Topics*) <<https://www.sciencedirect.com/topics/economics-econometrics-and-finance/index-futures>> accessed 11 December 2025; Agarwalla, Joshy and Varma (n 29); NSE Clearing Ltd (n 4).

³³ P Gurrola-Pérez, 'An Analysis of Market Manipulation Definitions Around the World' (*Financial Fraud and Market Manipulation Conference 2024*) <<https://wp.lancs.ac.uk/ffmm2024/files/2024/09/FFMM-2024-018-An-Analysis-of-Market-Manipulation-Definitions.pdf>> accessed 22 December 2025; T J Putniņš, 'Market Manipulation: A Survey' (2012) 26 *Journal of Economic Surveys* 952; International Organization of Securities Commissions, *Investigating and Prosecuting Market Manipulation (Technical Committee Report, May 2000)* <<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD103.pdf>> accessed 21 December 2025; C Comerton-Forde and T J Putniņš, 'Measuring Closing Price Manipulation' (2011) 20 *Journal of Financial Intermediation* 135; US Securities and Exchange Commission, 'In the Matter of Athena Capital Research, LLC' (*Release No 34-66274*, 6 February 2012) <<https://www.sec.gov/files/litigation/admin/2014/34-73369.pdf>> accessed 28 December 2025.

³⁴ n 6 ss 11, 11B, 12A; PFUTP Regulations (n 2) reg 3.

³⁵ PFUTP Regulations reg 4(2)(a)–(g) (as amended by PFUTP Amendment Regulations 2018 (n 7)); *Ajmera* (n 16); *Rakhi Trading* (n 2); Umakanth Varottil, 'Market Manipulation and the Role of Intent under Indian Securities Regulation' (2014) 7 *NUJS Law Review* 207; Somasekhar Sundaresan, 'Market Manipulation under Indian Securities Law: From Fairness to Market Integrity' (2019) 31 *National Law School of India Review* 1; Mihir Naniwadekar, 'Re-thinking Manipulation under the PFUTP Regulations' (2020) 12 *Indian Journal of Law and Economics* 45.

³⁶ PFUTP Regulations (n 2) reg 4(2)(e) (as amended).

unusual clarity: “marking the close” is problematic precisely because it impacts settlement prices for derivatives, i.e., reference prices that govern payoff finalisation.³⁷

Once “reference price” is taken seriously as an enforceable object, the index is best understood not as a metaphysical aggregation of stocks, but as a settlement primitive produced by institutional design choices: the index methodology, the exchange’s expiry-day settlement rule, the calculation window, and the VWAP mechanics that convert dispersed trades into a single determinative number.³⁸ That does not imply the index is a “security” in itself. The doctrinal move is narrower. PFUTP regulates “dealing in securities” and acts amounting to manipulation of the price of a security; an act that targets the settlement-reference can still be an act of manipulation *of the price of securities* insofar as the reference price is *of securities* (constituents) and is the legally appointed price for derivatives settlement.³⁹ The referent of harm is thus not a free-floating “index value,” but the reference price of constituent securities as constructed for settlement.⁴⁰

This is also the correct way to read the traditional objection, prominent in earlier jurisprudence, that broad, liquid indices are “almost impossible” to manipulate.⁴¹ That claim assumes that “index manipulation” could only mean suppressing or inflating the index’s continuously traded level across the day by cornering a diversified basket. It does not address, and was not designed to address, the distinct vulnerability created by settlement rules that compress determinative trading

³⁷ Securities and Exchange Board of India, *Study on Early/Pre-Open Session Price Manipulation, Order Book and Surveillance Parameters* (SEBI, August 2018) <https://www.sebi.gov.in/sebi_data/attachdocs/aug-2018/1533810314407.pdf> accessed 12 December 2025.

³⁸ National Stock Exchange of India Ltd (NSE Indices Ltd), *Methodology Document for Equity Indices* (NSE, 13 October 2025) <https://nsearchives.nseindia.com/content/indices/Method_NIFTY_Equity_Indices.pdf> accessed 29 December 2025; BSE Indices Pvt Ltd, *Index Mathematics Methodology* (June 2024) <https://www.bseindices.com/Downloads/BSE_Template_Methodology-Index-Math_JUNE2024.pdf> accessed 28 December 2025; NSE Clearing Ltd (n 4); Donald Lien and Yiu Kuen Tse, ‘A Survey on Physical Delivery Versus Cash Settlement in Futures Contracts’ (2006) 15 *International Review of Economics & Finance* 15 <<https://doi.org/10.1016/j.iref.2004.08.001>> accessed 29 December 2025; Darrell Duffie and Piotr Dworzak, ‘Robust Benchmark Design’ (*NBER Working Paper No 20540*, October 2014, revised March 2018) <https://www.nber.org/system/files/working_papers/w20540/w20540.pdf> accessed 28 December 2025; FTSE Russell, ‘Indices and Benchmarks Made Clear’ (*LSEG*, October 2023) <https://www.lseg.com/content/dam/ftse-russell/en_us/documents/research/indices-and-benchmarks-made-clear.pdf> accessed 27 December 2025.

³⁹ PFUTP Regulations (n 2) regs 2(1), 4(2)(e); PFUTP Amendment Regulations 2018 (n 7); Vinod Kothari, ‘SEBI’s Expanded Power to Protect Investors’ Interest’ (January 2019) <<https://vinodkothari.com/wp-content/uploads/2019/01/SEBI-expanded-power-to-protect-investors-interest.pdf>> accessed 28 December 2025; NSE Indices Ltd (n 38); BSE Indices Pvt Ltd (n 38); Anthony Lee Zhang, ‘Competition and Manipulation in Derivative Contract Markets’ (2022) 144 *Journal of Financial Economics* 396 <<https://doi.org/10.1016/j.jfineco.2022.02.001>> accessed 21 December 2025.

⁴⁰ PFUTP Regulations (n 2) reg 2(1)(c); regs 4(1)–(2).

⁴¹ *Rakhi Trading Pvt Ltd v SEBI* (SAT, Appeal No 70 of 2009, 11 October 2010).

into a narrow window and translate order flow into a mechanically weighted reference. The impossibility argument is therefore not a general immunity for indices; it is a conclusion derived from an implicit choice of object. Where the object is the spot index in continuous discovery, the argument has force. Where the object is the expiry settlement-reference calculated over a defined interval, the argument is misdirected, because the magnitude of resources required to move the reference price is a function of *window design* and *relative liquidity*, not merely the number of constituents.⁴²

The doctrinal reconstruction, accordingly, is a re-specification of “price” inside PFUTP: in index-linked markets, the legally relevant price is often the settlement-reference, and “manipulation” is interference with the integrity of that reference mechanism. This is not a claim that every aggressive close is abusive. It is a claim about what *counts* as the protected object when payoff is indexed to a settlement computation. The Jane Street interim order makes this legible precisely because it proceeds without insisting on persistent constituent-level mispricing; it treats concentrated expiry-window conduct as sufficient to contaminate the settlement-reference, and thus sufficient to trigger PFUTP’s manipulation logic.⁴³

B. Settlement-Window Targeting as the Core Manipulative Wrong

If the object is reconstructed as reference-price integrity, the core wrong is not “artificial prices” in the classical sense; it is settlement-window targeting: the deliberate concentration and sequencing of cash and futures orders in the determinative window to move the settlement computation in the direction required by a pre-existing derivative payoff profile. The doctrinal challenge is to describe this wrong without collapsing into (i) a fairness register (“gaming”, “unfair advantage”) or (ii) a price-effect fetishism that demands proof of enduring, constituent-level dislocation. PFUTP can accommodate that challenge if the evidentiary grammar is aligned with the object.

The first implication is temporal. Settlement is an *irreversibility point*: once the settlement-reference is fixed, payoff is finalised and cannot be undone by later price correction. In continuous

⁴² n 17.

⁴³ *Interim Order (Jane Street)* (n 1).

markets, a transient push is often self-correcting, and persistent distortion becomes the evidentiary anchor. In settlement-referential markets, the transient push is precisely the point, because it is designed to coincide with finalisation. The doctrinal weight of timing concentration is therefore not circumstantial colour. It is constitutive of the wrong: the same trades at 10:30 am and 3:20 pm are not analytically interchangeable once the legal system itself has privileged the latter interval as settlement-determinative.⁴⁴

The second implication is cross-market coordination. Settlement-window targeting is structurally a *composite* strategy: the derivative book fixes the direction and magnitude of desired settlement movement; the cash and futures leg supplies the price impact that moves the reference; and the two legs are synchronised around the settlement window. Under this structure, cash/futures losses are not evidentiary anomalies to be “netted off” against options profits as a matter of economic storytelling. They are part of the proof of design. A loss-making cash/futures leg that is predictably and repeatedly offset by expiry-linked derivatives gains is probative not because “losses imply guilt”, but because it reveals instrumentality: the cash leg is deployed as a costed mechanism to move the settlement-reference, rather than as a price-discovery trade with independent rationale. The payoff profile is thus *ex post* evidence of the trading design, not a substitute for a confession of intent.⁴⁵

The third implication is that “absence of persistent distortion” is no longer exculpatory. A trader can target settlement-reference integrity without leaving durable footprints in constituent prices. Indeed, the strategy’s rationality depends on not attempting day-long, conspicuous suppression or inflation. The legal wrong is the impairment of the settlement computation at the determinative moment, not a general corruption of the market’s informational efficiency. This is why the classical “too liquid to manipulate” intuition becomes fragile: liquidity measured across the full session is not the correct denominator. The relevant denominator is liquidity *in the settlement window and in the specific constituents with the highest VWAP influence at that time*, combined with the relative size of the derivatives exposure whose payoff is keyed to that computation.⁴⁶

⁴⁴ PFUTP Regulations (n 2) reg 4(2)(e); n 6.

⁴⁵ *Interim Order (Jane Street)* (n 1).

⁴⁶ *ibid*; n 37.

These implications yield an account that remains within PFUTP’s structure. Regulation 4(2)(e) already positions “influencing” the reference price as an included form of manipulation.⁴⁷ The interpretive work is to link “influencing” to settlement-window targeting without turning the provision into strict liability for market impact. That link is supplied by the internal logic of PFUTP’s deeming framework: it is aimed at conduct that uses the trading mechanism as a *device* to produce a misleading price signal or price outcome. In settlement-referential cases, the “misleading” character is not that other traders were deceived about fundamentals; it is that the settlement-reference, the designated price for contract finalisation, was made to reflect a targeted intervention rather than the undisturbed aggregation of orders in that window. This is manipulation as reference corruption, not manipulation as informational deceit.⁴⁸

The reconstruction also sits comfortably with the Supreme Court’s insistence that market abuse provisions protect market integrity and do not always require the regulator to establish a classical “artificial price” in the econometric sense. The Court’s concern in PFUTP cases has repeatedly been that certain trading patterns compromise the market’s functional conditions; genuineness of trading, integrity of price formation, and the credibility of the market as a venue for orderly discovery.⁴⁹ A settlement-reference is precisely a functional condition: it is the number by which the market clears a large class of contracts. If that number can be cost-effectively moved by concentrated order flow timed to the window, the market’s settlement infrastructure becomes a predictable extraction mechanism. PFUTP, post-amendment, has the doctrinal vocabulary to treat that as manipulation without inventing new wrongs.

What follows for Section V is the following: once the object is specified as settlement-reference integrity, evidentiary attention is properly directed to (i) window-specific concentration and sequencing, (ii) cross-market synchronisation, and (iii) payoff asymmetry that renders the cash leg instrumentally rational only through derivatives settlement. The Jane Street interim order is best read as an enforcement attempt to operationalise precisely these variables. The reconstruction offered here makes explicit what the order leaves implicit: “index manipulation” in derivatives-dominant markets is not necessarily the production of an “artificial price” in an individual scrip; it

⁴⁷ PFUTP Amendment Regulations 2018 (n 7).

⁴⁸ PFUTP Regulations (n 2) reg 4(2)(e).

⁴⁹ *Rakhi Trading* (n 2).

is the corruption of a settlement-reference that the legal system itself has designated as dispositive.⁵⁰

The author also acknowledges the limits of this reconstruction and a brief counterfactual is presented that clarifies the same. Consider an expiry-day trading strategy involving large, temporally concentrated constituent transactions executed within the settlement window, paired with an index-derivatives position, but where the cash and futures leg remains exposure-neutralising rather than settlement-targeting: execution tracks observable basis deviations or parity constraints, constituent trades are distributed in proportion to index weights rather than selectively concentrated for marginal reference impact, and the cash leg is not persistently adverse in a manner explainable only through derivatives payoff realisation. Even if such trading influences the settlement value in fact, it does not implicate reference-price integrity in the doctrinal sense advanced here, because the settlement statistic remains an accepted constraint of the strategy rather than its object. The reconstruction therefore does not rest liability on expiry proximity, market impact, or profit magnitude as such; it turns on whether the settlement reference is structurally treated as a controllable input within a cross-market scheme, demonstrable from timing, sequencing, and payoff asymmetry. Absent that scheme-coherence, aggressive expiry trading remains within PFUTP's tolerated ambit.

V. DISTINGUISHING LEGITIMATE INDEX ARBITRAGE FROM ABUSIVE SETTLEMENT ENGINEERING

A reconstruction that treats the index settlement value as a protected reference must also specify what it does not reach. In derivatives-dominant index markets, the cash–derivatives nexus is not an incidental complication; it is regulatory infrastructure. Arbitrage relations, cash–futures basis constraints, and options hedging loops are the mechanism through which cash-settled index contracts remain tethered to constituent trading, and through which price discovery and liquidity are jointly produced.⁵¹ The same infrastructure, however, also supplies a pathway for settlement-

⁵⁰ *Interim Order (Jane Street)* (n 1).

⁵¹ Elmar Theissen, 'Price Discovery in Spot and Futures Markets' (2011) 75 *Journal of Empirical Finance* 1; Kapil Gupta and Balwinder Singh, 'Price Discovery and Arbitrage Efficiency of Indian Equity Futures and Cash Markets' (*NSE Research Initiative Working Paper*); Pascal Alphonse, 'Efficient Price Discovery in Stock Index Cash and Futures Markets' (2000) *Annales d'Économie et de Statistique* No 60 177 <<http://www.jstor.org/stable/20076259>> accessed 29 December 2025.

reference interference: the benchmark is computed from constituent trades; derivatives payoffs crystallise against that computation; and expiry compresses incentives into a temporally privileged interval. The limiting task is therefore doctrinal, not moral: to distinguish parity-enforcing activity from benchmark-manufacturing activity without treating settlement-window trading as presumptively suspect.

Legitimate index arbitrage is structurally price-taking.⁵² It presupposes an exogenous misalignment (spot–futures basis, index–basket divergence, put–call parity deviation) and earns its return by compressing that misalignment; the causal story runs from mispricing to execution, not from execution to benchmark. In such strategies, the cash leg is economically accountable on its own terms: it is inventory acquisition or disposal at competitive prices, executed to neutralise exposure and preserve replication logic, and it is not persistently loss-making in a way that only becomes rational when re-read through an options payoff. The execution may be large, temporally clustered, or concentrated near expiry because liquidity and hedging demand concentrate there; but the trading pattern remains consistent with risk-spreading and exposure-neutralisation, rather than payoff concentration. In short, benchmark proximity does not itself re-characterise arbitrage; what matters is whether the benchmark is a *constraint* of the strategy (an input it must accept) or a *design target* (an output it seeks to control).

Abusive settlement engineering is different in kind. It is price-creating in the narrow, reference-price sense: it uses the exchange’s settlement mechanism to convert a computed benchmark into a controllable input for derivative payoff realisation, and it does so through a cross-market design whose internal coherence is only visible when the legs are read together. SEBI’s Jane Street interim order is important here because it operationalises this distinction as a matter of inference: the regulator does not merely point to “impact”; it reads timing concentration in the settlement window, payoff asymmetry across legs, and recurrent cross-market coordination as a single

⁵² Stephen A Ross, ‘The Arbitrage Theory of Capital Asset Pricing’ (1976) 13 *Journal of Economic Theory* 341 <<https://ideas.repec.org/a/eee/jetheo/v13y1976i3p341-360.html>> accessed 21 December 2025; Linda Canina and Stephen Figlewski, *Program Trading and Stock Index Arbitrage* (NYU Working Paper No FIN-94-023, 1994) <<https://archive.nyu.edu/bitstream/2451/27224/2/wpa94023.pdf>> accessed 18 December 2025; E Theissen, ‘Price Discovery in Spot and Futures Markets: A Reconsideration’ (*Working Paper*, April 2011) <<https://www.econstor.eu/bitstream/10419/70114/1/736369252.pdf>> accessed 28 December 2025; N Aggarwal, *Limits to Arbitrage: The Case of Single Stock Futures and Spot Markets* (IGIDR Working Paper No 2015-010, 2015); J Ganley, ‘Tests for Arbitrage Anomalies in the Stock–Futures Basis’ (*Bank of Japan Conference Paper*).

scheme-like structure.⁵³ The legal salience of the cash/constituent leg lies precisely in its *adversity*: repeated acceptance of worse execution in that leg becomes probative when it is systematically aligned with a larger derivatives payoff that benefits from a marginal movement in the computed settlement reference. That is the analytic boundary between “aggressive hedging” and “benchmark manufacture”: the former is explainable as parity-enforcing and risk-reducing; the latter is explainable only as settlement-targeting because the cash losses are not incidental frictions but the engineered cost of moving the reference.

The stabilising distinction must therefore be inferential rather than categorical. PFUTP is administered as an inference regime: schemes are reconstructed from patterns of conduct, economic coherence, and trading structure, not from confessional intent.⁵⁴ This is doctrinally orthodox in Indian market-abuse jurisprudence, which accepts circumstantial inference where the trading arrangement, viewed as a whole, has no credible commercial explanation other than producing an artificial market condition.⁵⁵ The restraint required by this paper’s reconstruction is not a safe harbour for “expiry trading”, but a disciplined demand that the record demonstrate *scheme-coherence*: settlement-window temporal privileging, cross-market payoff dominance, and constituent-side adversity that is rational only because the settlement statistic is the real object of the design. Where those elements are absent, where the cash leg is exposure-neutralising rather than settlement-moving, where payoffs are not asymmetrically concentrated at expiry, where the pattern is consistent with parity correction rather than reference targeting, the reconstruction does not support liability.

These limiting principles are best understood as *analytical markers* that guide inference rather than as formal elements of liability. They describe recurring features that, taken together, can render

⁵³ *Interim Order (Jane Street)* (n 1).

⁵⁴ n 6 s 12A; PFUTP Regulations (n 2) regs 3–4.

⁵⁵ *Ajmera* (n 16); Rajat Sethi, Misha Chadha and Aditi Agarwal, ‘Insider Trading: Circumstantial Evidence Is Evidence Enough?’ (2020) 32(1) National Law School of India Review <<https://repository.nls.ac.in/nlsir/vol32/iss1/9/>> accessed 29 December 2025; *Rakhi Trading* (n 2); ‘Analysis of Circumstantial Evidence under Securities Law’ (*Taxmann*, 26 April 2021) <<https://www.taxmann.com/research/company-and-sebi/top-story/10501000000020364/analysis-of-circumstantial-evidence-under-securities-law-experts-opinion/>> accessed 29 December 2025; Anand Dhir, ‘On the Legality of Synchronized Transactions in India’ (*Oxford FinTech & LegalTech Society*, 27 September 2020) <<https://www.oxfordfls.org/blog/synchronized-transactions/>> accessed 29 December 2025; Reddy and Mishra (n 18); ‘More Likely Than Not: Preponderance of Probabilities in Indian Securities Law’ (*Corporate Professionals*, 27 August 2020) <<https://www.corporateprofessionals.com/articles/more-likely-than-not-preponderance-of-probabilities-in-indian-securities-law/>> accessed 29 December 2025.

settlement-targeting legible within PFUTP’s scheme-based framework, without purporting to exhaustively define or mechanically determine violation.

Inference variable	Patterns typically consistent with parity-enforcing arbitrage	Patterns typically consistent with settlement-reference targeting
Causal direction	Mispricing/basis deviation precedes execution; trades compress the spread.	Trades are deployed to move the settlement reference; benchmark movement is output.
Underlying-leg rationality	Cash/futures leg is economically accountable on its own terms; losses not engineered.	Underlying leg is persistently adverse (‘intentional loss’), rational mainly via options payoff.
Temporal placement	Close clustering is explainable by hedging/rebalancing; not uniquely tied to settlement.	Price-impact leg is concentrated into the settlement window (including two-patch sequencing).
Position geometry	Hedge ratios are coherent (near-delta-neutral or proportionate).	Derivative payoff dominates; hedge ratio strained (over-hedge/7.3×-type); underlying leg as handle.
Recurrence and scheme-coherence	Episodic and strategy-contingent; no expiry-day recurrence of the same architecture.	Rekurs across expiry days with stable architecture; repetition supplies intent proxy.

Table 1: Structured inference variables separating arbitrage from settlement engineering

The author also recognizes that no single variable is dispositive; liability, if any, arises from the coherence of the pattern as a whole rather than from the presence of any isolated feature.

Therefore, this boundedness is reinforced, rather than undermined, by the 2018 amendment to Regulation 4(2)(e), which explicitly extends price manipulation to “influencing or manipulating the reference price or bench mark price”.⁵⁶ The amendment does not convert every influence on a benchmark into a violation; it supplies textual room to treat computed references as regulatory

⁵⁶ n 7.

objects where market design renders them uniquely susceptible to manufacture. Properly read, it sharpens the inquiry: it permits the regulator to treat the reference as the object of harm, but it simultaneously requires the regulator to show that the reference was targeted through a scheme-like cross-market structure, not merely that the reference moved. The doctrinal upshot is a narrow wrong: settlement-window interference that converts the settlement statistic into a controlled input for derivative payoffs, demonstrable from the trading record itself, without collapsing into a theory of over-broad liability.

VI. ENFORCEMENT AND INSTITUTIONAL IMPLICATIONS.

A reference-price-oriented manipulation doctrine has a direct operational consequence: it instructs surveillance to privilege temporal design and cross-market linkage, rather than to search for persistent “artificial prices” in any single constituent. Index derivatives settle against an exchange-designated close that is mechanically computed from constituent trades under published methodology, including last-half-hour weighted-average mechanics for index closing values and settlement inputs.⁵⁷ Once the protected object is understood as the integrity of that settlement reference, exchange surveillance is no longer conceptually “downstream” of doctrine; it becomes the doctrine’s first evidentiary substrate. The relevant signals are ex ante observable because the determinative window and the settlement formula are known in advance. What matters is not whether any constituent prints look irrational in isolation, but whether trading is structurally concentrated into the computation window, aligned to a pre-existing derivatives payoff, and then reversed once the reference has crystallised; precisely the type of temporal and cross-segment architecture SEBI foregrounded in the Jane Street interim order through patching, attributed impact tables, and payoff disproportionality.⁵⁸ The point is not to create a new surveillance mandate; it is to specify what existing surveillance must treat as legally salient when the alleged manipulation is of a benchmark used to finalise obligations.

This shift also clarifies institutional competence, and it disciplines both under- and over-enforcement. SEBI’s surveillance articulation places primary responsibility for market

⁵⁷ NSE Clearing Ltd (n 4); NSE Indices Ltd (n 38); National Stock Exchange of India Ltd, ‘Indices: FAQs’ (*NSE*) <<https://www.nseindia.com/products-services/indices-faqs>> accessed 30 December 2025.

⁵⁸ *Interim Order (Jane Street)* (n 1).

surveillance on the exchanges, with SEBI retaining proactive oversight and the capacity to conduct preliminary enquiries where trading raises suspicion of manipulation.⁵⁹ Exchanges therefore remain signal-generators, not arbiters: they own the order-level and client-level record and can identify window-specific concentration and clustering, but they are not institutionally positioned to assemble the full theory of a cross-market scheme.⁶⁰ Index-settlement cases require integration across cash, stock futures, index futures, and index options; the evidentiary meaning of constituent trading depends on the derivative book to which it is tethered, and on the sequence by which the tether is exploited. That integrative task fits SEBI's statutory architecture, investigative authority and direction-making powers under the SEBI Act, and the capacity to impose interim protective measures pending final adjudication, rather than an exchange's surveillance role.⁶¹ The reconstructed doctrine thus allocates work without inflating powers: exchanges produce structured signals; SEBI supplies cross-instrument synthesis and legal characterisation.

The adjudicatory implication is evidentiary discipline directed at hindsight bias. Expiry-local strategies can generate extreme profits; if outcome magnitude, post-expiry reversion, or public controversy substitutes for proof, PFUTP degenerates into retrospective moral condemnation of complex execution. Supreme Court doctrine permits inference from patterns on a civil standard where direct evidence is structurally unavailable, but it also requires that inference be anchored in the totality of circumstances revealed by the trading record.⁶² A reference-price integrity account tightens that anchoring by specifying which circumstances are probative in this market design: settlement-adjacent concentration in the computation window; cross-market sequencing that treats the window as the hinge; payoff asymmetry that renders the cash leg instrumentally rational only

⁵⁹ Securities and Exchange Board of India, 'Investigation, Enforcement and Surveillance – Market Surveillance System' (*SEBI*) <https://www.sebi.gov.in/sebi_data/commondocs/ar97982g_h.html> accessed 10 December 2025.

⁶⁰ Douglas Cumming and Sofia Johan, 'Global Market Surveillance' (2008) 10(2) *American Law and Economics Review* 454 <<https://doi.org/10.1093/aler/ahn009>> accessed 29 December 2025; Michael J Aitken, Douglas J Cumming and Feng Zhan, 'Exchange Trading Rules, Surveillance and Suspected Insider Trading' (2015) 34 *Journal of Corporate Finance* 311 <<https://doi.org/10.1016/j.jcorpfin.2015.07.013>> accessed 27 December 2025; Securities and Exchange Board of India, 'Market Surveillance' (*SEBI*) <https://www.sebi.gov.in/sebi_data/commondocs/ar99002f_h.html> accessed 30 December 2025; CFA Institute, *Self-Regulation in Today's Securities Markets: Outdated System or Work in Progress?* (CFA Institute, 2007) <<https://www.cfainstitute.org/sites/default/files/-/media/documents/article/position-paper/self-regulation-in-todays-securities-markets-outdated-system-or-work-in-progress.pdf>> accessed 26 December 2025; International Organization of Securities Commissions, *Objectives and Principles of Securities Regulation* (IOSCO, 2003) <<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD154.pdf>> accessed 28 December 2025.

⁶¹ n 6 ss 11, 11B, 11C, 11(4).

⁶² n 16.

because the settlement statistic is the payoff anchor; and recurrence across expiries that performs the corroborative work otherwise supplied by direct evidence. This is not a moral filter; it is a structural filter that forces adjudicators to justify why the pattern is scheme-like rather than parity-enforcing, thereby reducing the space for after-the-fact narrative substitution.

Enforcement remains credible and bounded so long as it is presented as operationalisation of existing legal objects rather than as a fairness-based expansion. Regulation 4(2)(e) expressly treats influencing a reference or benchmark price as a species of price manipulation, and the Fair Market Conduct Committee's discussion of close-marking foregrounds settlement-linked reference prices as uniquely vulnerable to temporally local manufacture.⁶³ The institutional demand is therefore internal: SEBI's reasons must articulate (i) the settlement methodology and why it makes the window legally privileged, (ii) the cross-market evidentiary chain by which constituent trading is connected to settlement-reference movement and to derivative payoff, and (iii) why benign explanations fail at the level of structure rather than at the level of outcome. Put differently, credibility is produced by demonstrating scheme-coherence against a known settlement design, not by invoking vague unfairness; and boundedness is maintained by treating exchanges as surveillance institutions and SEBI as the integrator that renders cross-market patterns legally cognisable without collapsing into strict liability for market impact.

VII. CONCLUSION.

This paper has argued for a narrow but consequential re-specification of the object of manipulation under the PFUTP regime. In index-dominant derivatives markets, the legally salient harm no longer lies primarily in enduring distortions to individual scrip prices, but in interference with settlement references that the market's own design elevates to dispositive significance. Once settlement values function as the points at which obligations crystallise and wealth transfers are finalised, the integrity of those reference prices becomes the appropriate doctrinal focus. The shift is not conceptual inflation; it is an alignment of legal analysis with the infrastructure through which contemporary markets clear.

⁶³ PFUTP Regulations (n 2) reg 4(2)(e); n 37.

Read in this light, the Jane Street interim order marks an enforcement inflection rather than a doctrinal endpoint. Its significance lies in how it renders reference-price targeting legally intelligible without insisting on persistent constituent-level irrationality, and without resorting to subjective intent or disclosure failure as organising devices. The order demonstrates how PFUTP's existing text, particularly its accommodation of reference-price manipulation, can be operationalised through structure-based inference grounded in timing, payoff alignment, and cross-market sequencing. At the same time, its interim character underscores that this is an evidentiary technique still subject to adjudicatory testing, not a settled taxonomy of liability.

The reconstructed interpretation advanced here preserves that balance. By locating the wrong in settlement-reference corruption rather than price-effect deviation, it avoids both doctrinal under-reach and over-reach. Enforcement credibility is maintained through insistence on scheme-coherence tied to known settlement design, while market functionality is protected by differentiating parity-enforcing arbitrage from benchmark-manufacturing conduct. The result is a PFUTP doctrine that remains anchored in its statutory logic, responsive to contemporary market architecture, and disciplined in its reach; capable of addressing index manipulation without dissolving into an unbounded fairness norm.

FROM PROHIBITION TO ARCHITECTURE: RE-DESIGNING COMPLIANCE IN INDIA'S ALTERNATIVE INVESTMENT FUND REGIME

- Anshuman Singh*

ABSTRACT

Alternative Investment Funds (AIFs) constitute a central pillar of India's private capital ecosystem, facilitating investment into startups, growth-stage enterprises, infrastructure, and real estate. The regulatory framework introduced in 2012 adopted a facilitative approach, relying on disclosure, investor sophistication, and private ordering rather than prescriptive controls. This design supported rapid growth in assets under management and enabled diverse fund strategies. However, instances of conflicted transactions, sponsor self-dealing, and misaligned incentive structures prompted a series of regulatory interventions by the Securities and Exchange Board of India between 2023 and 2025, alongside intensified scrutiny under the foreign exchange regime.

While these measures were motivated by legitimate concerns relating to investor protection, conflict management, and market integrity, their cumulative effect has been a contraction in managerial flexibility, heightened compliance uncertainty, and constraints on capital deployment. The present difficulties within the AIF ecosystem are therefore not attributable to the absence of regulation, but to the manner in which regulatory objectives have been operationalised. This paper argues that the post-2023 framework reflects a form of regulatory overcorrection, in which categorical prohibitions and numerical limits have displaced calibrated, design-based controls.

Moving beyond conventional critiques that advocate deregulation or rollback, the paper advances a compliance-architecture approach as an alternative regulatory technique. It proposes a five-part framework comprising: (i) contractual operationalisation of regulatory obligations through model Limited Partnership Agreement clauses; (ii) standardised co-investment structures to enable compliant capital aggregation; (iii) data-based safeguards addressing round-tripping concerns under the foreign exchange framework; (iv) consolidated governance scorecards to enhance transparency and investor oversight; and (v) a sandbox-based mechanism for the calibrated revival of Category II AIFs. These tools are designed to embed regulatory intent within fund architecture rather than rely solely on external constraint.

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By integrating regulatory objectives with deployable legal mechanisms across contract design, governance structures, and compliance workflows, this paper offers a design-based pathway for restoring commercial viability within the AIF regime without compromising investor protection or regulatory authority.

Keywords: Alternative investment funds, investor protection, co-investment framework.

I. INTRODUCTION

Alternative Investment Funds (“AIFs”) occupy a central position in India’s private capital ecosystem. They channel long-term domestic and foreign capital into startups, growth-stage companies, infrastructure projects, and real estate ventures. These sectors depend on flexible funding structures that traditional banks and public markets cannot adequately provide. Since the introduction of the SEBI (Alternative Investment Funds) Regulations, 2012,¹ AIFs have therefore functioned as a key institutional mechanism for risk capital formation in India.²

Between 2012 and 2022, SEBI followed a deliberately light-touch regulatory approach towards AIFs.³ The framework was based on two clear assumptions. First, AIF investors were treated as sophisticated participants capable of evaluating risk without extensive regulatory protection. Second, flexibility in fund structuring, distributions, and investments was considered essential for attracting global capital and managerial talent.⁴ This approach delivered results. Assets under management grew rapidly, fund strategies diversified, and India emerged as a competitive destination for venture capital and private equity investment.⁵

Over time, however, this flexibility revealed regulatory weaknesses. Instances of sponsor self-dealing, conflicted downstream investments, priority profit extraction, and opaque fund structures began to attract regulatory attention. In response, SEBI introduced a series of reforms between

¹ Securities and Exchange Board of India (Alternative Investment Funds) Regulations 2012, LAD-NRO/GN/2012-13/04/11262 reg 2(1)(b).

² Securities and Exchange Board of India, ‘Frequently Asked Questions (FAQs) on AIFs’ <https://www.sebi.gov.in/sebi_data/attachdocs/1471519155273.pdf> accessed 3 January 2026.

³ n 1, preamble.

⁴ Equalifi, ‘Regulatory Reconstruction of the AIF Regime in India’ (3 October 2021) <<https://equalifi.org/blog/regulatory-reconstruction-of-the-aif-regime-in-india/>> accessed 3 January 2026.

⁵ Hamsaveni D, ‘The Growth of Alternative Investment Funds in India’ (2024) 12(12) IJRASET 66024 <<https://doi.org/10.22214/ijraset.2024.66024>> accessed 7 January 2026; IAAIF, ‘Survey Report 2022’ <<https://equalifi.org/wp-content/uploads/2022/02/IAAIF-Survey-Report-2022.pdf>> accessed 7 January 2026

2023 and 2025.⁶ These included restrictions on priority distribution models, caps on downstream investments into related parties, enhanced disclosure and valuation norms, and tighter scrutiny of fund governance and co-investment structures.⁷ At the same time, the Reserve Bank of India intensified enforcement under the foreign exchange framework, particularly in relation to round-tripping risks involving AIFs with foreign investors.⁸

A growing body of commentary has analysed these developments. Most existing writing falls into three broad categories.⁹ First, descriptive explainers summarise regulatory changes and restate SEBI circulars. Second, issue-specific commentary examines individual pain points, such as the priority distribution ban, downstream investment restrictions, or RBI's round-tripping concerns, in isolation. Third, broader policy critiques argue that SEBI is walking a tightrope between innovation and investor protection. While these contributions are valuable, they share a common limitation. They do not examine how multiple regulatory interventions interact cumulatively, nor do they offer a coherent framework for operationalising the post-2023 regime in practice.¹⁰

This paper argues that the current stress in India's AIF ecosystem is best understood as a case of regulatory overcorrection. The problem is not regulation itself. Nor is it the legitimacy of SEBI's objectives. Rather, it lies in the manner in which regulatory intent has been implemented through broad prohibitions and rigid constraints, instead of calibrated and design-based controls. The cumulative effect has been a loss of capital efficiency, heightened compliance uncertainty, and reduced commercial flexibility, without proportionate gains in investor protection.

⁶ SEBI, *Adjudication Order in the matter of KellyGamma Fund* (HDFC Capital Advisors Limited) (28 February 2025).

⁷ SEBI, *Master Circular for Alternative Investment Funds (AIFs)* (23 November 2022); Nishith Desai Associates, 'AIFs jittery over Sebi move to ban priority distribution' (*Nishith Desai Associates*, 14 June 2023) <https://www.nishithdesai.com/fileadmin/user_upload/pdfs/NDA%20In%20The%20Media/quotes/AIFs-jittery-over-Sebi-move-to-ban-priority-distribution.html> accessed 7 January 2026.

⁸ SEBI (Alternative Investment Funds) (Second Amendment) Regulations 2023, reg 17A; Cyril Amarchand Mangaldas, 'RBI Notifies Restrictions on Investments by Regulated Entities in AIFs' (*Cyril Amarchand Mangaldas*, 25 September 2025) <<https://corporate.cyrilamarchandblogs.com/2025/08/rbi-notifies-restrictions-on-investments-by-regulated-entities-in-aifs/>> accessed 7 January 2026

⁹ Climate Angels, 'What are Alternative Investment Funds (AIFs)?' (11 December 2025) <<https://climateangels.in/what-are-alternative-investment-funds-aifs/>> accessed 7 January 2026.

¹⁰ Argus Partners, 'SEBI: Consultation Paper on review of Regulation 17(a) of SEBI AIF Regulations' (*Argus Partners*, 12 February 2025) <<https://www.argus-p.com/updates/updates/sebi-consultation-paper-on-review-of-regulation-17a-of-sebi-alternative-investment-funds-regulations-2012/>> accessed 7 January 2026.

The central contribution of this paper is to shift the debate from critique to construction. Instead of advocating deregulation or selective rollbacks, it advances a compliance-architecture approach to AIF regulation. This approach treats compliance not as a post-facto obligation, but as an enabling structure that can be designed into contracts, governance mechanisms, and reporting systems from the outset. In doing so, it reframes AIF regulation as a problem of legal and institutional design, rather than rule density.

To operationalise this approach, the paper develops a five-part compliance toolkit. It proposes: (i) model Limited Partnership Agreement clauses that translate SEBI and RBI expectations into enforceable contractual controls; (ii) structured co-investment vehicles designed to preserve flexibility within regulatory limits; (iii) data-driven safeguards to address round-tripping concerns under the foreign exchange regime; (iv) standardised LP-facing governance scorecards to rebuild investor trust; and (v) a sandbox-based framework for the calibrated revival of Category II AIFs. Unlike existing literature, these tools are designed to be directly deployable by fund managers and lawyers within the existing regulatory framework.

By integrating regulatory diagnosis with operational legal design, this paper adds a unified and practical contribution to the literature on AIF regulation in India. It demonstrates how investor protection and market integrity can be preserved without sacrificing capital formation, and how compliance can function as an enabling architecture rather than a prohibitive barrier.

II. EVOLUTION OF THE AIF REGULATORY FRAMEWORK IN INDIA

The SEBI (Alternative Investment Funds) Regulations, 2012 were introduced to regulate privately pooled investment vehicles catering to sophisticated investors.¹¹ The framework was designed to be facilitative rather than prescriptive.¹² It relied primarily on disclosure, contractual ordering, and investor consent, with limited reliance on rigid ex ante controls.¹³ Fund managers were afforded

¹¹ n 1.

¹² n 2; Vinod Kothari Consultants, 'Light-touch Regulations for AIFs with Accredited Investors' (*Vinod Kothari Consultants*, 11 August 2025) <<https://vinodkothari.com/2025/08/light-touch-regulations-for-aifs-with-accredited-investors/>> accessed 2 January 2026.

¹³ n 1, regs 15, 19; 'Alternative Investment Funds – Recent Trends, Light-Touch to Compliance Intensive' (2024) 30 CSJ 30 <<https://www.icsi.edu/media/webmodules/CSJ/July-2024/30.pdf>> accessed 1 January 2026.

substantial flexibility in structuring investments, distributions, and downstream transactions. Priority distribution models were permitted. Investments in related entities were allowed, subject to disclosure and conflict management. The framework did not impose rigid numerical caps on exposure or prohibit layered structures. Foreign investment into AIFs was enabled within the existing foreign exchange regime. This approach reflected SEBI's assessment that AIF investors possessed the capacity to evaluate risk and negotiate contractual protections, and it aligned with the broader policy objective of encouraging private capital formation in venture capital, private equity, infrastructure, and real estate.¹⁴

Over time, SEBI identified practices that raised concerns regarding investor protection and fund governance.¹⁵ Certain AIFs were observed to have invested in sponsor-linked or group entities without adequate safeguards.¹⁶ In some cases, priority distribution structures altered the intended alignment between manager incentives and investor returns.¹⁷ These developments prompted closer regulatory scrutiny. The concern was not that misconduct was pervasive across the industry, but that the existing framework permitted outcomes that could prejudice investor interests. SEBI's response was informed by supervisory experience and enforcement considerations. While existing commentary often characterises this phase as the natural trigger for regulatory intervention, it is relevant to note that the underlying issue related to the absence of standardised internal controls rather than flexibility itself.¹⁸

Between 2023 and 2025, SEBI introduced a series of measures aimed at strengthening the governance framework for AIFs.¹⁹ These included restrictions on priority distribution models, limits on downstream investments into related parties, enhanced disclosure obligations, and stricter

¹⁴ Malleshappa Kumbar, 'Regulatory Policies on the Growth of Alternative Investment Funds in India' (2019) 5(4) IJRAR 577; Sakshi Bagdi and RR Pragnyath, 'Unlocking the Potential of the Indian AIF Regime and SEBI's Role in it' (2023) IJIRL <<https://ijirl.com/wp-content/uploads/2023/04/UNLOCKING-THE-POTENTIAL-OF-THE-INDIAN-AIF-REGIME-AND-SEBIS-ROLE-IN-IT.pdf>> accessed 1 January 2026.

¹⁵ SEBI, *Adjudication Order in the matter of KellyGamma Fund (HDFC Capital Advisors)* (28 February 2025).

¹⁶ Cyril Amarchand Mangaldas, 'SEBI Order casts Spotlight on Conflicts of Interest of AIFs' (*Cyril Amarchand Mangaldas*, 20 May 2025) <https://corporate.cyrilamarchandblogs.com/2025/05/sebi-order-casts-spotlight-on-conflicts-of-interest-of-aifs/> accessed 1 January 2026

¹⁷ SEBI Circular No SEBI/HO/AFD-1/PoD/P/CIR/2022/157, *Schemes of AIFs which have adopted priority in distribution among investors* (23 November 2022).

¹⁸ Shalin Ghosh, 'Reviewing Leverage in Indian AIFs: Regulating Share Pledge Financing' (2025) 11(1) NLSBLR <<https://repository.nls.ac.in/nlsblr/vol11/iss1/2/>> accessed 7 January 2026.

¹⁹ SEBI (Alternative Investment Funds) (Second Amendment) Regulations 2023; SEBI, *Master Circular for Alternative Investment Funds (AIFs)* (23 November 2022).

valuation norms.²⁰ Greater scrutiny was also applied to co-investment arrangements. During the same period, the Reserve Bank of India intensified its focus on round-tripping risks under the foreign exchange framework, and investments involving foreign investors, AIFs, and Indian portfolio companies attracted increased regulatory attention. Each of these measures addressed specific regulatory concerns. However, their cumulative effect altered the operational environment for AIFs. Fund structuring became more constrained, compliance obligations expanded in scope, and regulatory outcomes became less predictable.

The post-2023 reforms also reflect a shift in regulatory technique. The earlier reliance on principles-based supervision and disclosure gave way to rule-based constraints and numerical limits. Regulatory intervention moved from contextual assessment to categorical restriction in several areas. This change has had practical implications. Managers have reported reduced flexibility in deal structuring and increased compliance uncertainty. Foreign investors have adopted a more cautious approach, particularly where regulatory outcomes depend on case-by-case evaluation. Rather than treating these outcomes as isolated consequences of individual measures, this paper views them as indicative of a broader change in regulatory approach.

An understanding of this regulatory evolution is necessary to contextualise the challenges currently faced by the AIF ecosystem. It demonstrates that the present difficulties are not the result of a single regulatory intervention, but of a series of changes that collectively reshaped the operating framework. The next section examines the specific consequences of this shift. The subsequent section proposes mechanisms aimed at addressing these challenges within the existing regulatory structure.

²⁰ SEBI Circular No SEBI/HO/AFD-1/PoD/P/CIR/2022/157, *Schemes of AIFs which have adopted priority in distribution among investors* (23 November 2022).

III. DIAGNOSING THE REGULATORY OVERCORRECTION IN THE AIF FRAMEWORK

A. Priority Distribution and the Breakdown of Incentive Design

SEBI's intervention in relation to priority distribution models was driven by concerns regarding unfair value extraction and misalignment of interests between fund managers and investors.²¹ Supervisory experience indicated that, in certain cases, such structures were used to prioritise managerial returns even where fund performance was suboptimal.²² The regulatory response proceeded on the assumption that priority-based arrangements were inherently susceptible to misuse. Consequently, restrictions were imposed without differentiation between opportunistic exploitation and incentive-aligned structures negotiated by sophisticated investors. This has narrowed the range of permissible economic arrangements within AIFs and has reduced flexibility in designing performance-linked compensation, particularly in high-risk strategies where incentive alignment is commercially significant. The issue, therefore, is not the legitimacy of SEBI's concern, but the absence of a calibrated framework that would permit such structures under defined conditions.

B. Downstream Investment Caps and Structural Rigidities

The imposition of numerical caps on downstream investments into related parties was intended to prevent self-dealing and excessive concentration.²³ However, contemporary investment structures frequently involve layered entities, including holding companies, subsidiaries, and special purpose vehicles. In such contexts, related-party exposure is often structural rather than conflicted.²⁴ The regulatory framework does not sufficiently distinguish between these categories. As a result,

²¹ n 1, reg 15(1)(c); ELP Law Team, 'AIFs Priority Distribution Model Draws SEBI's Attention: Regulator Temporarily Restricts Such AIFs' (*ELP Law*, 8 July 2024) <<https://elplaw.in/leadership/aifs-priority-distribution-model-draws-sebis-attention-regulator-temporarily-restricts-such-aifs-fr..>>. accessed 4 January 2026.

²² Nishith Desai Associates, 'AIFs Jittery over Sebi Move to Ban Priority Distribution' (*Nishith Desai*, 14 June 2023) <https://www.nishithdesai.com/fileadmin/user_upload/pdfs/NDA%20In%20The%20Media/quotes/AIFs-jittery-over-Sebi-move-to-ban-priorit...> accessed 7 January 2026

²³ RBI Circular No RBI/2023-24/123 DOR.STR.REC.58/21.04.048/2023-24, *Investments in Alternative Investment Funds by Regulated Entities* (19 December 2023); Aditi Kanoongo, 'RBI on Regulated Entities in AIFs: From Blanket Prohibition to Calibrated Limits' (*IndiaCorp Law*, 24 June 2025) <<https://indiacorplaw.in/2025/06/24/rbi-on-regulated-entities-in-aifs-from-blanket-prohibition-to-calibrated-limits/>> accessed 7 January 2026

²⁴ RMLNLU Law Review Blog, 'Regulating AIFs: Addressing Misuse and Harmonising Investment Frameworks' (*RMLNLU Law Review Blog*, 7 October 2025) <<https://rmlnlulawreview.com/2025/10/07/regulating-aifs-addressing-misuse-and-harmonising-investment-frameworks/>> accessed 7 January 2026

commercially routine arrangements have been brought within the scope of suspicion. Fund managers have been required to prioritise compliance thresholds over transactional logic, affecting follow-on investments, internal restructurings, and capital support to portfolio entities. This has introduced rigidity into deal structuring and has constrained the ability of funds to respond to commercial exigencies. The difficulty lies not in limiting conflicts, but in treating structural relatedness as presumptively abusive.²⁵

C. Foreign Exchange Scrutiny and the Chilling of Participation

The Reserve Bank of India's focus on round-tripping risks is grounded in established concerns under the foreign exchange regime.²⁶ AIFs have attracted particular attention due to their intermediary position between foreign investors and Indian portfolio companies.²⁷ Regulatory scrutiny has largely proceeded through case-by-case assessment rather than defined safe harbours. This has reduced predictability in regulatory outcomes. Even arm's length transactions have been subject to extended examination.²⁸ Market participants have reported delays and uncertainty in obtaining regulatory comfort. Foreign investors, in turn, have exhibited caution in environments where compliance risk is difficult to assess *ex ante*.²⁹ The effect has been a moderation of participation, not through express prohibition, but through uncertainty. This dynamic has altered capital flows in ways that may not be proportionate to the regulatory risk being addressed.

D. Category II AIFs and the Question of Functional Viability

Category II AIFs were intended to facilitate long-term investment in infrastructure, real estate, and private equity. Such strategies depend on extended investment horizons and, in many cases,

²⁵ Cyril Amarchand Mangaldas, 'SEBI Prescribes Due Diligence Norms for AIFs to Curb Regulatory Circumvention' (*Corporate & Commercial Law Blog*, 16 October 2024) <<https://corporate.cyrilamarchandblogs.com/2024/10/sebi-prescribes-due-diligence-norms-for-aifs-to-curb-regulatory-circumvention/>> accessed 7 January 2026.

²⁶ Foreign Exchange Management (Non-debt Instruments) Rules 2019, r 23A.

²⁷ Jayshree P Upadhyay, 'India's Top Regulators Investigating Some Alternate Investment Funds' (*Reuters*, 17 October 2023) <<https://www.reuters.com/world/india/indias-top-regulators-investigating-some-alternate-investment-funds-sources-2023-10-17/>> accessed 7 January 2026;

²⁸ RBI, 'Master Direction – Foreign Investment in India' (FIRMD.DIR. No.11/2017-RB, 4 April 2022) para 7.2.

²⁹ World Bank Policy Research Working Paper, 'FDI Round Tripping' (*WPS8046*, 2017) <<https://documents1.worldbank.org/curated/en/319451493385113949/pdf/WPS8046.pdf>> accessed 7 January 2026.

leverage.³⁰ Regulatory tightening, including restrictions on borrowing and capital deployment, has placed Category II funds at a relative disadvantage. Investors have increasingly preferred alternative vehicles with greater structural flexibility. Fund launches in this category have declined.³¹ The framework has not been recalibrated to reflect the capital requirements of the sectors it seeks to support.³² Uniform constraints have produced uneven outcomes. The issue is not merely one of competitiveness, but of functional viability within the existing regulatory design.

E. A Pattern of Technique: From Risk Management to Risk Avoidance

When examined together, these developments reveal a consistent regulatory technique. Broad restrictions have been preferred over contextual assessment. Numerical caps have replaced qualitative evaluation. Enforcement risk has supplanted supervisory engagement.³³ The regulatory framework has moved towards risk avoidance rather than risk management. This has had predictable effects on fund operations, deal structuring, and investor behaviour. Compliance has become defensive. It prioritises the avoidance of regulatory exposure over commercial optimisation. These outcomes are attributable to the method of regulation rather than its objective. The framework has addressed perceived misuse through categorical constraint rather than embedded governance mechanisms.

F. Implications for the Proposed Approach

Most existing analyses address these issues in isolation.³⁴ Priority distribution restrictions are examined separately from downstream investment caps. Foreign exchange scrutiny is treated as a

³⁰ SEBI, 'Guidelines for Borrowing by Category I and II AIFs' (*Circular*, 19 August 2024) <<https://www.sebi.gov.in/legal/circulars/aug-2024/guidelines-for-borrowing-by-category-i-and-category-ii-aifs-and-maximum-permiss...>> accessed 7 January 2026.

³¹ Nishith Desai Associates, 'Roundup of Key Changes to Framework Governing AIFs' (*Nishith Desai*, 18 September 2024) <<https://nishithdesai.com/default.aspx?id=15128>> accessed 7 January 2026.

³² Cyril Amarchand Mangaldas, 'SEBI Proposes Key Changes to the AIF Regime' (*Private Client Blog*, 18 June 2023), <<https://privateclient.cyrilamarchandblogs.com/2023/06/sebi-proposes-key-changes-to-the-aif-regime/>> accessed 7 January 2026

³³ KS&K, 'RBI's New Playbook for AIF Investments: Stronger Rules to Prevent "Evergreening"' (*KS&K*, 22 June 2025) <<https://ksandk.com/banking/rbi-guidelines-aif-investments-evergreening/>> accessed 7 January 2026.

³⁴ Rohan Gaddam and John Scaria, 'SEBI's Specialized Investment Funds (SIFs): A Regulatory and Risk Analysis' (*NLIU Law Review Blog*, 5 July 2025), <<https://nliulawreview.nliu.ac.in/blog/sebis-specialized-investment-funds-sifs-a-regulatory-and-risk-analysis/>> accessed 4 January 2026.

parallel concern.³⁵ Category II constraints are discussed as a discrete policy issue. This paper adopts a different approach. It treats these interventions as elements of a single regulatory turn characterised by overcorrection. The common feature is not the subject matter of regulation, but the method. Recognising this pattern is necessary for identifying an appropriate response. Calls for deregulation overlook the underlying governance concerns. Further tightening risks deepening existing distortions. The issue is not whether regulation is required, but how it is implemented. If the original framework failed due to inadequate internal controls, and the current framework fails due to excessive external constraints, the solution must lie in the design of compliance mechanisms within the fund structure.

This diagnosis suggests that the regulatory problem is not one of absence or excess, but of design. Where discretion was misused, the response has been prohibition. Where flexibility was abused, the response has been rigidity. A more sustainable response lies in embedding regulatory intent within fund architecture itself. It is this design-based approach that the following section develops.

IV. A COMPLIANCE-ARCHITECTURE FRAMEWORK FOR THE AIF REGIME

The analysis in the preceding sections demonstrates that the present challenges within the AIF framework are not attributable to an absence of regulation, but to the manner in which regulatory objectives have been translated into operational constraints.³⁶ The regulatory response to instances of misuse has increasingly relied on categorical prohibitions, numerical caps, and uniform restrictions. While these measures address legitimate concerns relating to conflicts of interest, investor protection, and market integrity, they have also reduced structural flexibility and increased compliance uncertainty.³⁷ The issue, therefore, is not whether regulatory intervention is justified, but whether the technique of intervention is optimally designed. A framework that embeds regulatory intent within the internal architecture of funds offers a more calibrated and sustainable

³⁵ Khushi Patel and Kritika Jain, 'Regulation vs Reality: Is SEBI Pushing Category-II AIFs into Obsolescence?' (*IndiaCorpLaw*, 28 February 2025) <<https://indiacorplaw.in/2025/02/28/regulation-vs-reality-is-sebi-pushing-category-ii-aifs-into-obsolence/>> accessed 7 January 2026.

³⁶ n 1, reg 15; CDSL, 'SEBI Master Circular for Alternative Investment Funds' (*SEBI CIR/IMD/DF/147/2015*, 30 July 2015) <<https://www.cdslindia.com/downloads/Publications/Communique/SEBI-CIR-Master-Circular-for-Alternative-Investment-Funds.pdf>> accessed 7 January 2026.

³⁷ AIF Services, 'RBI's New Draft Rules on AIF Investments' (*AIF Services*, 20 May 2025) <<https://www.aifservices.in/p/rbis-new-draft-rules-on-aif-investments>> accessed 7 January 2026.

response. This section develops a compliance-architecture framework comprising five interrelated tools, each directed at a specific regulatory concern and designed to operate within the existing legal structure.³⁸

A. Contractual Operationalisation of Regulatory Obligations through LPA Design

The Limited Partnership Agreement constitutes the primary governance instrument of an AIF.³⁹ It allocates rights and obligations between the fund manager and investors, structures economic arrangements, and establishes internal control mechanisms.⁴⁰ SEBI's regulatory framework relies significantly on the LPA to effect disclosure, conflict management, and investor protection.⁴¹ However, regulatory requirements are often expressed in general terms, leaving their operationalisation to managerial discretion. This has produced variation in drafting practices across funds and has reduced predictability in regulatory supervision.⁴²

A structured approach to LPA drafting is therefore warranted. Regulatory limits relating to downstream investments, related-party transactions, sponsor involvement, and conflicts of interest should be reflected through defined contractual thresholds. Audit triggers should be specified. Reporting timelines should be fixed. Escalation mechanisms should be incorporated. This approach converts regulatory expectations into measurable obligations rather than aspirational standards.

By way of illustration, instead of a general undertaking to “comply with applicable SEBI regulations,” an LPA may contain a clause of the following nature:

“The Manager shall ensure that the aggregate exposure of the Fund to Related Parties, including through downstream investments and sponsor-linked entities, does not exceed twenty-five per cent

³⁸ SEBI, ‘Alternative Investment Policy Advisory Committee Report’ <https://www.sebi.gov.in/sebi_data/attachdocs/1480591844782.pdf> accessed 7 January 2026

³⁹ AIF Services, ‘Drafting the Foundational Agreement – The LLP Deed or Trust Deed’ (*AIF Services*, 3 September 2025) <<https://www.aifservices.in/p/drafting-the-foundational-agreement>> accessed 7 January 2026;

⁴⁰ Mondaq, ‘Alternative Investment Funds Comparative Guide – India’ (*Mondaq*, 1 October 2020) <<https://www.mondaq.com/india/finance-and-banking/917960/alternative-investment-funds-comparative-guide>> accessed 7 January 2026.

⁴¹ n 36.

⁴² Vinod Kothari Consultants, ‘Understanding the Governance & Compliance Framework for AIFs’ (*Vinod Kothari*, 5 July 2025) <<https://vinodkothari.com/2025/07/understanding-the-governance-compliance-framework-for-aifs/>> accessed 7 January 2026.

of the total investible corpus at any time. A quarterly compliance certificate in this regard shall be provided to the Limited Partners and shall be subject to independent auditor verification. Any proposed breach shall require the prior approval of the Limited Partner Advisory Committee.”

Such drafting performs several functions. It specifies a numerical threshold. It allocates responsibility. It creates an audit obligation. It establishes an escalation pathway. It stands in contrast to generic covenants that merely restate regulatory language without specifying mechanism, thresholds, or accountability. Importantly, it does not introduce new regulatory duties. It gives operational effect to existing ones. By embedding regulatory intent within the contractual framework, reliance on ex post enforcement is reduced. Managers obtain clarity on permissible conduct. Investors obtain visibility on governance safeguards. Regulators benefit from standardisation.

What makes this tool particularly valuable is its design orientation. The LPA is treated not merely as a commercial contract, but as a compliance instrument. Governance is embedded ex ante. Risk is constrained through structure rather than through prohibition.

B. Standardised Co-Investment Structures as a Governance Mechanism

Co-investment arrangements have historically enabled investors to increase exposure to specific assets and have allowed funds to aggregate additional capital for attractive opportunities.⁴³ Regulatory scrutiny of such arrangements has intensified due to concerns regarding preferential treatment, unequal access, and circumvention of fund-level restrictions.⁴⁴ The present framework treats co-investment largely as an exception. It is assessed on a case-by-case basis, with limited structural guidance. This has constrained the ability of funds to design such arrangements predictably and has increased regulatory uncertainty.

⁴³ n 1, reg 17A (inserted 2025); SNR Law, ‘Regulatory Update: Introduction of a New Co-Investment Scheme for AIFs by SEBI’ (*SNR Law*) <<https://www.snrlaw.in/regulatory-update-introduction-of-a-new-co-investment-scheme-for-aifs-by-sebi/>> accessed 7 January 2026.

⁴⁴ SEBI, ‘Framework for AIFs to Make Co-investment within the AIF Structure’ (*Circular*, 9 September 2025) <<https://www.sebi.gov.in/legal/circulars/sep-2025/framework-for-aifs-to-make-co-investment-within-the-aif-structure-under-sebi-al...>> accessed 7 January 2026.

A standardised co-investment vehicle structure offers a more consistent approach.⁴⁵ Under this model, co-investments are routed through a dedicated vehicle with uniform governance terms.⁴⁶ Participation is offered on a pro rata basis. Pricing and allocation are identical for all participants. Disclosure obligations mirror those applicable at the fund level. Conflicts are addressed through predefined procedures. Decision-making is standardised. This design addresses regulatory concerns regarding preferential access and opacity. It preserves equality of treatment. It maintains transparency. At the same time, it restores flexibility in capital deployment. The co-investment vehicle operates as a governance mechanism rather than a circumvention tool. It allows funds to respond to commercial opportunities within defined regulatory boundaries. This structure can be implemented within SEBI's existing co-investment framework by standardising the terms under which such vehicles operate, rather than treating each as a bespoke exception.⁴⁷

Its importance lies in its function as a regulatory safety valve. It does not undermine fund-level protections. It provides a structured channel through which additional capital may be deployed without distorting governance norms. In this sense, it reconciles regulatory caution with commercial necessity.

C. Data-Based Safeguards for Foreign Exchange Compliance

Regulatory scrutiny of round-tripping under the foreign exchange framework has increased in recent years.⁴⁸ AIFs have attracted particular attention due to their intermediary position between foreign investors and Indian portfolio companies.⁴⁹ The absence of defined safe harbours has

⁴⁵ Taxmann, 'SEBI Notifies Regulation 17A on Co-Investment by AIF Investors' (*Taxmann*, 9 September 2025) <<https://www.taxmann.com/post/blog/sebi-notifies-regulation-17a-on-co-investment-by-aif-investors>> accessed 7 January 2026.

⁴⁶ SEBI, 'Framework for AIFs to Make Co-investment within the AIF Structure' (*Circular*, 9 September 2025) <<https://www.sebi.gov.in/legal/circulars/sep-2025/framework-for-aifs-to-make-co-investment-within-the-aif-structure-under-sebi-al...>> accessed 7 January 2026.

⁴⁷ SEBI, 'Providing Flexibility to AIFs to Make Co-investment' (*Board Meeting*, July 2025) <https://www.sebi.gov.in/sebi_data/meetingfiles/jul-2025/1751437676387_1.pdf> accessed 7 January 2026; AZB & Partners, 'SEBI Co-Investment Scheme Framework' (*AZB*, 15 September 2025) <<https://www.azbpartners.com/bank/sebi-co-investment-scheme-framework/>> accessed 7 January 2026.

⁴⁸ Foreign Exchange Management (Overseas Investment) Rules 2022, r 19 (prohibiting round-tripping for tax evasion); EnterSlice, 'Round Tripping under the New Overseas Direct Investment' (*EnterSlice*, 29 May 2024) <<https://enterslice.com/learning/round-tripping-under-the-new-overseas-direct-investment-odi/>> accessed 7 January 2026.

⁴⁹ SEBI Master Circular for AIFs (7 May 2024) <https://www.sebi.gov.in/legal/master-circulars/may-2024/master-circular-for-alternative-investment-funds-aifs-_83229.html> accessed 7 January 2026

resulted in reliance on discretionary assessment. This has reduced predictability in regulatory outcomes. It has also increased transaction costs and compliance risk.

A data-based compliance framework addresses this concern by shifting the focus from retrospective justification to prospective structuring. Investor identity should be documented at the point of commitment. Ownership thresholds should be mapped. Downstream deployment should be tracked. The arm's length character of transactions should be verified. Exposure levels should be monitored on an ongoing basis. Deviations should trigger internal review.⁵⁰

For example, a fund may internally adopt a rule that where foreign limited partner ownership remains below a specified threshold and no common directorship or control linkage exists between foreign investors and portfolio entities, the investment is treated as presumptively compliant, subject to documentation and audit. Such internal benchmarks do not bind the regulator, but they structure managerial decision-making and reduce ambiguity. This framework does not weaken regulatory scrutiny. It structures it. It allows funds to demonstrate compliance in a systematic manner rather than defend it retrospectively. It facilitates regulatory oversight through a clear audit trail. The objective is not to relax foreign exchange controls, but to render them administrable. Its contribution lies in transforming the technique of compliance. Regulatory risk is managed through information design rather than through abstention. Funds are enabled to participate in cross-border capital flows with greater predictability. Regulators are enabled to supervise with greater clarity.

D. Consolidated Governance Scorecards for LP Transparency

Investor confidence has been affected by concerns regarding governance, conflict management, and regulatory compliance within AIFs.⁵¹ Existing disclosure mechanisms are fragmented.

⁵⁰ Vinod Kothari Consultants, 'Round Tripping Reined: RBI Rolls Out Relaxed Rules for Investments in AIFs' (*Vinod Kothari*, 30 July 2025) <<https://vinodkothari.com/2025/07/round-tripping-reined-rbi-rolls-out-relaxed-rules-for-investments-in-aifs/>> accessed 3 January 2026.

⁵¹ Vinod Kothari Consultants, 'Understanding the Governance & Compliance Framework for AIFs' (*Vinod Kothari*, 5 July 2025) <<https://vinodkothari.com/2025/07/understanding-the-governance-compliance-framework-for-aifs/>> accessed 3 January 2026.

Information is often dispersed across multiple reports and formats. This reduces accessibility and comparability. It limits the ability of investors to assess compliance holistically.⁵²

A consolidated governance scorecard addresses this limitation by presenting key compliance indicators in a single, structured format.⁵³ Regulatory thresholds are stated. Actual exposure is disclosed. Variances are identified. Auditor verification is indicated. The scorecard may include metrics relating to related-party exposure, downstream investment limits, valuation compliance, sponsor lock-in, and conflict approvals.⁵⁴

By way of illustration, a scorecard row may be structured as follows:

Metric	Regulatory Limit	Current Exposure	Status	Auditor Confirmation
Downstream investment in related parties	≤ 25% of corpus	18.4%	Compliant	Verified
Priority distribution structures	Not permitted	Nil	Compliant	Verified
Valuation audit completion	100% required	100%	Compliant	Verified

Such scorecards can be annexed to quarterly reports, thereby reusing data already collected for SEBI reporting while making it decision-useful for limited partners.

This design serves multiple functions. It enhances transparency. It reduces information asymmetry. It disciplines managerial conduct. It facilitates regulatory inspection. It converts disclosure from a formal requirement into a functional governance tool. Investors are better placed to monitor compliance. Managers are incentivised to maintain discipline.

⁵² n 1, reg 29; CDSL, ‘SEBI Master Circular for Alternative Investment Funds’ (*SEBI CIR/IMD/DF/147/2015*, 30 July 2015) <<https://www.cdslindia.com/downloads/Publications/Communique/SEBI-CIR-Master-Circular-for-Alternative-Investment-Funds.pdf>> accessed 7 January 2026.

⁵³ Original analysis; cf S&P Global, ‘Alternative Investment Funds (AIF) Scorecard’ <<https://www.spglobal.com/market-intelligence/en/solutions/products/alternative-investment-funds>> accessed 7 January 2026.

⁵⁴ SEBI Master Circular for AIFs (7 May 2024) <https://www.sebi.gov.in/legal/master-circulars/may-2024/master-circular-for-alternative-investment-funds-aifs-_83229.html> accessed 7 January 2026.

What makes this tool effective is its behavioural impact. Governance becomes continuous rather than episodic. Compliance becomes visible rather than abstract.

E. Regulatory Sandbox for Category II AIFs

Category II AIFs operate in sectors characterised by long gestation periods and capital intensity. Infrastructure and real estate investments often require leverage and extended investment horizons.⁵⁵ Regulatory constraints on borrowing and deployment have affected the functional viability of such funds. Existing commentary has noted this tension. However, structured responses have been limited. A sandbox-based framework provides a calibrated mechanism for regulatory experimentation. Limited leverage may be permitted within defined parameters. Performance metrics may be monitored. Risk thresholds may be prescribed. The framework may be time-bound. Regulatory oversight remains intact.⁵⁶

For instance, leverage may be permitted subject to minimum debt service coverage ratios or maximum project default rates. Exceeding such thresholds may trigger enhanced reporting or suspension of sandbox privileges. Such metrics enable controlled experimentation without systemic exposure.

This approach allows regulatory learning. It accommodates sector-specific capital needs. It avoids permanent regulatory relaxation. It enables evidence-based calibration. The objective is adaptive regulation rather than deregulation. It recognises that uniform constraints may not produce uniform outcomes. Its institutional significance lies in treating regulation as a learning process rather than a static command. It acknowledges sectoral diversity. It enables controlled flexibility.

F. Integrated Operation of the Framework

Each of the above tools addresses a specific regulatory concern. Their significance lies in their integration. Contractual design, co-investment structuring, data-based compliance, transparency

⁵⁵ Dezerv, 'Guide to Category II AIFs in India' (31 March 2024) <<https://www.dezerv.in/blog/category-ii-aif/>> accessed 7 January 2026; GKToday, 'Alternative Investment Funds (AIFs)' (*GKToday*, 17 December 2025) <<https://www.gktoday.in/alternative-investment-funds-aifs/>> accessed 7 January 2026.

⁵⁶ SEBI, 'Regulatory Sandbox' <<https://www.sebi.gov.in/sebiweb/other/RegulatorySandbox.jsp>> accessed 7 January 2026; Balaji K, 'An Analysis of SEBI's Framework for Innovation Sandbox' (22 February 2025) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5286075> accessed 7 January 2026.

mechanisms, and regulatory experimentation operate together to create an internal compliance architecture.⁵⁷ This architecture shifts the locus of control. Risk is managed through embedded structure rather than solely through external constraint.⁵⁸ Regulatory objectives are achieved through design rather than through blunt prohibition.

The framework does not displace regulatory authority. It complements it. It preserves investor protection. It maintains regulatory oversight. It restores commercial viability. It demonstrates that governance and flexibility need not be mutually exclusive. However, any framework that seeks to replace categorical prohibition with embedded design necessarily invites questions regarding dilution, circumvention, and feasibility.

V. ADDRESSING POTENTIAL OBJECTIONS TO THE COMPLIANCE ARCHITECTURE APPROACH

The compliance-architecture framework proposed in this paper seeks to reorient the AIF regulatory response from categorical restriction to design-based control. Any such shift raises legitimate concerns regarding regulatory dilution, circumvention, administrative feasibility, and preservation of regulatory authority. These concerns warrant careful and systematic examination.⁵⁹ This section addresses the principal objections that may be advanced against the proposed framework and evaluates their implications for regulatory design.

A. Risk of Regulatory Dilution and Recurrence of Misuse

A primary objection is that moving away from blanket prohibitions towards internal control mechanisms may weaken regulatory discipline and permit the recurrence of practices that originally prompted regulatory intervention. It may be argued that the pre-2023 framework failed

⁵⁷ S&R Associates, ‘Regulatory Update: Introduction of a New Co-Investment Scheme for AIFs by SEBI’ (*S&R Associates*, 29 September 2025) <<https://chambers.com/articles/regulatory-update-introduction-of-a-new-co-investment-scheme-for-aifs-by-sebi>> accessed 7 January 2026.

⁵⁸ KS & K, ‘Simplified Co-Investment Structure under AIF Regulations 2012’ (*KS & K*, 23 October 2025) <<https://ksandk.com/newsletter/simplified-co-investment-structure-under-aif-regulations-2012/>> accessed 7 January 2026.

⁵⁹ Vinod Kothari Consultants, ‘Understanding the Governance & Compliance Framework for AIFs’ (*Vinod Kothari Consultants*, 5 July 2025) <<https://vinodkothari.com/2025/07/understanding-the-governance-compliance-framework-for-aifs/>> accessed 7 January 2026.

precisely because it relied on disclosure and private ordering,⁶⁰ and that reintroducing flexibility, even in structured form, risks re-opening avenues for misuse.

This concern is not without foundation. The earlier framework did not uniformly prevent conflicted conduct. However, the proposed framework does not seek to restore unstructured discretion. It replaces discretionary flexibility with embedded constraints. Contractual thresholds, audit triggers, and escalation mechanisms are designed to limit managerial latitude. Compliance is rendered measurable rather than aspirational. The emphasis is not on trusting market discipline, but on institutionalising control through design. In this respect, the framework reflects a shift from reliance on behaviour to reliance on structure. Misuse becomes more difficult when governance safeguards are embedded at the level of fund architecture. The objective is not to dilute regulation, but to implement it through mechanisms that operate continuously rather than episodically.⁶¹

B. Possibility of Regulatory Arbitrage and Circumvention

A second objection concerns the risk of regulatory arbitrage. It may be contended that structured mechanisms such as co-investment vehicles, sandbox arrangements, and contractual design could be used to achieve outcomes substantively similar to those prohibited by regulation, thereby undermining regulatory intent.⁶² This critique assumes that structure and circumvention are functionally equivalent. That assumption does not hold where design constraints are embedded. The co-investment framework proposed in this paper is predicated on pro rata participation, uniform pricing, and disclosure symmetry. Preferential access is precluded by design. The sandbox framework is time-bound and subject to defined risk thresholds. Exit criteria are prescribed. Regulatory oversight remains intact.

The distinction lies in transparency and auditability. Circumvention operates through opacity. Structured compliance operates through visibility. Where design mechanisms generate traceable

⁶⁰ n 1, reg 15(1)(c); RegFin Legal, 'Insights from SEBI's Recent Orders Against AIFs' (*RegFin Legal*, 31 July 2025) <<https://regfinlegal.com/insights-from-sebis-recent-orders-against-alternative-investment-funds/>> accessed 7 January 2026.

⁶¹ RMLNLU Law Review Blog, 'Regulating AIFs: Addressing Misuse' (*RMLNLU Law Review Blog*, 6 October 2025) <<https://rmlnlulawreview.com/2025/10/07/regulating-aifs-addressing-misuse-and-harmonising-investment-frameworks/>> accessed 7 January 2026.

⁶² Cyril Amarchand Mangaldas, 'SEBI Prescribes Due Diligence Norms for AIFs to Curb Regulatory Circumvention' (*India Corporate Law*, 16 October 2024) <<https://corporate.cyrilamarchandblogs.com/2024/10/sebi-prescribes-due-diligence-norms-for-aifs-to-curb-regulatory-circumvention/>> accessed 7 January 2026.

decision-making and verifiable outcomes, the scope for regulatory arbitrage is materially reduced. The proposed framework therefore mitigates, rather than amplifies, circumvention risk.

C. Administrative Complexity and Compliance Burden

A further objection relates to administrative feasibility. Contractual standardisation, data tracking, and governance scorecards require institutional capacity. Smaller fund managers may lack resources. It may be argued that the proposed framework increases compliance burden and raises barriers to entry. This concern is relevant. However, it must be assessed in comparative terms. The present framework already imposes significant compliance obligations. These obligations are often fragmented across multiple reporting formats and subject to discretionary interpretation. This increases transaction costs and compliance risk.⁶³ A structured framework may reduce aggregate burden by standardising processes and reducing uncertainty.

Predictability enables planning. Standardisation enables efficiency. While the initial investment in systems may be non-trivial, the long-term effect may be a reduction in regulatory friction. The framework therefore represents a shift from reactive compliance to anticipatory compliance.

D. Preservation of Regulatory Authority and Supervisory Control

It may also be argued that emphasising internal compliance architecture risks shifting regulatory control away from the regulator. The concern is that funds may effectively regulate themselves through contractual design, thereby diluting supervisory authority. This objection rests on a narrow conception of regulatory control. Regulatory authority is not exercised only through prohibition. It is also exercised through supervision, inspection, and enforcement. Embedded compliance mechanisms facilitate supervision. They generate audit trails. They standardise reporting. They enhance transparency.⁶⁴

The proposed framework does not displace SEBI's authority. It complements it. The regulator retains rule-making power. It retains inspection power. It retains enforcement power. What changes

⁶³ NLS Forum, 'SEBI's Co-investment Framework' (8 August 2025) <<https://forum.nls.ac.in/nlsblr-blog-post/sebis-co-investment-framework-for-aifs-analysing-the-proposed-reforms-and-path-forward/>> accessed 7 January 2026.

⁶⁴ CorpZo, 'AIF Setup & SEBI Approval' (*CorpZo*, 18 November 2025) <<https://www.corpzo.com/aif-setupsebi-approval-regulatory-roadmap-for-fund-managers>> accessed 7 January 2026.

is the mode of control. The regulator moves from episodic intervention to continuous oversight. Authority is preserved. Its exercise is refined.

E. Uniformity and Risk of Inconsistent Application

A further concern relates to uniformity. If compliance architecture is implemented through contractual design and internal systems, outcomes may vary across funds. This may undermine regulatory consistency. This concern highlights the importance of standardisation. Model clauses, standardised scorecards, and defined thresholds reduce variation. Regulatory guidance can further harmonise practice. The framework is therefore capable of achieving consistency without imposing rigidity.⁶⁵

Uniformity need not imply uniform form. It may be achieved through uniform function. So long as regulatory objectives are met through equivalent safeguards, structural diversity does not undermine regulatory coherence.

F. Evaluation of the Objections

Taken together, these objections underscore the need for careful design. They do not undermine the framework. They refine it. Each critique reinforces the importance of transparency, auditability, and standardisation. The alternative is continued reliance on blunt constraints and discretionary scrutiny. That approach has already produced distortions. A design-based framework offers a more balanced path.

The compliance-architecture approach does not deny the legitimacy of regulatory concerns. It accepts them. It seeks to address them through mechanisms that are continuous rather than episodic, structural rather than behavioural, and preventive rather than corrective.

⁶⁵ SEBI Master Circular for AIFs (13 September 2023) <<https://dolcevitaadvisors.com/sebi-master-circular-aifs/>> accessed 7 January 2026.

VI. CONCLUSION

The evolution of the AIF regulatory framework in India reflects a shift in regulatory technique rather than a change in regulatory objective. The initial reliance on disclosure and private ordering proved insufficient to prevent certain forms of misuse. The subsequent response has relied on categorical prohibitions and numerical limits. While each intervention was motivated by legitimate concerns, their cumulative effect has altered the structural balance of the AIF ecosystem. Flexibility has been reduced. Compliance uncertainty has increased. Capital deployment has been affected. *This paper has argued that the present challenges are best understood as a problem of regulatory design. The issue is not whether investor protection, conflict management, and market integrity are important. It is how these objectives are operationalised.* The existing framework has sought to manage risk through constraint. This has produced rigidity. It has also generated unintended distortions. A different approach is required.

The compliance-architecture framework proposed in this paper seeks to address this design problem. *It does not advocate deregulation. It does not question regulatory authority. It does not seek to restore unstructured flexibility. Instead, it proposes that regulatory intent be embedded within the internal architecture of funds through contractual design, structured co-investment mechanisms, data-based compliance systems, transparency tools, and calibrated regulatory experimentation.* These tools are designed to operate within the existing legal framework. They aim to achieve regulatory objectives through structure rather than prohibition.

The significance of this approach lies in its orientation. It shifts the locus of control from ex post correction to ex ante design. It treats compliance as an enabling architecture rather than a defensive obligation. It recognises that governance and flexibility are not mutually exclusive. They may be reconciled through careful institutional design. From a doctrinal perspective, the framework aligns with SEBI's emphasis on disclosure, investor sophistication, and private ordering. From a regulatory perspective, it enhances supervision, auditability, and transparency. From a market perspective, it restores commercial viability. The framework therefore offers a balanced response to the current regulatory impasse. The experience of AIF regulation in India illustrates a broader regulatory lesson. Where flexibility is misused, the answer need not be prohibition. Where

discretion is abused, the answer need not be rigidity. Regulation may be redesigned. Compliance may be structured. Governance may be embedded.

In this sense, the compliance-architecture approach does not merely respond to the present moment. It offers a template for regulatory design in complex financial markets. It demonstrates how regulatory objectives may be pursued without sacrificing institutional viability. It suggests that the future of financial regulation lies not in the density of rules, but in the quality of design.

GOLD WITHOUT A GUARDIAN: INDIAN DIGITAL GOLD MARKET'S REGULATORY VACUUM

*-Tushar Umesh Bhoopalam and Shaunak Rohit Wagle**

ABSTRACT

The story of digital gold transactions in India is nothing short of remarkable. Despite operating in a regulatory vacuum, the volume of purchases has increased multifold year-on-year. The world awes at its shine but does little to address the impurities within. Although the product has a glamorous shell, underneath it lies hollowness and uncertainty. The business model of digital gold is inherently unstable and susceptible to counterparty risks while also contravening foundational principles of transparency, fair trade and consumer protection. However, digital gold holds the potential to democratize the access to gold in India. If regulated, it can become a safe and trusted savings mechanism for millions of Indians. This article aims to comprehensively highlight these problems and prescribe regulatory measures inspired by 'best practices' followed around the world to supervise and stabilize the product.

A reader, on completing this article, would be acquainted with a concrete understanding of digital gold transactions, their promises, their most problematic characteristics, their hidden pitfalls, the regulatory model through which other jurisdictions offer such products and a roadmap ahead for India to contain the genie. The authors put forth that the time for regulation is 'now or never' and the Reserve Bank of India must step up to incorporate digital gold within the reliable banking system of India.

Keywords: Digital Gold, Regulatory Vacuum, Counterparty Risk, Comparative Analysis, Banking-Led Regulation.

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I. INTRODUCTION

“Technology changes exponentially, but social, economic, and legal systems change incrementally.”

- *Laws of Disruption by Larry Downes*

On November 08, 2025, the Securities and Exchange Board of India (“SEBI”) issued a press release warning the public that platforms providing Digital Gold/E-Gold products as alternative means of investments fall outside its regulatory mandate.¹ The press release cautioned that these products entail significant risks for investors as they are not insulated by the safeguards available under SEBI’s framework.² It advised the public to opt for safer regulated products like Gold Exchange Traded Funds (“**Gold ETFs**”), commodity derivative contracts, and Electronic Gold receipts (“**EGRs**”) for investment.³

The press release was long overdue, and perhaps the last card in SEBI’s deck. For years, SEBI took multiple actions to combat the rising demand for Digital Gold. From prohibiting stock brokers from offering the product to creating a regulatory alternative (in the form of Gold ETFs) and constantly issuing warnings, SEBI’s efforts were to no avail.⁴ As of December 2025, the estimated purchases for digital gold sit at 12 tonnes, which amounts to Rs 16,670 crore.⁵ Furthermore, digital gold transactions via India’s Unified Payments Interface (“**UPI**”) hit 123.42 million in November 2025, a 142% jump from January of that year.⁶ The product is viewed as a means for

¹ SEBI, ‘Caution to Public Regarding Dealing in “Digital Gold”’ (*Press Release*, 8 November 2025) <www.sebi.gov.in/media-and-notifications/press-releases/nov-2025/caution-to-public-regarding-dealing-in-digital-gold-_97676.html> accessed 19 December 2025.

² Id.

³ Id.

⁴ Anjali Jena and Himanshu, ‘The Rise and Fall of Digital Gold: A Tale Of Regulation And Market Turmoil’ (*NLIU-CLT Cell for Law & Technology (TechTonic)*, 8 December 2023) <<https://clt.nliu.ac.in/?p=976>> accessed 19 December 2025; Vinod Kothari and Dayita Kanodia, ‘Digi to Dizzy Highs: Digital Gold Shines in Regulatory Dark Spot’ (*Vinod Kothari Consultants*, 9 November 2025) <<https://vinodkothari.com/2025/11/digital-gold-shines-in-regulatory-dark-spot/>> accessed 22 December 2025.

⁵ Moneycontrol News, ‘Millennials, Gen Z Drive 50% Surge as Indians Buy 12 Tonnes of Digital Gold Worth Rs 16,670 Crore Despite Sebi Caution’ (*Moneycontrol*, 26 December 2025) <<https://www.moneycontrol.com/news/business/commodities/millennials-gen-z-drive-50-surge-as-indians-buy-12-tonnes-of-digital-gold-worth-rs-16-670-crore-despite-sebi-caution-13742675.html>> accessed 28 December 2025.

⁶ Open Bureau and Agencies, ‘India’s Digital Gold Rush: Will 2026 Be the Year of Regulatory Reckoning?’ (*Open The Magazine*, 23 December 2025) <<https://openthemagazine.com/business/indias-digital-gold-rush-will-2026-be-the-year-of-regulatory-reckoning/>> accessed 24 December 2025.

democratization of the yellow metal, whose ownership was largely restricted to the wealthy. As per a survey conducted by Moneyview in October 2024, 65% of millennial respondents preferred digital gold over physical gold, and 75% respondents cited liquidity and convenience as the primary reason.⁷ Additionally, the Co-Founders of Winzo, Saumya Singh and Pawan Nanda, described the product as revolutionizing the digital savings habit in Indian households.⁸

For centuries, gold has had a central role in Indian culture and religion. It has remained our most coveted asset, owing to its extraordinary store of value and stability as well as its symbol of wealth and status, thereby making it an obsession for every Indian household.⁹ The asset also sources credibility from its ability to remain profitable despite any economic or geopolitical downturns.¹⁰ The value of gold has consistently increased over the years, with the value of 10 gms of gold increasing from Rs. 4,000 in 2000 to Rs. 1,36,570 in 2025.¹¹ However, gold has historically been a reality only for the affluent and has been elusive for the middle and lower classes, with investment restricted only to landmark ceremonies like marriage, poojas, and festivals like Diwali and Dhanteras. Its exposure as an investment or savings apparatus has remained significantly low due to a lack of reach to a huge portion of the population, owing to entry costs. Herein, the introduction of digital gold was a viable opportunity for many to gain access to the precious yellow metal.

The concept of digital gold is simple, or at least it is portrayed to be. The model within which digital gold operates consists mainly of 3 actors: the customer, the intermediary, and the gold partner (“**Gold Partner**”). The intermediaries are usually fintech platforms like Paytm and PhonePe, but also include companies and jewellers like Aditya Birla Capital, Jos Allukas, and Tanishq. Gold Partners are the main actors in the product ecosystem. They are Gold Refineries

⁷ Our Bureau, ‘65% of Millennials Prefer Digital Gold Over Traditional for its Ease of Access and Convenience: Moneyview Survey’ (*The Hindu Businessline Bengaluru*, 16 October 2024) <www.thehindubusinessline.com/markets/gold/65-of-millennials-prefer-digital-gold-over-traditional-for-its-ease-of-access-and-convenience-moneyview-survey/article68760734.ece> accessed 21 December 2025.

⁸ ETGovernment Desk, ‘From Spending to Saving: A Digital Pathway to Gold Ownership’ (*ETGovernment*, 18 October 2025) <<https://government.economicstimes.indiatimes.com/news/economy/a-digital-pathway-to-gold-ownership-winzo-launches-zo-gold-for-small-scale-investments/124637483>> accessed 19 December 2025.

⁹ World Gold Council, ‘India’ <<https://www.gold.org/about-gold/gold-demand/geographical-diversity/india>> accessed 24 December 2025.

¹⁰ Hanan Yanuar, ‘Economic Recession: Why is Gold a Safe Investment Option?’ (*Treasury*, 28 October 2024) <www.treasury.id/en/economic-recession-why-is-gold-a-safe-investment-option> accessed 23 December 2025.

¹¹ Forbes India, ‘Gold Rate History in India: 2000 to 2025’ (*Forbes India*, 19 December 2025) <www.forbesindia.com/article/explainers/gold-rate-history-india/92539/1> accessed 26 December 2025.

based in India and include MMTC PAMP (“**MMTC**”), Augmont Goldtech Private Limited (“**Augmont**”), Digital Gold India Private Limited (“**DGIPL**”), Gujarat Gold Centre, etc., and are primarily engaged in precious metals refining, manufacturing, and trading activities. Gold Partners, either directly through their own platforms or through tie-ups with intermediaries, offer digital gold to customers.

Essentially, purchasing digital gold is akin to buying physical gold and paying for it through digital modes. The difference, however, is that once the purchase is made digitally by the buyer through a platform (operated by the Gold Partner) or the intermediary, an amount of gold equivalent to the purchase amount is stored in a vault and insured by the Gold Partner on behalf of the buyer.¹² The equivalent amount (in Rupees and grams) is credited to a gold account held by the customer on the intermediary or Gold Partner platform. The Gold Partners secure and manage the vaults (either in-house or through external vaults). The gold offered is marketed to be of 999.9 / 24K purity.¹³

The purchases are based on a ‘live’ gold price provided by the platform.¹⁴ Once a customer makes a purchase, the platform displays the returns being made by the customer and provides options to either purchase more gold or to sell the existing holdings. An invoice is issued as proof of transaction, which can be found in the gold account on the platform.¹⁵ It is important to note that gold, as a commodity, has different purchase and sale prices, and the platforms compute this accordingly.¹⁶ A customer sells their holdings at a different rate as compared to the prevailing purchase rate. The customer can sell their gold entirely or in smaller portions at any time of the day, throughout the week.¹⁷ The gold is usually sold back to the Gold Partners at a profit or at a

¹²Timothy Lopes, ‘The basics of digital gold’ (*Vinod Kothari Consultants*, 24 November 2022) <<https://vinodkothari.com/2022/11/the-basics-of-digital-gold/>> accessed 24 December 2025.

¹³Augmont, ‘Digital Gold’ (2026) <www.augmont.com/digital-gold> accessed 30 December 2025; MMTC-PAMP, ‘India’s Leading Platform for Digital Gold’ (2026) <www.mmtcpamp.com/digital-gold> accessed 30 December 2025; Jos Alukkas Group, ‘Jos Alukkas Digi Gold’ <www.josalukkasdigigold.com> accessed 30 December 2025.

¹⁴ Id.

¹⁵Titan Company Limited, ‘Tanishq Digital Gold - Buying the Gold FAQ’ <https://www.tanishq.co.in/digigold/buy?lang=en_IN> accessed 29 December 2025.

¹⁶ MMTC PAMP, ‘Gold Buy vs Sell Price: What No One Tells You’ (*MMTC PAMP*, 17 July 2025) <<https://www.mmtcpamp.com/blog/blog-detail/difference-between-gold-buy-and-sell-price>> accessed 22 December 2025.

¹⁷ Lopes (n 12); Anas, ‘How to Start Digital Gold Investment in India’ (*Wealth Redefine*, 8 October 2025) <<https://www.wealthredefine.in/how-to-start-digital-gold-investment-in-india/>> accessed 27 December 2025.

loss, and the gold account is debited to reflect the new holding. The customer also has the option to order delivery of physical gold from the Gold Partners at their address.¹⁸

The investment in digital gold can begin from amounts as low as Rs. 1 (although this varies across platforms),¹⁹ allowing for fractional ownership, and the customer can increase their holdings by accumulating gold through multiple smaller purchases, essentially like a savings scheme. There is no maximum limit on gold that one can purchase. The product attracts 3% GST during purchase, along with the ‘making’ fees and delivery fees during sale.²⁰ Furthermore, the Income Tax framework for physical gold applies *mutatis mutandis* to digital gold.²¹ The entire ecosystem is governed by the Terms and Conditions (“T&Cs”) of adhesion agreements entered into between the Gold Partners and customers. In cases of an intermediary, their respective T&Cs apply simultaneously.

The primary advantage of digital gold over physical gold is that investors do not have to be concerned about its security after purchase. Additionally, the feature of investing from as low as Rs. 1 allows for the onboarding of people with limited savings. The product is also convenient, enabling purchases to be made with just one tap. A lack of paperwork requirements and direct access via mobile applications, without a demat or trading account, all make the product highly appealing. A customer can also set up SIPs for making periodic purchases, enabling recurring investments. The issue with digital gold, however, is that it remains in a complete regulatory vacuum. No regulator, governmental authority, or industry body supervises or governs the product, leaving customers at the mercy of the sellers.²² We find that perhaps this vacuum is also the cause of certain foundational problems that are inherent in the digital gold ecosystem, which we will discuss in the forthcoming chapter.

¹⁸ Id.

¹⁹ Id.

²⁰ Annapoorna, ‘GST on Gold in India 2026: GST Rate on Gold Purchase, Jewellery, Coins & Bar’ (*ClearTax*, 6 January 2026) <<https://cleartax.in/s/gst-impact-on-gold>> accessed 29 December 2025.

²¹ CA Mohammed S Chokhawala, ‘Income Tax On Digital, Physical and Paper Gold in India’ (*ClearTax*, 9 December 2025) <<https://cleartax.in/s/tax-on-gold-in-india>> accessed 22 December 2025.

²² Sinhasi Consultants Pvt Ltd, ‘Digital Gold Exposed: Why Regulation and Vigilance Matter’ (*Sinhasi*, 2025) <<https://sinhasi.com/digital-gold-exposed-why-regulation-and-vigilance-matter/>> accessed 4 January 2026.

II. PROBLEMS OF DIGITAL GOLD SERVICES

Shakespeare's adage that "*all that glitters is not gold*" aptly encapsulates the current regulatory vacuum in which digital gold services operate. Despite its promising features to democratize access to gold, the product is marred by several foundational issues due to a lack of regulatory oversight. History is testament to the fact that for any investment product to be stable, the underlying pillars that support it must be financially sound. Multiple innovative and futuristic initiatives like the United States' FTX,²³ and the Madoff investment scandal²⁴ and the Indian Sahara and PACL scams represent instances where regulators allowed informal systems to operate quietly until they became too large or risky, and then stepped in for a decisive clean-up before a potential blow-up (if they were that lucky).²⁵ Digital gold, in a similar manner, runs a risk model that drastically compromises the principles of fairness, transparency, and consumer justice. This paper attributes the source of these issues to several alarming stipulations concealed within the T&Cs of the Gold Partners. The authors narrow down certain major problems that make investment in this product highly precarious and unstable.

A. Glittering gold shrouded with pricing problems

The foundational principle for any investment/financial instrument is price transparency. All regulated instruments adhere to strict guidelines on price disclosure mandated by the Reserve Bank of India ("RBI") and SEBI, either through Consumer Rights/Investor Charters.²⁶ Banks and other regulated entities adopt these charters in their respective consumer policies.²⁷ However, this protective framework erodes upon entering the domain of unregulated products like digital gold.

²³ Nemit Shroff and Cate Reavis, 'Sam Bankman-Fried's FTX' (*Case Study 23-210, MIT Sloan School of Management*, 17 January 2024) 1.

²⁴ Natalia Nunez, 'Hiding in Plain Sight: The Madoff Scandal and Regulatory Failure' (*Michigan Journal of Economics* 4 April 2025) <<https://sites.lsa.umich.edu/mje/2025/04/04/hiding-in-plain-sight-the-madoff-scandal-and-regulatory-failure/>> accessed 26 December.

²⁵ Navneet Dubey, 'Fortune Indian Explainer: Why Must You be Aware of Digital Gold?' (*Fortune India*, 10 November 2025) <<https://www.fortuneindia.com/personal-finance/fortune-indian-explainer-why-must-you-be-aware-of-digital-gold/128019>> accessed 25 December 2025.

²⁶ Government of India, Ministry of Finance, 'RBI Norms for Protecting Customers' (*Press Information Bureau*, 6 May 2016) <<https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=145039®=3&lang=2>> accessed 19 December 2025; Securities and Exchange Board of India, 'Investor Charter of SEBI' (2026) <<https://investor.sebi.gov.in/Investor-charter.html>> accessed 20 December 2025.

²⁷ Bandhan Bank Ltd, 'Charter of Customer Rights' (October 2025) <<https://bandhan.bank.in/sites/default/files/2025-10/Charter-of-Customer-Rights.pdf>> accessed 20 December 2025; JK Bank Ltd, 'Charter of Customer Rights' (2025) <https://www.jkbank.com/pdfs/Charter_of_Customer_Rights_2025.pdf> accessed 19 December 2026.

Digital gold services, structured as a buyer-seller relationship, act as a quasi-investment vehicle.²⁸ This raises questions on price-setting mechanisms, revealing layers of ambiguity and structured opaqueness in the operations of Gold Partners. The first layer can be observed by understanding how the value/price of gold is determined. In India, no centralized body establishes gold prices. It is usually determined by the various stakeholders of the industry as per their business needs.²⁹ Although the Indian Bullion and Jewellers Association (“**IBJA**” - a neutral body releasing daily nationwide rates for different purities of gold and silver) has made considerable progress in ensuring a uniform benchmark price throughout the country, adhering to its rates is *not* mandatory.³⁰ Absence of central pricing stipulations allows Gold Partners to determine purchase and sale rates.³¹ Being an unregulated market, refineries have no mandate to disclose mechanisms through which rates are determined, enabling opaque operations. This allows Gold Partners to charge rates that are not reflective of market prices,³² thereby leaving scope for exorbitant or unreasonable rates.

The authority to establish purchase and sale rates comes with the advantage of manipulating the difference between the digital gold purchase rate and digital gold sale rate (the “**Spread**”) to earn greater returns. In a recent experiment by Fynprint, it was observed that customers could face negative returns from -2.2% to -3.6% due to the difference in Spreads. Interestingly, the experiment found that the same transaction would have yielded returns of +1.8% if transacted at

²⁸ SafeGold, cl. 21.1 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026; MMTC-PAMP, cl. 1 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

²⁹ Press Trust of India, ‘No mechanism to fix single daily price for gold in India: Government’ (*The Times of India New Delhi*, 04 January 2019) <<https://timesofindia.indiatimes.com/business/india-business/no-mechanism-to-fix-single-daily-price-for-gold-in-india-government/articleshow/67383582.cms>> accessed 20 December 2025.

³⁰ Muthoot Finance Ltd, ‘How are Gold Rates Determined in India?’ (*Muthooth Finance*, 7 March 2024) <<https://www.muthootfinance.com/blog/how-are-gold-rates-determined-in-india>> accessed 21 December 2025.

³¹ Augmont, Terms & Conditions for DIGIGOLD and Systematic Investment Plan: DIGIGOLD <<https://www.augmont.com/terms-conditions>> accessed 06 January 2026; MMTC-PAMP, cl. 9,17 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

³² Augmont, STORAGE CHARGES <<https://www.augmont.com/terms-conditions>> accessed 06 January 2026; MMTC-PAMP (n 31) cl 17; SafeGold, cl. 12.2, 14.4 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

neutral IBJA rates.³³ The Daily Brief by Zerodha observed that platforms are benefiting on an average of 2-3% of the transaction value as Spreads, compromising on fair pricing.³⁴

This discretionary ‘liberty to price’ is codified in the platforms’ T&Cs; however, the underlying computation remains a ‘black box’ mystery.³⁵ Concerningly, the T&Cs acknowledge that the prices in digital gold can differ from the prevailing open market/retail outlets rates, enabling opportunity for abuse and exploitation.³⁶ Clause 11.2 of the T&Cs of **DGIPL**, for instance, states - “... *There is no guarantee that the Currency Value offered to You will be close to or comparable with other prices available in the market*”.³⁷ Additionally, Gold Partners like **MMTC** have liability limitation clauses that state pricing and data are subject to errors, oversights, mistakes, etc. The said clause also absolves them of liability on account of delays, failures, or other losses due to, caused by, or resulting from such problems.³⁸

In contrast, regulated products like Gold ETFs publish daily NAVs and display prices on exchanges, backed by stringent disclosure norms. This ensures investors know the manner in which the prices are established.³⁹ Alternatively, financial products like Sovereign Gold Bonds and gold loans by NBFCs and Banks subscribe to rates set by the IBJA.⁴⁰ Overall, regulated products provide for disclosure, fairness, and neutrality in pricing to ensure consumer protection.

B. Incomplete price tags and hidden costs

Price transparency is two-fold: while the first layer relates to the mechanism through which the gold price is set, the second layer deals with charges/fees that a Gold Partner or intermediary slides into the final purchase/sale price. Any regulated market not only strives to ensure transparency in

³³ Divya Prata, ‘Digital Gold, Dynamic Rates: How The Prices Differ On Different Platforms’ (*NDTV Profit*, 16 October 2025) <<https://www.ndtvprofit.com/markets/digital-gold-dynamic-rates-how-the-prices-differ-on-different-platforms>> accessed 21 December 2025.

³⁴ ZERODHA, ‘SEBI isn’t a big fan of digital gold’ (*The Daily Brief by Zerodha*, 12 November 2025) <<https://thedailybrief.zerodha.com/p/sebi-isnt-a-big-fan-of-digital-gold>> accessed 22 December 2025.

³⁵ *Id.*

³⁶ Augmont (n 32); MMTC-PAMP (n 31) cl 17; SafeGold (n 32).

³⁷ SafeGold, cl. 11.2 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

³⁸ MMTC-PAMP, cl. 30 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

³⁹ ZERODHA (n 34).

⁴⁰ India Bullion and Jewellers Association Ltd, ‘About Us’ (2026) <<https://www.ibja.co/About.aspx>> accessed 22 December 2025.

price setting, but also to ensure full disclosure of charges, fees, and commissions.⁴¹ While most Gold Partners mention the levy of fees and charges in their T&Cs, there is no clarity as to what these are attributable to and how they are computed. Additionally, there is scope for abuse as there is no authority checking the levy of such fees and charges. The degree of transparency also varies across Gold Partners. For instance, while Augmont specifies in their T&Cs that insurance charges will be borne by them,⁴² the same clarity is absent in MMTC and DGIPL, with MMTC having a brief mention that full insurance cover would be provided.⁴³

The same trend is noticeable in the levy of fees for the storage of gold in their vaults (storage fees). Most Gold Partners specify a free storage period in their T&C, generally 5 years,⁴⁴ although platforms like Augmont and DGIPL reserve the power to alter it at their discretion.⁴⁵ Post the expiry of this free storage period, Gold Partners deduct storage fees from the gold holdings of the customer or a special customer advance account (for intermediaries partnered with Augmont) on a monthly basis.⁴⁶ However, MMTC does not specify the manner in which such charges would be collected. The issue arises from the lack of clarity in the computation and administration of charges. To make it worse, these platforms do not reveal the charges prior to or after purchase, leaving customers uninformed and raising doubts as to the authenticity of these charges.

The T&Cs clarify that charges would be levied from the date of placing the order.⁴⁷ But with digital gold allowing for accumulation through fractional purchases, what happens in a scenario where a customer purchases 0.01 gms of gold in 2025 and the remaining 0.99 gms in 2029? Does this mean that storage charges would be levied for the 0.01 gms of purchase in 2030, even though its storage is practically impossible, and in all likelihood, the vault would have been opened in 2029 when the accumulation reached the physical conversion quantity? What happens in scenarios where a

⁴¹ Securities and Exchange Board of India (SEBI), 'Investor Charter for Securities Market' (*Memorandum*, November 2021) <https://www.sebi.gov.in/sebi_data/meetingfiles/nov-2021/1635938648274_1.pdf> accessed 21 December 2025; Reserve Bank of India, 'RBI Regulations - Customer Service Guidelines' (2007) <www.rbi.org.in/commonman/english/Scripts/CustomerServiceGuidelines.aspx> accessed 21 December 2025.

⁴² Augmont (n 31).

⁴³ MMTC-PAMP, cl. 13 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

⁴⁴ Id cl 21.

⁴⁵ Augmont (n 32); SafeGold, cl. 5.1, 5.2 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

⁴⁶ Augmont (n 32).

⁴⁷ SafeGold (n 45) cl. 5.1; One97 Communications Limited, MMTC-PAMP Terms and Conditions <<https://paytm.com/company/terms-and-conditions?company=one97&tab=terms>> accessed 06 January 2026.

person purchases a fraction (say 0.2 gms), and is being charged storage fees 5 years later, even though such quantities cannot possibly be physically stored? Should the customer pay storage fees for each purchase of an unreasonably small quantity, which is physically impossible to store, and in all likelihood, a storable quantity is likely to be vaulted much later? More fundamentally, why is the customer being charged when, in reality, they do not even hold a storable quantity?

The problem becomes more pressing when we inspect the T&Cs of the intermediaries involved in the market. Popular platforms like PhonePe, Paytm, Jos Alukas, and DBS Bank remain silent on intermediary charges or fees. Due to the lack of pricing guidelines, these intermediaries have the leeway to charge any amount under the blanket. Most platforms also do not provide price breakdowns while purchasing, which could result in the unsuspecting customer funding hidden returns for intermediaries.

Vinod Kothari & Dayita Kanodia found that digital gold sellers are reporting Profit After Tax rises of over 200%.⁴⁸ They observe, “*If gold is one of the metals that has the least bid-ask spreads, then the question is - where is all this profit, for so many of the players, coming from?*”⁴⁹ An article on Economic Times found digital gold transactions to carry a distribution fee markup of 2-3% shared between the distributor and the Gold Partner, covering platform distribution costs, UPI and gateway fees and other charges.⁵⁰ Further, the article notes that margins cause differences in prices between multiple fintech platforms and, more importantly, between the IBA rates, as illustrated in the table below.⁵¹

⁴⁸ Kothari and Kanodia (n 4).

⁴⁹ Id.

⁵⁰ Abhinav Kaul, ‘Digital Gold Is Booming, but Look Beyond the Shine: Know What You’re Buying Before You Tap “Buy” on Your Phone’ (*The Economic Times*, 13 October 2025) <<https://economictimes.indiatimes.com/wealth/invest/digital-gold-is-booming-but-look-beyond-the-shine-know-what-youre-buying-before-you-tap-buy-on-your-phone/articleshow/124469460.cms?from=mdr>> accessed 24 December 2025.

⁵¹ Id.

Digital Gold Purchase Price of the three leading intermediaries

	Paytm Digital Gold	Aditya Birla Capital Digital Gold	Jos Alukkas Digital Gold	IBJA Rate
31st December 2025 (6:30 PM)	13,761.83/gm	13,707.53/gm	13,689.18/gm	13,320.00/gm
5th January 2026 (7:45 PM)	14,123.69/gm	14,063.54/gm	14,046.61/gm	13,617.00/gm
2nd January 2026 (7:00 PM)	14,221.05/gm	14,161.07/gm	14,143.44/gm	13,666.00/gm
3rd January 2026 (7:15 PM)	14,116.88/gm	14,057.89/gm	14,041.56/gm	13,668.00/gm

**Primary data gathered by the authors.*

The above table consists of the purchase rate of digital gold of three intermediaries on four different dates. Despite having a common Gold Partner, each intermediary quoted a different purchase price. The T&C of these intermediaries unequivocally state that they reflect the price set by the Gold Partner, yet there is noticeable variation in their purchase rates. The data further showcases that all these intermediaries are selling digital gold at higher rates when compared to the IBJA rates. Therefore, it can be reasonably inferred that intermediaries might be charging extra amounts in varying degrees to customers, without disclosing them adequately during the purchase, increasing the need for regulatory intervention.

C. Forum non-existentia: the lack of a dedicated dispute resolution forum

Digital gold, despite all its promise, is riddled with structural problems and inconsistencies as we have demonstrated. Yet, India's digital gold market experienced a boom, with UPI transactions reaching Rs. 123.42 million in November 2025, a 142% jump from January.⁵² Indian investors

⁵² Open Bureau and Agencies (n 6).

purchased over ₹9,000 crore in digital gold within the first three quarters of 2025, with monthly buys climbing sharply from ₹762 crore in January to ₹1,410 crore in September, underscoring robust retail demand.⁵³ It is distressing that a market experiencing such unprecedented levels of growth is entirely unregulated, exposing customers to risks with no reliable grievance redressal mechanism in place. As of now, the website of every vaulter and intermediary has in place a generic helpline email address along with a toll-free number on which customers can lodge their complaints. The T&Cs of intermediaries and Gold Partners also restrict complaints to arbitration.⁵⁴ Although Indian law permits aggrieved consumers to approach consumer courts despite mandatory arbitration clauses, there is a pressing need for a speedier and dedicated grievance redressal mechanism, given the investment-like nature of this product.

In June 2025, Aditya Birla Capital Digital's mobile application experienced a massive security breach where digital gold worth Rs. 1.95 crore was stolen from nearly 435 customers.⁵⁵ Remedial steps were taken, with the company filing an FIR with the Mumbai police,⁵⁶ but the consumers had no recourse other than depending on the company's legal action. Gold is a volatile commodity, experiencing price variations on a day-to-day basis, and this lack of recourse could compromise the portfolio of the investors.

The absence of an authoritative redressal system becomes even more glaring when it is contrasted with the mechanisms available for regulated financial products. The regulatory disparity in India's gold ecosystem can be observed in the 2025 data: The banking sector resolves its disputes through the RBI Ombudsman Scheme, which is acclaimed to have resolved 93.07% of its 29.6 lakh complaints.⁵⁷ The securities market has SEBI's SCORES 2.0 framework that mandates a 21-day

⁵³ Id.

⁵⁴ SafeGold, cl. 9.1 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026; Augmont, DISPUTES <<https://www.augmont.com/terms-conditions>> accessed 06 January 2026.

⁵⁵ TNN, 'Rs 2crore digital gold theft: Birla co restores funds' (*Time of India Mumbai*, 27 June 2025) <<https://timesofindia.indiatimes.com/business/india-business/rs-2crore-digital-gold-theft-birla-co-restores-funds/articleshow/122102739.cms>> accessed 24 December 2025.

⁵⁶ Id.

⁵⁷ Vimal Chander Joshi, 'RBI Ombudsman saw 13% increase in consumer complaints in FY25: Here's how to resolve your grievances' (*Mint Mumbai*, 2 December 2025) <<https://www.livemint.com/money/personal-finance/rbi-ombudsman-saw-13-increase-in-consumer-complaints-in-fy25-heres-how-to-resolve-your-grievances-11764681127264.html>> accessed 25 December 2025.

resolution period with an option to seek two subsequent legal reviews.⁵⁸ Conversely, the ₹16,670 crore digital gold market, which saw a 50% surge in demand this year,⁵⁹ remains without a resolution unit. The Minister of State for Finance, Pankaj Chaudhary, noted that the ministry received a total of 371 complaints about digital gold transactions in the past 5 years, indicating flaws in the in-house redressal mechanisms.⁶⁰ This number is likely only the tip of the iceberg, as many more consumers remain unaware of their right to file a complaint regarding digital gold products in the first place.

Year	Total Complaints
2020	17
2021	42
2022	71
2023	61
2024	68
2025 (Till Nov'25)	112
Total	371

** Government Data as of November 2025.⁶¹*

⁵⁸ SEBI, 'SCORES 2.0 New Technology to strengthen SEBI Complaint Redressal System for Investors' (*SEBI*, 01 April 2024) <https://www.sebi.gov.in/media-and-notifications/press-releases/apr-2024/scores-2-0-new-technology-to-strengthen-sebi-complaint-redressal-system-for-investors_82618.html> accessed 25 December 2025.

⁵⁹ Sutanuka Ghosal, 'Digital gold rush up roughly 50% even as Sebi flags regulatory risks' (*The Economic Times Kolkata*, 26 December 2025) <<https://economictimes.indiatimes.com/markets/commodities/news/digital-gold-rush-up-roughly-50-even-as-sebi-flags-regulatory-risks/articleshow/126180968.cms?from=mdr>> accessed 26 December 2025.

⁶⁰ Lok Sabha Unstarred Question No 2403, answered on 15 December 2025.

⁶¹ Vani Dua, 'Digital gold complaints rise in 5 years: Here is what you should know before investing in e-gold' (*Upstox*, 16 December 2025) <<https://upstox.com/news/personal-finance/investing/digital-gold-complaints-rise-in-5-years-here-is-what-you-should-know-before-investing-in-e-gold/article-186302/>> accessed 29 December 2025.

D. Vagueness in Vaulting: Issues with Gold Storage

The central aspect of Digital Gold is its marketed promise of safe and insured vaulting. Every intermediary/Gold Partner boasts about the security, protection, and assurance of their product.⁶² The process is simple; every purchase of gold is followed by an immediate vaulting procedure of equivalent gold.⁶³ However, the platforms fail to shed light on two important aspects. First, who is guaranteeing that actual gold is being vaulted each time a transaction is placed, especially in the absence of a regulatory authority? Supposedly, there is a trustee who oversees and ensures that gold is being backed behind every investment.⁶⁴ Gold Partners claim to have an independent neutral trustee and put-up certificates demonstrating honest vaulting, but these might as well be marketing gimmicks without any regulatory supervision.

Interestingly, most Gold Partners do not even mention the existence of a trustee in their T&Cs, most of which are also completely silent on how the vaulting procedure works, what obligations and responsibilities exist between them and the trustees, and in what form the customer's gold is stored. When these agreements themselves omit mention of trustees and the vaulting process, it becomes quite challenging to plainly believe statements regarding authenticity and independence featured on their websites. Additionally, due to the lack of regulation, there is no guarantee that other market participants or future entrants would create robust trustee mechanisms. There is no assurance of equivalent gold being stored in the vaults except for the promise of the Gold Partners. This leaves significant counterparty risks, while regulated products like SEBI's EGRs and the RBI's Gold Monetisation Scheme ("GMS") feature periodic inspections from neutral government bodies and prescribe penalties and fines for non-compliance.⁶⁵

The lack of clarity raises additional questions. What is the purity of the gold being stored in vaults? Clause 4.3.2 of DGIPL's T&Cs states that precious metal would be stored in the form of bars with

⁶² PhonePe, 'Digital Gold: Buy Certified 24K Pure Gold Online' (2026) <www.phonepe.com/gold/> accessed 30 December 2025; Paytm, 'Buy Digital Gold Online' (2026) <paytm.com/digitalgold/> accessed 30 December 2025; Jos Alukkas, 'Buy Digital Gold Online' (2026) <www.josalukkasdigigold.com/> accessed 30 December 2025.

⁶³ MMTC-PAMP (n 18); SafeGold, cl. 4.3 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

⁶⁴ Kothari and Kanodia (n 4).

⁶⁵ Reserve Bank of India (Gold Monetization Scheme) Directions 2015, Master Direction No DBR IBD No 45/23.67.003/2015-16, cl 2.11; Securities and Exchange Board of India, Master Circular for Electronic Gold Receipts (EGRs) 2024, SEBI/HO/MRD/MRD-PoD-1/P/CIR/2024/87, cl 3.11.

purity ranging from 99.5%, 99.9% or 99.99% or other terms;⁶⁶ despite them marketing the gold to be of 99.99% purity.⁶⁷ Perhaps the more alarming aspect is that other Gold Partners like MMTC and Augmont do not specify the purity of the gold being kept in their vaults at all, while marketing their gold as being of 99.99% purity.⁶⁸ Additionally, they do not reveal the form in which gold is being kept (whether as coins, bars, or any other form), leaving consumers in the dark as to the true nature of their purchase.⁶⁹ This diminishes the credibility of these supposedly neutral trustees, as customers often lack clarity on the item being inspected. This model of strategic ambiguity, we believe, is purposeful. The Daily Brief by Zerodha observes, “*Are you a beneficial owner of specific bars with serial numbers, or just a general claimant on a big pile? Without a legal backstop, there are no standards to any of this*”.⁷⁰

The quantum of digital gold transactions keeps increasing with approximately 12 tonnes of gold purchased, representing a market value of Rs. 16,670 crores between January 2025 and November 2025,⁷¹ despite SEBI highlighting its regulatory vacuum.⁷² Purchases through UPI alone witnessed a 377% growth in just 16 months.⁷³ It is clear that these transactions are bound to increase further, which leads us to the question: are the refineries stocking equivalent amounts of gold, and do they have sufficient vaulting capacity to accommodate increasing purchases? Finshots raises pertinent observations, “*What if everyone who’s ever bought digital gold suddenly says, “Hey, I want delivery of my gold” or “I want to redeem”, the platform should ideally have enough gold to honour those requests instantly*”.⁷⁴ The article cautions that no authority is checking if a Gold Partner’s holdings match the customer balances.⁷⁵ A mass panic exit could expose the deficiencies

⁶⁶ SafeGold, cl. 4.3.2 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

⁶⁷ SafeGold, ‘Buy 24K Digital Gold’ (2026) <www.safegold.com/?redirect=false> accessed 30 December 2025.

⁶⁸ Augmont (n 13); MMTC (n 13).

⁶⁹ MMTC-PAMP (n 43).

⁷⁰ ZERODHA (n 34).

⁷¹ TOI Business Desk, ‘Digital gold boom: Youth-led purchases hit 12 tonnes; what Sebi's warning changes now’ (*The Times of India*, 26 December 2025) <<https://timesofindia.indiatimes.com/business/india-business/digital-gold-boom-youth-led-purchases-hit-12-tonnes-what-sebis-warning-changes-now/articleshow/126192972.cms>> accessed 26 December 2025.

⁷² SEBI (n 1).

⁷³ Ministry of External Affairs, ‘Digital Gold Transactions Surge 377% as UPI Drives Shift in Investment’ (9 September 2025) <indbiz.gov.in/digital-gold-transactions-surge-377-as-upi-drives-shift-in-investment/> accessed 25 December 2025.

⁷⁴ Finshots, ‘How Digital Gold Became India’s Favourite Unregulated Investment’ (*Finshots*, 14 November 2025) <finshots.in/archive/how-digital-gold-became-india-favourite-unregulated-investment-sebi-rbi-mmtc-pamp-augmont-google-pay-phonepe/> accessed 25 December 2025.

⁷⁵ Id.

in gold reserves.⁷⁶ Finshots further notes that “*if even one major platform hasn’t actually stocked the gold it promised, and people start redeeming in large numbers, we might find ourselves dealing with a crisis we didn’t see coming*”.⁷⁷ The possibility of a gold run, thus, looms larger under current conditions.

E. The Operational Ambiguity of Fractional Ownership

The second aspect that platforms fail to address is the problem with fractional transactions. While platforms claim to democratize gold by permitting purchases from Rs. 1,⁷⁸ this contradicts the promise of vaulting equivalent gold. One would wonder, how Rs. 1 worth of gold, which is equivalent to approximately 0.0001 gms, is being stored in these vaults? The T&Cs of all major Gold Partners remain silent on threshold quantities required for vaulting, although some require a minimum of 0.5 gms to 1gms for physical delivery.⁷⁹ Augmont and DGIPL create further obscurity, using discretionary terms for delivery requirements. No explicit information exists on how much accumulation is needed for physical delivery.⁸⁰

Practically, fractional ownership cannot be backed by physical gold. Even larger purchases often involve decimals; an investment of Rs. 30,000 yields approximately 2.1124 gms (based on live rates as on 30th December, 2025). How is a vaulter storing 0.1124 gms of gold to accurately represent the holding? Unfortunately, the T&Cs do not shed light on the minimum quantity required to begin vaulting.⁸¹ Since these are buyer-seller relationships, how is the sale completed for fractional purchases?⁸² Any sale requires the existence of a commodity. How is the transaction completed with no appropriation of goods? Are these merely a ‘promise to sell’, once sufficient thresholds are met? What is backing these fractional ownerships if equivalent gold cannot be

⁷⁶ Id.

⁷⁷ Id.

⁷⁸ MMTC-PAMP, cl. 9 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.; SafeGold, cl. 12.1 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026.

⁷⁹ PhonePe (n 62); Sunita Abraham, ‘Investing in Digital Gold is Easy, but Should You?’ (*Mint*, 18 September 2019) <<https://www.livemint.com/money/personal-finance/investing-in-digital-gold-do-your-due-diligence-1568799482768.html>> accessed 25 December 2025.

⁸⁰ SafeGold, cl. 13 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026; Augmont, REQUEST DELIVERY <<https://www.augmont.com/terms-conditions>> accessed 06 January 2026.

⁸¹ SafeGold (n 63).

⁸² SafeGold (n 28).

appropriated? It is daunting that until sufficient amounts are accumulated, holdings are guaranteed merely by the Gold Partner’s promise.

The scope of fractional ownership in an unregulated market creates room for ‘Ponzi-like dynamics’ as the Gold Partners are receiving money while providing no underlying assets in return. Finshots notes that nearly 85% of customers don’t opt for physical delivery, allowing Gold Partners to fund cash redemptions through money received from purchases of new customers.⁸³ Gold Partners could thus create a vicious cycle where the money received from fractional purchases is used for settling sale transactions. Of late, every second jeweller or platform claims to sell digital gold; some jewellers or fintech platforms even offer digital gold stored in their own vaults. This compounds the scope for misuse by platforms.⁸⁴

F. The Delivery Deception

The issues with digital gold manifest throughout the infrastructure of the business model, including the delivery feature. The glitter of the product lies in the readily accessible delivery option, as, after all, Gold Partners are mere custodians/vaulters. They provide this feature through a catalogue of products that a customer can redeem with sufficient gold holdings, usually an assortment of gold coins and bars. However, concealed in the T&Cs, the Gold Partners reserve the right to cancel or reject delivery requests due to limitations in availability. For instance, MMTC specifies, “*the redeemable product selected from the catalogue for delivery shall be subject to availability of stock with the MMTCJPAMP.*”⁸⁵

The Gold Partners explicitly mention that services are available on an “*as is*” and “*as available*” basis.⁸⁶ When the T&Cs and the website specify that an equivalent amount of gold is vaulted, why should the delivery of the same gold be subject to availability? In fact, Paytm, one of the largest intermediaries for digital gold, stretches this further. Its T&Cs state, “*Additionally, the option to redeem accumulated gold in the form of physical gold will be made available to Customers soon.*”

⁸³ ‘How Digital Gold Became India’s Favourite Unregulated Investment’ (n 74).

⁸⁴ Kaul (n 50).

⁸⁵ MMTC-PAMP, cl. 12 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

⁸⁶ SafeGold, cl. 3.6 <<https://app.safegold.com/terms-of-use>> accessed 06 January 2026; Augmont, DISCLAIMER OF WARRANTIES <<https://www.augmont.com/terms-conditions>> accessed 06 January 2026.

*The availability of physical gold redemption will be subject to ... serviceability of delivery locations, and stock availability.*⁸⁷ As elucidated previously, the potential for Gold Partners not maintaining sufficient reserves is significant, which only increases when we look at their delivery mechanics.

For a lot of customers, the end goal of investing is to redeem gold physically but the major hurdle lies in the fact that delivery is subject to the Gold Partner's ability to service the location.⁸⁸ The T&Cs provide discretion to Gold Partners to determine the location they want to serve, a caveat not disclosed on their platforms/intermediaries. The customers have no means to determine if their PIN code is within the network of serviceability during purchase, leaving them no option to discover this until they invest. For instance, MMTC's T&Cs state, "*The Customer will not be entitled to make an offer for delivery if the zip code of delivery address is outside serviceable areas. At time of redemption the Customer will be required to provide a full delivery address.*"⁸⁹ The fact that the customer can ascertain serviceability during redemption, entails the possibility that one could spend years saving and investing, only to discover in the end that their address is unserviceable. Thus, the current delivery mechanism erodes consumer trust, and Gold Partners/intermediaries should, at a minimum, be required to verify a user's delivery address upfront, ensuring that no one invests in a product they cannot ultimately access.

The overall lack of safeguards for customers, coupled with opaqueness in the method for conducting operations in digital gold transactions, creates foundational issues that make investing in digital gold services risky and unstable. Regulatory oversight is direly needed, but digital gold in most jurisdictions of the world runs unchecked, barring a few, which will be explored in the subsequent chapter.

⁸⁷ One97 Communications Limited (n 47).

⁸⁸ MMTC-PAMP, cl. 22 <<https://www.mmtcpamp.com/gap-customer-terms-and-conditions>> accessed 06 January 2026.

⁸⁹ Id.

III. COMPARATIVE ANALYSIS

A. The Banking Model of Ankara and Jakarta

Historically, Turkey and Indonesia have also shared India's strong cultural affinity for gold; the yellow metal holds a degree of reverence and demand that has never waned.⁹⁰ Even in modern times, gold is regarded as a secure and reliable investment in these societies.⁹¹ It is associated with pride and honour and features in their festivals, marriages, and religious ceremonies, similar to Indian societal practices.⁹² Commendably, these countries have tapped into this inherent affection and have developed their domestic bullion markets to compete and flourish internationally. To mobilize vast amounts of "gold under the pillow", large-scale integration efforts were undertaken using formal financial routes like the banking system.⁹³ Authorized financial service institutions were permitted and incentivized to offer various gold-related financial services like Gold Deposit Accounts, Gold Savings accounts, and Gold Current Accounts to provide exposure to bullion prices within the banking regulatory framework.⁹⁴ Within this established system, the banks and financial service institutions of these countries created space for the adoption of digital gold-esque services (as known in India).

Turkey operates digital gold services as Gold Current/Deposit Accounts (though the naming convention is not uniform across banks).⁹⁵ These accounts are usually provided under a bank's overall precious metal accounts services, permitting customers to purchase and sell gold of 995/1000 purity or higher digitally. Each purchase is considered as a book-entry claim in the

⁹⁰ 'The Role of Gold in Turkey: Cultural Legacy and Economic Stability' (*Bullion World*, October 2024) 39 <<https://www.gold.org/goldhub/research/market-update/perspectives-on-the-turkish-gold-market>> accessed 5 January 2026; Natasha Khairunisa Amani, 'Indonesia Emerging as Asia's Next Gold Market, WGC Says' (*Jakarta Globe*, 13 November 2025) <<https://jakartaglobe.id/business/indonesia-emerging-as-asias-next-gold-market-wgc-says>> accessed 7 January 2026.

⁹¹ World Gold Council, 'Perspectives on the Turkish gold market' (July 2024) <<https://www.gold.org/goldhub/research/market-update/perspectives-on-the-turkish-gold-market>> accessed 1 January 2026; George Yudistira Irawan and Hwian Christianto, 'Legal Regulations on Gold Banks Post-UUP2SK and POJK17/2024: Normative Review and Comparison with International Practices' (2025) 4(2) *International Journal of Social and Research* 2133.

⁹² Alistair Hewitt, Louise Street and Krishan Gopaul, *Turkey: Gold in Action* (World Gold Council 2015).

⁹³ Id.

⁹⁴ Id.

⁹⁵ Türkiye İş Bankası, 'Gold Deposit Account' <<https://www.isbank.com.tr/en/gold-deposit-account>> accessed 7 January 2026.

bank's system, giving the customer a claim over unallocated gold.⁹⁶ Customers can also request delivery of gold after meeting specific bank policy requirements.⁹⁷ Although there is no uniform minimum requirement for purchasing gold, most banks allow investments as low as 0.01 gms, enabling fractional ownership.⁹⁸ The gold can also be sold back to the bank at prevailing rates in exchange for Turkish Lira.⁹⁹ According to the Turkish Banking Regulation and Supervision Agency (“**BDDK**”), Turkish gold deposit accounts soared 99.1% year-over-year in Q3 2025, with total bank deposits reaching 2.72 trillion Lira, doubling from the 1.36 trillion lira held in Q3 2024,¹⁰⁰ showcasing widespread adoption.

Indonesia, meanwhile, has formulated an analogous system officially termed ‘Bullion Banking’. Under this framework, licensed banks are permitted to operate various gold-related services like gold deposits, gold financing, gold safekeeping, and gold trading.¹⁰¹ The framework essentially provides the liberty to engage in any other authorized financial activity related to gold.¹⁰² Banks offer a digital gold-like service under this mechanism, where customers can purchase and sell gold of 99.99% purity, with an investment as low as Rp 10,000. Every allocated Rupiah converts instantly into grams, based on the day's buying price. At present, PT Pegadaian (Persero) (“**Pegadaian**”) and PT Bank Syariah Indonesia Tbk (“**BSI**”), the only two licensed bullion banks,

⁹⁶ Mike Maharrey, ‘Gold Deposit Accounts Surge in Turkey as People Try to Cope With Runaway Inflation’ (*Money Metals*, 20 November 2025) <<https://moneymetalsexchange.medium.com/gold-deposit-accounts-surge-in-turkey-as-people-try-to-cope-with-runaway-inflation-8bdcd2c52871>> accessed 28 December 2025; Muflih Hidayat, ‘Complete Guide to Gold Deposit Accounts in Turkey 2025’ (*Discovery Alert*, 21 November 2025) <<https://www.google.com/search?q=discoveryalert.com.au/gold-banking-economic-turbulence-turkey-2025/>> accessed 28 December 2025.

⁹⁷ ‘What Makes Turkish Banks Unique? Gold Storage, Cultural Legacy, and a Safe Haven for Foreigners’ (*Bayraktar Attorneys*, 2026) <bayraktarattys.com/gold-storage-turkish-banks-foreigners> accessed 28 December 2025; ‘Gold Current Account’ (*Kuveyt Türk*, 2026) <www.kuveytturk.com.tr/en/personal/gold-banking/gold-accounts/gold-current-account> accessed 27 December 2025.

⁹⁸ ‘Precious Metals Deposit Account’ (*HSBC Bank AŞ*, 2026) <www.hsbc.com.tr/en/daily-banking/accounts/precious-metals-deposit-account> accessed 26 December 2025; Türkiye İş Bankası (n 95); ‘Gold Current Account’ (*Alternatif Bank*, 2026) <www.alternatifbank.com.tr/en/retail/deposit/demand-deposit/gold-current-account#nedir> accessed 26 December 2025.

⁹⁹ ‘What Makes Turkish Banks Unique? Gold Storage, Cultural Legacy, and a Safe Haven for Foreigners’ (n 97).

¹⁰⁰ ‘Gold Deposit Accounts in Banks Nearly Double in Third Quarter’ (*Hürriyet Daily News*, 18 November 2025) <<https://www.hurriyetaidailynews.com/gold-deposit-accounts-in-banks-nearly-double-in-third-quarter-215867>> accessed 7 January 2026.

¹⁰¹ Dewi Arum and Ninda Maghfira, ‘Redefining the Bullion Industry in Indonesia: OJK Reg 17/2024’ (*ARMA Law*) <<https://www.arma-law.com/news-event/newsflash/redefining-the-bullion-industry-in-indonesia-ojk-reg-17-2024>> accessed 7 January 2026.

¹⁰² Aditya Kesha W, ‘Bullion Banking in Indonesia: A Legal Overview of the Emerging Industry’ (*ADCO Law*, 20 March 2025) <<https://adcolaw.com/blog/bullion-banking-in-indonesia-a-legal-overview-of-the-emerging-industry/>> accessed 7 January 2026.

have received authorization from the *Otoritas Jasa Keuangan* (“**OJK**” - a government body that acts as the regulator and supervisor of the financial sector of Indonesia) to provide digital gold services under the names Pegadaian Gold Savings and BSI Emas Digital¹⁰³

Both these countries ensure regulatory oversight over these activities through their apex financial authorities: Turkey’s BDDK (an independent governmental agency tasked with regulation and supervision of the Banking sector) and Indonesia’s OJK. Specifically, Gold accounts in Turkish banks operate under the wider framework of precious metal account services and is governed by the Communiqué No: 2008-32/35 (“**Communiqué**”) regarding Decree No. 32 on the Protection of the Value of Turkish Currency and The Banking Regulation and Supervision Authority’s (“**BRSA**”) “Regulation on the Procedures and Principles for Sales and Purchase of Precious Metals by Banks”.¹⁰⁴ Likewise, Indonesia’s Bullion Banking Sector is governed by, Article 132 of Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector (“**P2SK Law**”)¹⁰⁵ which establishes the legal basis for bullion banking and business activities in the financial sector and OJK Regulation No. 17 of 2024 on Bullion Business Activities (“**POJK 17/2024**”) provides for its detailed rules and conditions for operating bullion banks.¹⁰⁶ By and large, both regulatory models, despite minor differences, have successfully established certain foundational pillars that ensure customer fairness and protection in the system, which can be found in detail in the following paragraphs.

B. Entry Barriers and Regulatory Supervisors

The central issue with digital gold in India is the ability for any institution to start dealing in the product without any authorization, leaving scope for scams and fraud. In contrast, the Banking Model has requirements regulating market entry. In Turkey, the Communiqué restricts all gold-

¹⁰³ Prita Ghozie, ‘Digital Gold Savings: An Investment for All Generations’ (*Maybank Indonesia*, 19 December 2023) <<https://www.maybank.co.id/en/Article/StoryForYourInspirationPersonal/2023/12/18/10/01/nabung-emas-digital-investasi-pas-untuk-semua-generasi>> accessed 7 January 2026; ‘BSI Becomes the First Sharia Gold Bank in Indonesia’ (*Detik Finance*, 26 February 2025) <[¹⁰⁴ Communiqué Regarding Decree No 32 on the Protection of the Value of Turkish Currency \(Communiqué No 2008-32/35\).](https://www.indopremier.com/ipotnews/newsDetail.php?jdl=BSI%20Jadi%20Bank%20Emas%20Syariah%20Pertama%20di%20Indonesia%20%20&news_id=459545&group_news=RESEARCHNEWS&news_date=&taging_subtype=&name=&search=&q=&halaman=> accessed 7 January 2026.</p></div><div data-bbox=)

¹⁰⁵ Law No 4 of 2023 on the Development and Strengthening of the Financial Sector (P2SK Law) art 132.

¹⁰⁶ OJK Regulation No 17 of 2024 on Bullion Business Activities (POJK 17/2024).

related financial instruments to only recognised commercial banks and participating (Islamic) banks.¹⁰⁷ To qualify, an institution would have to fulfill the ten conditions laid under Article 7 of Banking Law 5411, which includes paid up capital thresholds, detailed plans for envisioned fields of activity, plans for risk management, and an internal audit system.¹⁰⁸

Indonesia contains stricter requirements to deal in bullion business activities; any financial institution intending to provide such services must obtain a license from the OJK. The system has a dual mandate: First, the entity has to be a financial service institution (*Lembaga Jasa Keuangan* – “**LJK**”) focused on credit distribution or financing, (excluding people’s economic banks, shariah-based people’s economic banks, and microfinance institutions).¹⁰⁹ Second, it must meet certain capital requirements and institutional and management requirements to be eligible to apply for a license.¹¹⁰ Following is a detailed list of eligibility that LJK must fulfill:

¹⁰⁷ Communiqué No 2008-32/35 (n 104) art 3.

¹⁰⁸ Banking Law No 5411 art 7.

¹⁰⁹ Kesha W (n 102).

¹¹⁰ Id.

<p>Criteria (Article 21)</p>	<ol style="list-style-type: none"> 1. LJKs with primary business activities involving credit distribution, excluding rural bank (<i>Bank Perkreditan Rakyat – “BPR”</i>), BPR <i>syariah</i> and micro finance institutions (<i>Lembaga Keuangan Mikro</i>). 2. LJKs with a minimum soundness assessment of composite rating (<i>tingkat kesehatan minimum peringkat komposit</i>) 2 (two) or classified as sound (<i>sehat</i>). 3. Assessment must be based on the most recent evaluation period.
<p>Capital Requirement (Article 22)</p>	<ol style="list-style-type: none"> 1. Commercial banks, sharia business units (<i>unit usaha syariah – “UUS”</i>) of conventional commercial banks, or conventional commercial banks with a sharia business unit must have a core capital of at least 14 trillion Rupiah. 2. Other entities, except those mentioned above, must have a minimum equity of 14 trillion Rupiah. <p>LJKs engaged solely in gold deposit activities are exempted from the core capital or equity requirements of Rp14 trillion. However, they must comply with the applicable core capital or equity requirements for LJK.</p>
<p>Institutional and Management Requirement (Article 23)</p>	<p>LJKs engaged in bullion banking must establish a <i>Saturan Kerja Khusus (dedicated work unit)</i> exclusively responsible for bullion-related activities. The special work unit (<i>satuan kerja khusus – “SKK”</i>) must operate independently and cannot be merged with or concurrently function as other work units. Additionally, the unit must be led by an official who reports directly to the director responsible for overseeing bullion business activities.</p>

**Photo Sourced from ADCO Law¹¹¹*

Article 2 of the POJK 17/2024 classifies bullion banking into five key activities, i.e., Gold Deposit, Gold Financing, Gold Trading, Gold Safekeeping, and other activities.¹¹² A distinct permit must be obtained for each of such activities, essentially requiring institutions to get authorization for dealing with Digital Gold services. Additionally, pursuant to Article 18 (2) of the POJK 17/2024, the bullion activities must be included in the LJK’s business plan.¹¹³ The OJK further requires applicants to submit comprehensive documents that outline the application of prudential principles and risk mitigation in business operations; business prospect analysis; rights and obligations of the parties; and a draft agreement to be used for the services.¹¹⁴ The POJK 17/2024 directs the OJK to analyze the documents exhaustively and also ensure feasibility and overall compliance with applicable financial sector laws.¹¹⁵ The measures ensure that the institution is financially stable

¹¹¹ Kesha W (n 102).

¹¹² POJK 17/2024 (n 106) art 2.

¹¹³ Id art 18(2).

¹¹⁴ Id art 18(7).

¹¹⁵ Id.

enough to manage the risks associated with bullion transactions. These provisions within the framework of both countries restrict only banks/financial institutions that qualify the legal mandates, effectively eliminating the counterparty risks involved with private intermediaries and Gold Platforms. Furthermore, the regulatory oversight ensures that Banks maintain ‘fair play’.

C. Quality Assurance

The ambiguity pertaining to the quality of gold is another serious issue that Indian customers grapple with. Though intermediaries and Gold Platforms claim to offer 99.99% purity, there is no authority mandating and verifying the quality of the product. On the contrary, digital gold services in Turkey and Indonesia have to follow mandates set by their governing laws. In Turkey, the Communiqué under Article 4 prescribes that the bank delivering or selling gold via its gold deposit account must maintain a minimum purity of 995/1000.¹¹⁶ Accordingly, banks such as Kuveyt Türk and Türkiye İş Bankası offer “*Gold Current Accounts*” with a 995/1000 purity standard.¹¹⁷ Likewise, under the Indonesian framework, as per Article 1(6) r/w. Article 3 of the POJK 17/2024, bullion banking activities must adhere to the Indonesian National Standard issued by the National Standardization Body, which prescribes Gold with a minimum of 99.9% (Au) content.¹¹⁸

D. Grievance Redressal

The regulatory vacuum of digital gold in India has left investors without an effective redressal mechanism. By virtue of digital gold being under the banking system in Turkey & Indonesia, the customers benefit from regulated grievance structures. Customers in Turkey can lodge their complaint by filling out a ‘Customer Complaint form’ provided on the website of the respective bank.¹¹⁹ The head offices or the relevant branch are obligated to reply within thirty days to such a complaint¹²⁰ and in cases of a negative reply, the customer is entitled to refer the complaint to the Banks Association of Turkey’s Customer Complaints Arbitration Panel (“**Panel**”).¹²¹ Furthermore,

¹¹⁶ Communiqué No 2008-32/35 (n 104) art 4.

¹¹⁷ Kuveyt Türk, ‘Gold Current Account’ <<https://www.kuveytturk.com.tr/kendim-icin/altin-bankaciligi/altin-hesaplari/altin-cari-hesabi>> accessed 1 January 2026; Türkiye İş Bankası A.Ş (n 95).

¹¹⁸ POJK 17/2024 (n 106) art 1(6) read with art 3.

¹¹⁹ Communiqué on Composition and Operation Principles and Procedures of Customer Complaints Arbitration Panel (Turkey) art 9.

¹²⁰ Id.

¹²¹ Id.

the legislation ensures awareness by mandating the publishing of information about the Panel on their official websites, effectively providing a portal for justice on every interface.¹²²

Likewise, the governing legislation of Indonesia (POJK 17/2024), through Article 41, mandates financial service institutions to adhere to POJK 22/2023 “*On consumer and public protection in the financial services sector*” for consumer safety.¹²³ Under Articles 53 and 55 of POJK 22/2023, customers are allowed to submit verbal and written complaints to the internal consumer units of financial institutions free of cost.¹²⁴ Verbal complaints are to be resolved within 5 days, and written complaints must be redressed within 20 days, with an option to extend it further by 20 days in complex cases.¹²⁵ The consumer has the option to escalate the Alternative Agency for Dispute Resolution in the Financial Services Sector (“**LAPS SJK**”) and/or to the civil courts.¹²⁶ The LAPS SJK provides Mediation and Arbitration services to customers, regulated under OJK Regulation Number 61 of 2020 on “*Alternative Agency for Dispute Resolutions in the Financial Services Sector*”.¹²⁷ Additionally, POJK 22/2023 requires the OJK to conduct market supervision to ensure the implementation of consumer and public protection in the financial services sector.¹²⁸ To implement the said mandate, the OJK is empowered with vast inspection, enquiry, supervision and penal powers to ensure compliance with price transparency, unfair trade practices, marketing and consumer redressal norms outlined under the law, creating an added layer of protection.¹²⁹

¹²² Id; Garanti BBVA, ‘TBB Customer Complaints Arbitration Committee’ <<https://www.garantibbva.com.tr/en/customer-care/tbb-customer-complaint-arbitration-committee#:~:text=Communique%20On%20Composition%20and%20Operation,with%20a%20written%20application%20form>> accessed 1 January 2026.

¹²³ POJK 17/2024 (n 106) art 41.

¹²⁴ OJK Regulation No 22 of 2023 on Consumer and Public Protection in the Financial Services Sector (POJK 22/2023) art 53 and 55.

¹²⁵ Id.

¹²⁶ Id.

¹²⁷ OJK Regulation Number 61 of 2020 on Alternative Agency for Dispute Resolutions in the Financial Services Sector (Indonesia), art 1(1); Abraham Devrian and Roka Hanan Firmansyah, ‘Alternative Dispute Resolutions through LAPS SJK: Arrangements of Consumer Disputes in the Financial Services Sector in Indonesia’ (*A&Co Law Office*, 1 March 2024) <<https://aco-law.com/articles/alternative-dispute-resolutions-through-laps-sjk-arrangements-of-consumer-disputes-in-the-financial-services-sector-in-indonesia/>> accessed 7 January 2026.

¹²⁸ POJK 22/2023 (n 124) Chapter VII.

¹²⁹ Id art 66 – 70.

IV. THE SEQUEL FOR DIGITAL GOLD

The dilemma regarding the assumption of regulatory responsibility for digital gold in India persists. In fact, this is a puzzle that many other countries, like the US and the UK, are also attempting to solve. The product has reached astronomical proportions and is only expected to grow further, driving a pressing need for a supervisory model. Everyone's first instinct would naturally be to turn to SEBI for this task. The IBA had, in fact, urged SEBI to extend a formal regulatory framework for digital gold services.¹³⁰ The authors, however, point out that SEBI has already taken up digital gold services under its purview with the introduction of EGRs. SEBI introduced EGRs with the specific object of creating a 'securities'-like alternative for digital gold.¹³¹ The framework for EGR is thus only a simulation of what digital gold would look like if taken over by SEBI. Therefore, mandating SEBI's oversight now would be merely reinventing the wheel. It is also evident that the SEBI model did not work well. The purview of the board extends to financial products with the key characteristic of tradability,¹³² and digital gold services are non-tradable but rather savings/accumulative in nature. Such services cannot be moulded into securities without sacrificing or fundamentally altering their core, which perhaps destroyed the appeal of EGRs in the first place. This explains EGR's low adoption rates and why people continue to pursue its unregulated brother.

The answer lies elsewhere, and inspiration needs to be sourced from countries that have successfully implemented a regulatory model. The authors suggest onboarding the Banking Model for regulating digital gold, as seen in Turkey and Indonesia. Two key points support this position. First, the inherent nature of digital gold, which functions similarly to a savings instrument, makes a banking regulatory model the favorable choice. Second, the successful incorporation of digital gold in Indonesia and Turkey as gold-backed accounts, directly enabled by their pre-existing frameworks for regulating gold-based financial products, reinforces the necessity of an existing

¹³⁰ Swati Gandhi, 'IBJA Urges Sebi to Regulate Digital Gold Firms as Investor Concerns Rise' (*Business Standard*, 18 November 2025) <https://www.business-standard.com/markets/commodities/ibja-urges-sebi-regulate-digital-gold-firms-investor-concerns-125111800372_1.html> accessed 7 January 2026.

¹³¹ Kothari and Kanodia (n 4).

¹³² Contributor, "Marketable Securities" and "Spot Delivery Contracts": The Supreme Court's Analysis of the SCRA' (*IndiaCorpLaw*, 30 July 2013) <<https://indiacorplaw.in/2013/07/30/marketable-securities-and-spot-delivery/>> accessed 7 January 2026.

regulatory structure. India to a certain extent possesses a banking structure for gold-based financial services under the GMS, 2015.¹³³

The RBI introduced GMS to incorporate the vast amounts of ‘under the pillow gold’ into the formal financial system and to utilize them for productive purposes.¹³⁴ The scheme has two components: the Gold Deposit Scheme (GDS), where customers can deposit their gold with banks for a fixed period of time. Post maturity, the banks would either return the gold in the form of standard bars or its cash equivalent, with the customers earning interest for the time period of the deposit.¹³⁵ The second component, Gold Metal Loan Scheme (GML), enables banks to give loans to jewellers in the form of gold bars accumulated under the GDS for fixed periods and specified interstate rates.¹³⁶ The authors opine that the GMS has scope for the adoption of gold current/investment accounts within its regulatory framework that includes detailed rules for vaulting, assaying, custody, grievance redressal, inspections, and penalties. The following analysis showcases the mechanization of the gold current accounts using the existing infrastructure under the GMS.

A. The Framework for the ‘Gold Current Account’

Under the proposed framework, customers can purchase digital gold from banks either through their branches or internet banking facilities. Banks can also have the liberty to enter into tie-ups with intermediaries through comprehensive bi-partite agreements. Transactions can permit fractional ownership of gold by treating gold purchases made by customers as unallocated book entries. The price rates provided by the IBJA, which are already referred to by banks for issuing Sovereign Gold Bonds and loans against jewellery, can be adopted.¹³⁷ The gold can be sourced from the existing GDS or from its gold reserves. Alternatively, banks can enter into bi-partite agreements with refiners who are recognised as GMS Mobilisation, Collection & Testing Agent (“GMCTAs”) under the GMS for sourcing gold. (GMCTAs are refiners who meet the standards set out under Paragraph 1.3,¹³⁸ they render vaulting, assaying and delivery services to banks).¹³⁹

¹³³ Reserve Bank of India, Master Direction No DBR.IBD.No 45/23.67.003/2015-16 on Gold Monetization Scheme, 2015 (updated 4 August 2022).

¹³⁴ Id.

¹³⁵ Id.

¹³⁶ Id.

¹³⁷ India Bullion and Jewellers Association Ltd (n 40).

¹³⁸ RBI Master Direction on GMS (n 1) para 1.3.

¹³⁹ Id para 2.6.

The gold can either be held with banks or deposited in the vaults held by the GMCTAs under the GDS. Delivery can be undertaken by GMCTAs, as is already done under the existing GMS. The aforementioned can be adopted by utilizing mechanisms under the GMS.

B. GMS features facilitating Gold Current Accounts: -

1. **Regulated Entry Barriers:** Inspiration can be taken from the two-layered entry barrier under the GMS. Paragraph 1.2 states that only Scheduled Commercial Banks will be eligible to implement the scheme.¹⁴⁰ Additionally, Paragraph 1.3 ensures that banks intending to implement the scheme should map out a comprehensive policy approved by the Board.¹⁴¹ The Gold Current Account can incorporate the essence of the aforementioned clauses. This will effectively restrict access to only scheduled commercial banks that have their plan approved by the RBI.
2. **Comprehensive Bi-Partite and Tri-Partite Agreements:** The GMS allows for Scheduled Banks to tie up with GMCTAs for assaying the purity, and for vaulting of gold deposited by customers with the Banks.¹⁴² Similar agreements can be entered under the Gold Current Account service, where Banks can specify the terms and procedure for vaulting and its associated charges.

Furthermore, if the bank is sourcing gold from the GMCTA, the terms can additionally specify the standard purity of gold that will be adhered to and the sale proceeds split. The terms can be drafted in such a manner wherein banks will be quasi-intermediaries, and the sale is occurring between the GMCTA (refiner) and the customer. The GMS allows for tri-partite agreements where banks can have a separate assayer and valuer for the deposits made by the customers. Such agreements can be entered into where the gold supplied by the GMCTA can be assayed by an independent body. These agreements would comprehensively cover the entire life-cycle of gold, i.e., from the purchase of gold to its delivery.

¹⁴⁰ Id para 1.2.

¹⁴¹ Id para 1.3.

¹⁴² Id para 2.8.

3. **Authorized Refiners:** GMS, through Paragraph 1.3 (vii), imposes requirements to gain the status of a Refiner.¹⁴³ The refineries need to be accredited by the National Accreditation Board for Testing and Calibration Laboratories (“NABL”) and notified by the Central Government in order to handle the gold deposited and redeemed under this scheme.¹⁴⁴ This provision can be extended to bring the Refineries/Vaulters offering digital gold under its mandate. The additional requirements to become a CPTC and GMCTA as per Paragraph 1.2 (i) and (iii) can be imported.¹⁴⁵
4. **Fractional ownership:** The GMS has been operating fractional qualities of gold, and Banks, GMCTA, and CPTC are well versed in dealing with such denominations. Paragraph 2.1.1 (ix) allows for operating gold up to three decimals of a gram. The same clause can be introduced for gold current accounts.¹⁴⁶
5. **Risk Management:** Paragraph 2.10 of the GMS provides prudent risk management strategies for GDS, and the same can be effectively extended to gold current accounts.¹⁴⁷ Specifically, sub-para (ii) requires suitable risk management mechanisms, including appropriate limits to manage the risk arising from gold price movements in respect of their net exposure to gold.¹⁴⁸ This mechanism of banks under the GDS can be modified for the gold current accounts.
6. **Oversight:** The GMS boasts appropriate supervisory mechanisms for CPTCs and GMCTAs that ensure adherence to standards set out under the scheme. Furthermore, Paragraph 2.11 empowers the Central Government to levy penalties against CPTCs and GMCTAs, creating deterrence for refiners.¹⁴⁹ The scheme also provides for grievance redressal mechanisms for complaints against refiners and banks (the existing banking complaint redressal process and the Banking Ombudsman of RBI).¹⁵⁰ This provision can be incorporated *mutatis mutandis* into the Gold Current Account scheme.

¹⁴³ Id para 1.3 (vii).

¹⁴⁴ Id.

¹⁴⁵ Id para 1.2 (i), (iii).

¹⁴⁶ Id para 2.1.1 (ix)

¹⁴⁷ Id para 2.10.

¹⁴⁸ Id para 2.10 (ii).

¹⁴⁹ Id para 2.11.

¹⁵⁰ Id.

7. **Consumer Rights Charter Protection:** The entire GMS being under the banking system extends the RBI regulations charter on consumer rights, and the gold current account, if incorporated, would benefit from the same.¹⁵¹

The Indian variant of the gold current accounts can be introduced within the Gold Monetization scheme. The RBI, pursuant to its powers under Section 35A of the Banking Regulation Act, 1949,¹⁵² along with the corresponding Central Government notification through the Department of Economic Affairs, can issue a new consolidated master direction for the Gold Current Account Scheme, GDS, and the GML. The notification and directions will implement a phased ban on unregulated digital gold services. They also establish a transitional mechanism, allowing customers to transfer their gold holdings to regulated accounts with Banks. This transfer is permitted provided the Gold Partners, under whom the gold was originally held, are authorized under the new revamped scheme. This new scheme would address concerns of price transparency and hidden charges, grievance redressal, unfair practices, vaulting uncertainty, fractional ownership, and issues with delivery existing in the unregulated digital gold system, with the added benefit of additional protection through various RBI and Banking regulations and the RBI's oversight.

¹⁵¹ Reserve Bank of India, 'RBI releases Charter of Customer Rights' (Press Release 2014-2015/1142, 3 December 2014).

¹⁵² The Banking Regulation Act, 1949 (10 of 1949) s 35A.

V. CONCLUSION

Justice Manmohan of the Supreme Court of India at the NPAC's 16th Annual International Conference 2025 noted, "*Technology is moving at a fast pace, laws are lagging behind in fact, light years behind*".¹⁵³ India has often failed to tap into the potential of emerging products, which results in a larger loss for the citizens. Digital gold presents a promising opportunity to nurture and advance the savings culture in India, unlocking the elusive yellow metal for a major portion of the population. The intuitional issues that the product presents are remediable. However, the time for introducing regulatory supervision is 'now or never' with either the statutory authorities or the government of India taking charge. Furthermore, due to the lack of regulation in many foreign jurisdictions,¹⁵⁴ the country also has the prospect of becoming an international hub for digital gold services, if acted swiftly. Advancing its regulation would allow for the steady growth of the overall gold market in India and would align with the policy of the government to make India a formidable force in the International Gold Industry. It would be interesting to see what lies ahead in the tumultuous story of Digit Gold in India.

¹⁵³ 'Indian laws "light years behind" evolving technology: Supreme Court Justice Manmohan' (*Bar and Bench*, 8 September 2025) <<https://www.barandbench.com/news/indian-laws-light-years-behind-evolving-technology-supreme-court-justice-manmohan>> accessed 7 January 2026.

¹⁵⁴ 'Digital Gold in the U.S.A | Exploring Digital Gold Platforms' (*Wholesale Coins Direct*, 11 October 2024) <<https://www.wholesalecoinsdirect.com/precious-metals-news/digital-gold-usa-exploring-digital-gold-platforms>> accessed 7 January 2026; The Royal Mint, 'DigiGold Digital Investments' <<https://www.royalmint.com/digital-investments/digigold/>> accessed 7 January 2026.

TOO SYSTEMIC TO TRUST? RE-EXAMINING DIRECT PARTICIPATION OF COMMERCIAL BANKS IN CATEGORY III AIFS

- Suhani Sugandha and Vikrant Gupta*

ABSTRACT

The private investment structure has evolved rapidly. Most privately pooled investment structures are now under the framework of Alternative Investment Funds (AIFs). AIFs are divided into three categories based on their risk profile and strategy of investment strategy. While commercial banks are permitted to invest in categories I and II, they are singled out from investing in Category III. The Regulators justify these constraints on the grounds of depositor protection and concerns relating to the evergreening of funds in AIFs.

This paper examines the legal and regulatory approach for limiting bank participation, specifically in Category III AIFs. It analyses the approach adopted by the SEBI, alongside the frameworks of the RBI, particularly the Reserve Bank of India (All India Financial Institutions-Undertaking of Financial Services) Directions, 2025. While the direct participation by the banks is restricted, it is permitted through regulated subsidiaries. This paper demonstrates that the current regulatory framework relies on exclusion-based safeguards, rather than differentiated assessment. It argues that concerns relating to evergreening and systemic risk are addressed largely through broad prohibitions, maintaining the restrictive approach. Rather than through controls, while the risks associated with the direct participation of banks are real, the paper argues that they are not inherently unmanageable. It proposes targeted safeguards that regulate the manner, duration, and structure of bank investment to ensure that the banks internalize downside risk. These measures directly address the protection of the depositors and the risks of evergreening while also maintaining the regulatory oversight. The paper concludes that a proportionate and structured approach to

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bank participation in Category III AIFs would better align India's regulatory objectives with market development and financial stability.

Keywords: Alternative Investment Funds, Category III AIFs, Commercial Banks, Evergreening, Systemic Risk.

I. INTRODUCTION

India's burgeoning capital market has undergone a structural shift marked by the growing importance of private capital and sophisticated investment strategies. Under this fundamental reconfiguration, privately pooled investment vehicles play a crucial role in the formation of capital. The restructuring has been accompanied by regulatory attention to how such funds operate, who may participate in the Alternative Investment Funds ("AIFs"), and the systemic risks they may pose. In this respect, the Securities and Exchange Board of India ("SEBI") consolidated a wide range of private fund structures under the AIFs under its 2012 regulation for the management of an unregulated private pool of money.¹

An AIF refers to a private investment fund that collects money from a group of investors and invests it according to a pre-decided investment strategy. Unlike mutual funds, AIFs do not raise money from the general public but rather are meant only for sophisticated investors who understand higher risks.² This framework is divided into three categories based on their investment objective and risk profile.

Category I: It focuses on socially and economically desirable sectors such as start-ups, social ventures, early-stage ventures, and others. The government also provides incentives for these funds.³

Category II: It focuses on private equity and debt funds that do not fall under the other two categories and do not receive any incentive from the government. Additionally, it cannot use any leverage.⁴

¹ Securities and Exchange Board of India (Alternative Investment Funds) Regulations 2012, LAD-NRO/GN/2012-13/04/11262.

² *ibid.*

³ *ibid* reg 3(4)(a).

⁴ *ibid* reg 3(4)(b).

Category III: These funds are permitted to employ leverage, trade frequently, and adopt complex investment techniques.⁵

AIFs under Category III are similar to hedge funds and consist of flexible and actively managed strategies that aim to generate returns under different market conditions.⁶ This restricts the entry to high-net-worth individuals (“HNI”) who are normally thought of as having the ability to assume the high-risk factors of active and leveraged investment practices.⁷ However, commercial banks are excluded from this category, but are permitted to invest in Category I and II AIFs, subject to prudential limits and regulatory supervision.⁸

The reasons for such exclusions are the concerns around evergreening and potential misuse of AIF by the regulated entities. Further, these restrictions are also reinforced by the Reserve Bank of India (“RBI”).⁹ The regulatory rationale for this stance is that, since Category III has leveraged and usually cryptic trading tactics, they pose a high risk of volatility. Having depositors in institutions that run their operations with the depositors’ funds and have a pivotal role in the financial system may undermine their prudential discipline. This may also create systemic risks. This strategy, in turn, has a number of legal and policy implications today. Why not allow banks to take risks similar to other regulated financial activities through capital adequacy and modulated norms? Why are they excluded only from a specific category? This paper examines the regulatory basis for the “excuse and exclusion” of commercial banks from Category III AIF. The paper also suggests and navigates a calibrated framework that allows limited bank participation without compromising systemic stability.

II. REGULATORY AND STRUCTURAL FEATURES OF CATEGORY III AIFS

The categorization of AIFs under Category III can be seen as flexible but risky.¹⁰ Categories I and II aim towards long-term employment of capital and comparatively secure investment. Unlike

⁵ *ibid* reg 3(4)(c).

⁶ Securities and Exchange Board of India, ‘Frequently Asked Questions (FAQs) on AIFs’ <https://www.sebi.gov.in/sebi_data/attachdocs/1471519155273.pdf> accessed 3 January 2026.

⁷ n 1.

⁸ *ibid*.

⁹ Reserve Bank of India, Reserve Bank of India (Investment in AIF) Directions 2025 RBI/DOR/2025-26/138, DOR.STR.REC.43/21.04.048/2025-26 (29 July 2025).

¹⁰ National Institute of Securities Markets, *Workbook for NISM-Series-XIX-B: Alternative Investment Funds (Category III) Distributors Certification Examination* (NISM 2023).

them, Category III aims to generate returns through frequent trading, tactical positioning, derivatives, and other financial instruments.¹¹ These funds may use leverage to increase market exposure through Futures and Options (“F&O”) contracts, speculation on price movements, or complex trading positions.¹² They may also engage in short-selling, enabling them to profit from falling markets. As a result, these funds can seek returns across varying market conditions, including periods of volatility or market decline. The division of these funds is usually based on the entry or exit of funds by the investor: open-ended and closed-ended.¹³

What leads SEBI to classify this Category as risky is its features. These funds are permitted to use leverage, provided that it does not exceed the fund’s net asset value by more than two times.¹⁴ Further, frequent trading exposes the funds to market movement, and the strategies based on derivatives make the valuation and risk monitoring challenging.¹⁵ Although this category is permitted greater flexibility, it is not unbounded. Fund managers of Category III AIFs are required to make periodic disclosures regarding the use of leverage, concentration of risks, and exposure of the portfolio.¹⁶ Their activities are closely supervised to prevent excessive accumulation of risk within the financial system.

Despite these risks, Category III AIFs constitute a significant segment within India’s capital market. SEBI’s statistics indicate that Category III AIFs constitute a meaningful segment of India’s alternative investment system. As per the quarterly disclosure of SEBI, Category III has raised INR 1.77 lakh crore and has deployed close to INR 1.97 lakh crore in investments.¹⁷ It shows that

¹¹ Charalampos Stasinakis and Georgios Sermpinis, ‘Financial Forecasting and Trading Strategies: A Survey’ in Costas Dunis and others (eds), (2014) Computational Intelligence Techniques for Trading and Investment, Routledge, 25.

¹² J.P. Morgan, ‘Alternative Investments’ <<https://www.jpmorgan.com/insights/global-research/investing/alternative-investments>> accessed 3 January 2026.

¹³ Puja Roshani, Divya Bansal, Shivani Agarwal and Abhay Bhardwaj, ‘Investments and Alternate Investment Options in India’ in Analytics in Finance and Risk Management (1st edn, CRC Press 2023) 8.

¹⁴ Securities and Exchange Board of India and National Institute of Securities Markets, ‘Curriculum – Alternative Investment Funds (Category III) Distributors’ <<https://www.nism.ac.in/curriculum-alternative-investment-funds-category-iii-distributors/>> accessed 4 January 2026.

¹⁵ Meta Investment, ‘CAT III AIF in India: Top Performing Funds, Oldest Funds and Key Differences Between Open-Ended and Closed-Ended Funds’ <<https://metainvestment.in/2025/03/19/cat-iii-aif-india-top-funds-oldest-funds-investor-guide-2025/#open-ended-vs-closed-ended-funds-key-differences>> accessed 4 January 2026.

¹⁶ International Financial Services Centres Authority, ‘Frequently Asked Questions on International Financial Services Centres Authority (Fund Management) Regulations, 2022’ <<https://ifsc.gov.in/>> accessed 4 January 2026.

¹⁷ Securities and Exchange Board of India, ‘Data Relating to Activities of Alternative Investment Funds (AIFs): Cumulative Net Figures as at 30 September 2025’ <<https://www.sebi.gov.in/statistics/1392982252002.html>> accessed 3 January 2026.

these funds operate under established regulatory oversight that provides meaningful economic value to the country.

Category	Funds raised (in crores)	Investment made (in crores)
I	54,224	45,034
II	4,04,212	3,69,570
III	1,77,982	1,97,335

Source: Data relating to activities of Alternative Investment Funds (AIFs)

In the final analysis, while this category is regulated and economically active, the commercial banks are singled out from participation. This interdiction rests largely on the assumption of systemic risk and for the protection of the depositor, rather than an assessment to manage such risks. This raises a question about whether the exclusion has replaced the scope of supervision.

III. THE REGULATORY BAR ON COMMERCIAL BANKS

The exclusion of commercial banks from Category III AIFs emerges from a combination of regulatory positions adopted by SEBI.¹⁸ and prudential restrictions by the RBI.¹⁹ Under the prevailing framework, banks are permitted to invest in Category I and Category II AIFs, subject to limits and prudential norms. However, banks are effectively singled out from investing in Category III.²⁰ Importantly, this framework distinguishes direct participation by banks and indirect participation through subsidiaries.

Within the Category III AIFs, investment by a bank's subsidiary is permitted with regulated limits set by SEBI.²¹ This distinction indicates that the concern is not the mere existence of exposure to category III AIFs, but the form and degree of such exposure when undertaken directly by the banks. Such exclusion proceeds on the assumption that direct bank participation in Category II AIFs is inherently incompatible with prudential objectives.²² The regulatory justification for such barring rests on two primary interlinked concerns: the protection of depositors' funds and the risk

¹⁸ n 1.

¹⁹ n 9.

²⁰ Securities and Exchange Board of India, Enhancing Trust in the Alternative Investment Funds Ecosystem by Introducing Due Diligence Measures with Respect to Investors and Investments (*Board Memorandum*, 2024) <<https://www.sebi.gov.in>> accessed 3 January 2026.

²¹ Reserve Bank of India, All India Financial Institutions – Undertaking of Financial Services Directions 2025 (28 November 2025) para 9(3).

²² *ibid.*

of evergreening of stressed assets. SEBI and RBI have consistently taken into view that banks that operate largely using public deposits should not be exposed to investment structures that involve higher use of borrowed funds, frequent trading, and sharp tactical fluctuations.

From the perspective of protecting the depositor, the concern is clear. Losses arising from risky and flexible trading relying on derivatives and leverage can weaken a bank's balance sheet and, in turn, undermine public confidence in the banking system.²³ Closely connected to this is the concern of evergreening, which has been repeatedly highlighted by SEBI and RBI. Evergreening is a situation in which a bank avoids recognizing stress in a borrower's account by indirectly providing financial support that allows existing obligations to be serviced.²⁴ When the borrower is bolstered with funds through an AIF, this support does not take the form of a loan, but rather an investment vehicle, making the exposure harder to detect. Regulators fear that banks could use such funds to indirectly support stressed borrowers.

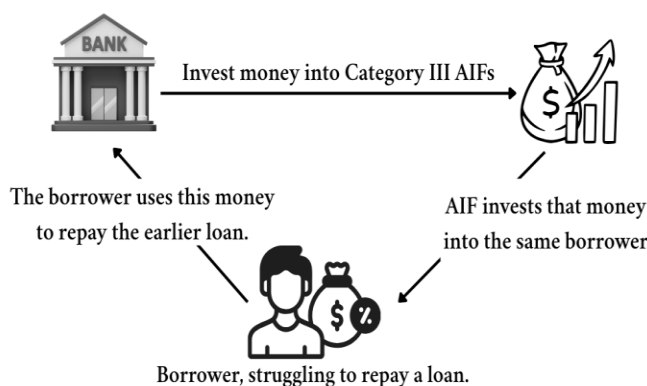


Illustration: Evergreening using Category III AIFs

To address these concerns, SEBI and RBI have completely singled out commercial banks from direct participation in Category III AIFs.²⁵ However, SEBI's supervisory stance and RBI's prudential norms and directions reflect a regulatory choice that prioritizes exclusion over supervision. The limited permissibility afforded to bank subsidiaries, contrasted with a complete bar on direct participation, misaligns with the coherent and proportional approach to regulatory oversight.

²³ BDO India, 'Delhi High Court in the Case of Category III AIFs Holds That Non-Mentioning of Investor Names...' <<https://www.bdo.in/en-gb/insights/alerts-updates/delhi-high-court-in-the-case-of-category-iii-aifs-holds-that-non-mentioning-of-investor-names>> accessed 3 January 2026.

²⁴ *ibid.*

²⁵ n 1.

IV. FLEXIBILITY, RISK, AND REGULATION IN CATEGORY III AIF

The total exclusion of commercial banks from category III of AIF creates a complex situation because other financial institutions, like NBFCs and subsidiaries, are allowed, but not commercial banks themselves. Thus, letting commercial banks indirectly invest in category III. The only response from RBI or SEBI for this exclusion is the problem of “evergreening,” and as the market of hedge funds is highly traded, bank funding has been excluded from this market.²⁶

A. Risk Assumptions and Regulatory Limits in Category III AIFs

SEBI (Alternative Investment Fund) Regulations, 2012, provision 13 (1) and 13 (3) have allowed category III to be open-ended or closed-ended.²⁷ In the former, an entity can buy and sell the fund at any time of day, making it more flexible. In the latter, a fixed number of funds is allocated and sold when the company is listed.²⁸ The former is more investor-friendly. In the AIF regulations under 15(1)(d), it has been ensured that category III AIF shall not invest more than 10% of the investable funds in a particular investee company.²⁹ This regulation ensures that there is no concentration of money in a particular fund and also at the same time protects the investors from the collapse of any one particular fund.

The risk that is being assumed by the regulatory bodies in this category is not for all types of hedge funds. Hedge funds are not distinguished by a hard and fast rule, but rather by the strategies they adopt.³⁰ While hedge funds are not unwavering high-risk investments but funds like Global Macro are risky because of their exposure to macroeconomic variables, reliance on leverage, and cross-border contagion, making them riskier. Through a risk perspective, funds like Activist are not risky because this investment is firm-specific and transparent, as all the strategies regarding the company need to be disclosed to the public.³¹ The total exclusion of commercial banks is protecting, but at the same time, also taking them away from the opportunity to invest in a safer fund.

²⁶ KS&K, ‘RBI Guidelines, AIF Investments & Evergreening’ <<https://ksandk.com/banking/rbi-guidelines-aif-investments-evergreening/>> accessed 7 January 2026.

²⁷ n 1 reg 13 (1); reg 13 (3).

²⁸ Digit Insurance, ‘Difference Between Open-Ended and Closed-Ended Mutual Funds’ <<https://www.godigit.com/life-insurance/mutual-funds/difference-between-open-ended-and-closed-ended-funds/>> accessed 5 January 2026.

²⁹ Argus Partners, ‘Informal Guidance Pertaining to Category III AIF’, (*Argus Partner*, 2019) <<https://www.argus-p.com/updates/updates/informal-guidance-pertaining-to-category-iii-aif/>> accessed 7 January 2026.

³⁰ Groww, ‘Hedge Funds’ <<https://groww.in/p/hedge-funds/>> accessed 7 January 2026.

³¹ *Id.*

B. Indirect Bank Exposure to Category III AIFs

Although SEBI and RBI have allowed a bank subsidiary to invest in this category as a high-net-worth entity.³² The high-net-worth entity needs to have a minimum investment of rupees 1 crore, and this is how subsidiaries invest in category III by acting as a high-net-worth entity.³³ In this scenario, the subsidiary is using the bank's money because the capital invested in the subsidiary is wholly funded by the bank.³⁴ SEBI has also made it mandatory for the banks to maintain additional capital based on risk evaluation on behalf of the investments made in AIFs made through their subsidiaries or directly.³⁵ The subsidiary acting as a sponsor to fund the interest under category III may hold only the minimum requisite under SEBI regulations, which currently holds that it should be lower of 5% of the corpus or rupees 10 crore, whichever is lower, as per the regulation 10(d) mentioned in SEBI AIF Regulations 2012.³⁶

V. COMPARING REGULATORY APPROACHES ACROSS JURISDICTIONS

Legal approaches are being taken in this field to ensure that the inclusion of commercial banks in this field is done without any risk to banks. There are various important international and national case studies which will help us understand how commercial banks are included in this category and how it is certain that the commercial banks are not at risk.

A. India

In India, the commercial banks are prohibited from investing in category III.³⁷ The banks are under the strict watch of the RBI. The banks have been excluded from this category because of the high

³² Vinod Kothari Consultants, 'A Guide for AIF Managers on Investor Eligibility and Regulatory Restrictions', (*Vinod Kothari Consultants*, 24 December 2025) <<https://vinodkothari.com/2025/12/a-guide-for-aif-managers-on-investor-eligibility-and-regulatory-restrictions/>> accessed 7 January 2026.

³³ GripInvest, 'Hedge Funds in India' <<https://www.gripinvest.in/blog/hedge-funds-in-india>> accessed 7 January 2026.

³⁴ U.S. Department of the Treasury, 'Press Release — RR3125' <<https://home.treasury.gov/news/press-releases/rr3125>> accessed 7 January 2026.

³⁵ AZB & Partners, 'Chambers Global Practice Guide on Investment Funds (India)', (*AZB & Partners*, 5 March 2019) <<https://www.azbpartners.com/bank/chambers-global-practice-guide-on-investment-funds-india/>> accessed 7 January 2026.

³⁶ n 1 reg 10 (d).

³⁷ Corpzo, 'Inside Category III Funds: Strategies, Regulations and Investment Opportunities in India' <<https://www.corpzo.com/inside-category-iii-funds-strategies-regulations-and-investment-opportunities-in-india>> accessed 7 January 2026.

level of risk present in this category and the problem of evergreening.³⁸ RBI, in their *Commercial Banks - Undertaking of Financial Services (Amendment) Directions, 2025*, has allowed investing in category III for commercial banks, but through their subsidiary.³⁹ The RBI and SEBI have given an opportunity to banks to indirectly invest in category III funds through their subsidiaries. The exclusion of commercial banks from directly investing in this category can be marked by various reasons, like High Volatility, Leverage Risk, and Complex Structures, which can create complications for banks in the future.⁴⁰ The complex trading strategies incorporated in this category make it a high-risk move for the banks to invest their capital.⁴¹ These strategies can give profits to banks only if they work out, but at the same time, they can give huge losses to these commercial banks.

B. USA: Volcker Rule

In the USA, the Volcker Rule adopts a prohibitive regulatory framework but also permits banks to invest in hedge funds through their closely established exemptions.⁴² The rule does not exclude all banks but creates a distinction by setting a rule that determines which bank is permitted to own or sponsor a hedge fund. The rule clearly draws the boundary by allowing banks that have not more than \$10 billion in total consolidated funds and do not have total trading assets and liabilities of 5% or more of total consolidated assets to fall under this rule.⁴³ A banking entity can invest in a hedge fund which it organizes or offers but it should ensure that:-(i) the aggregate interest of the banking entity and its affiliates must not exceed 3% of that fund ownership and (ii) the aggregate interest of the entity and its affiliates in the fund must not exceed 3% of the entity's tier 1 capital.⁴⁴

³⁸ The Legal 500, 'RBI's 2025 Amendment Directions on Financial Services by Scheduled Commercial Banks' (*The Legal 500*, 5 January 2026) <<https://www.legal500.com/developments/thought-leadership/rbis-2025-amendment-directions-on-financial-services-by-scheduled-commercial-banks/>> accessed 7 January 2026.

³⁹ Vinod Kothari Consultants, 'RBI Brings Major Regulatory Restrictions on Banks and Group Entities' (*Vinod Kothari Consultants*, 6 December, 2025) <<https://vinodkothari.com/2025/12/rbi-brings-major-regulatory-restrictions-on-banks-and-group-entities/>> accessed 7 January 2026.

⁴⁰ AR PCG Research Team, 'What is Category 3 AIF Investment' (*Anand Rathi pcg*, 10 August, 2025) <<https://www.anandrathipcg.com/blogs/what-is-category-3-aif-investment/>> accessed 7 January 2026.

⁴¹ *ibid.*

⁴² The Hedge Fund Journal, 'The Volcker Rule' <<https://thehedgefundjournal.com/the-volcker-rule/>> accessed 7 January 2026.

⁴³ Federal Deposit Insurance Corporation, 'Volcker Rule' <<https://www.fdic.gov/capital-markets/volcker-rule/>> accessed 7 January 2026.

⁴⁴ The Hedge Fund Journal, 'Dodd-Frank Becomes Law' <<https://thehedgefundjournal.com/dodd-frank-becomes-law/>> accessed 7 January 2026.

The commercial banks in the USA are allowed to invest in the market of hedge funds, but with strict regulations that protect banks from the risks of investing in a high-risk market.

C. EU: AIFMD

In the European Union, commercial banks have been given the liberty to invest in alternative funds, i.e., hedge funds, but under the strict regulation of the Alternative Investment Fund Managers Directive (“AIFMD”).⁴⁵ Any Alternative Investment Fund Manager (“AIFM”) will come under this rule if the managing funds are worth more than 500 million euros.⁴⁶ The banks under this regulation are protected in such a way that AIFM is obligated to disclose vital information like liquidity profiles, independent valuation of assets, and risk profile regarding the fund.⁴⁷ All of this important information helps commercial banks in making well-informed investment decisions. The rule also applies to fund managers that are handling assets of less than 500 million euros, but they are exempted from the full requirement of AIFMD; they are still required to comply with the simplified registration and reporting regime.⁴⁸ The EU model has ensured that alternative investment funds like hedge funds are under strict regulation, at the same time ensuring that banks at the time of investment have all the essential information required to invest in a fund.

VI. RISK REGULATION: BANKS VERSUS NBFCs

In category 3 AIF, when commercial banks’ subsidiaries are allowed, and even NBFCs are allowed to invest, then the inclusion of commercial banks in this category even matters more.⁴⁹ The allowed institutions are themselves financial institutions. Commercial banks, being more financially sound and rising institutions, need to be included.

⁴⁵ Société Générale Securities Services, ‘AIFM Directive’ <<https://www.securities-services.societegenerale.com/en/insights/views/news/aifm-directive/>> accessed 7 January 2026.

⁴⁶ Invest Europe, ‘AIFMD’ <<https://www.investeurope.eu/policy/key-policy-areas/aifmd/>> accessed 7 January 2026.

⁴⁷ Confluence Technologies, ‘AIFMD Depositories and the Impact of AIFMD on Fund Managers’ <<https://www.confluence.com/aifmd-depositories-and-the-impact-of-aifmd-on-fund-managers/>> accessed 7 January 2026.

⁴⁸ n 45.

⁴⁹ Suranjali Tandon, ‘From Banks to AIFs and Back: Analysing RBI’s Regulatory Responses to Evergreening’ (*National Institute of Public Finance and Policy*, 24 June 2025) <<https://nipfp.org.in/publication-index-page/blog-index-page/from-banks-to-aifs-and-back-analysing-rbis-regulatory-responses-to-evergreening/>> accessed 7 January 2026.

A. Banks Out, NBFCs in: A Regulatory Paradox

RBI, in their “*Report on Trend and Progress of Banking in India 2024-2025*”, has shown that the banking institutions in India have a stable and compelling performance in 2024-25.⁵⁰ The report shows that banks continued to grow in their balance sheets, leading to the total value of assets of banks owned by banks having increased.⁵¹ The banks were able to maintain their profitability with return on assets (“**ROA**”) being at 1.4% and return on equity (“**ROE**”) at 13.5% during the financial year 2025.⁵² This clearly shows banks have improved their earning profile and have emerged as one of the most stable financial institutions in India. Commercial banks are very stable and have consistently maintained their profitability; therefore, they have been excluded from this category. At the same time, a Non-Banking Financial Company (“**NBFC**”) is allowed to invest in this category.⁵³ NBFCs are also regulated by RBI under their Scale-Based Regulatory Framework (“**SBR**”).⁵⁴ All NBFCs earn their money through interest on loans advanced and through investing in stocks and bonds.⁵⁵

NBFCs are expected for a growth of 21% CAGR over FY26-28.⁵⁶ The investments of NBFCs are under strict regulation of the RBI. According to para 8 of *RBI (Non-Banking Financial Companies - Undertaking of Financial Services) Directions 2025*, an NBFC individually can only invest 10% and not more than this in the corpus of an individual AIF scheme.⁵⁷ This restriction is an effort to ensure that NBFCs are not put at any risk, but category III NBFCs also face the same risk as banks

⁵⁰ Reserve Bank of India, ‘Trend and Progress of Banking in India 2024-25’ (PDF) <<https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/0RTP291220258C89B9E5F3F240AEB82AC25A1707A8C6.PDF>> accessed 7 January 2026.

⁵¹ Business Today, ‘Indian Banking Sector Shows Strong Growth in 2024-25, RBI Report’ (*Business Today*, 29 December 2025) <<http://businesstoday.in/india/story/indian-banking-sector-shows-strong-growth-in-2024-25-rbi-report-508563-2025-12-29>> accessed 7 January 2026.

⁵² News on AIR, ‘RBI Releases its Report on Trend and Progress of Banking in India 2024-25’ (*News on AIR*, 29 December 2025) <<https://www.newsonair.gov.in/rbi-releases-its-report-on-trend-and-progress-of-banking-in-india-2024-25/>> accessed 7 January 2026.

⁵³ *ibid.*

⁵⁴ Reserve Bank of India, ‘FAQs’ <<https://www.rbi.org.in/commonman/english/scripts/FAQs.aspx?Id=1167>> accessed 7 January 2026.

⁵⁵ Abhi Loans, ‘What is NBFC? How Does It Work? Everything You Need to Know’ (*Abhi Loans*, 23 January 2025) <https://abhiloans.com/blog/what-is-nbfc-how-does-it-work-everything-you-need-to-know/#How_Does_an_NBFC_Work> accessed 7 January 2026.

⁵⁶ Economic Times BFSI, ‘India’s Banks and NBFCs Set for Growth Surge in H2 FY26’ (*Economic Times BFSI*, 15 November 2025) <<https://bfsi.economictimes.indiatimes.com/articles/indias-banks-and-nbfc-set-for-growth-surge-in-h2-fy26/125337052>> accessed 7 January 2026.

⁵⁷ Reserve Bank of India, ‘Notification’ (PDF) <<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/343MD54448C9FA65A429BB5AFADBB162904F1.PDF>> accessed 7 January 2026.

do. On the other hand, NBFCs are expected to experience a rampant growth in the upcoming year, thus letting them invest in category III leads risk migration. The inclusion of NBFCs and exclusion of commercial banks is still an unanswered question.

B. Supervision Over Prohibition

The Banking Regulation Act, 1949, entitles the RBI to inspect and supervise commercial banks.⁵⁸ RBI has formed two bodies, that are Department of Banking Operations and Development (“DBOD”) and the Department of Banking Supervision (“DBS”), to keep a constant check on commercial banks.⁵⁹ There are many functions of RBI, but one of the main functions is that it supervises banking institutions throughout the country and ensures that all banks follow rules and operate rationally.⁶⁰ The supervision of the RBI on commercial banks has led to stability in the banking sector and has refined the standards of banking in the country.⁶¹ The RBI supervision explains to us one thing that banks can never take a step that can hamper the stability in the banking sector. Supervisory intensity minimises the probability of unbridled exposure. RBI also keeps a check on commercial banks’ investments and ensures that transparency is maintained.⁶² RBI itself is the biggest advocate for reducing unethical frameworks and advises banks in strengthening internal governance models.⁶³ The investment of banks in categories I and II is under the strict watch of SEBI and RBI.⁶⁴ All of this leads us to one thing that banks have the capital to invest in various funds, and the investment of banks in various categories will itself lead to diversification of investments. Restricting them to only categories I and II leads to a concentration of funds in just two categories. Thus, a calculated entry of banks is better for investment in category III, under

⁵⁸ Banking Regulation Act 1949 (10 of 1949).

⁵⁹ Reserve Bank of India, ‘Department of Banking Supervision’ <<https://www.rbi.org.in/commonman/english/scripts/deptofbs.aspx>> accessed 7 January 2026.

⁶⁰ The Legal QnA, ‘The Supervisory Role of Reserve Bank of India’ <<https://thelegalqna.com/the-supervisory-role-of-reserve-bank-of-india/>> accessed 7 January 2026.

⁶¹ Taxmann, ‘Reserve Bank of India | Functions and Objectives (Taxmann, 1 December 2023) <<https://www.taxmann.com/post/blog/functions-of-rb/>> accessed 7 January 2026.

⁶² Invest India, ‘Role of Regulatory Bodies in India’s Financial Sector: What Investors Should Know’ (*Invest India*, 12 June 2025) <<https://www.investindia.gov.in/team-india-blogs/role-regulatory-bodies-indias-financial-sector-what-investors-should-know/>> accessed 7 January 2026.

⁶³ The Hindu, ‘Strengthen Framework to Curb Unethical Practices, RBI Governor to Bank Boards’ (*The Hindu*, 18 November 2024) <<https://www.thehindu.com/news/national/strengthen-framework-to-curb-unethical-practices-rbi-governor-to-bank-boards/article68881560.ece>> accessed 7 January 2026.

⁶⁴ Cyril Amarchand Mangaldas Blogs, ‘RBI Notifies Restrictions on Investments by Regulated Entities in AIFs’ (*Cyril Amarchand Mangaldas Blogs*, 12 August 2025) <<https://corporate.cyrilamarchandblogs.com/2025/08/rbi-notifies-restrictions-on-investments-by-regulated-entities-in-aifs/>> accessed 7 January 2026.

supervision will be much better, rather than displacing risk. Thus, exclusion of commercial banks from category III has consequences; the RBI, as a strict regulator, will make sure that no harm is done to commercial banks for their investments.

VII. SUGGESTIONS FOR MOVING FROM EXCLUSION TO SUPERVISED BANK PARTICIPATION

The aforementioned evaluation and assessment of the global framework highlight that commercial banks should be included in category III AIF. In relation to these concerns, the authors herein argue that commercial banks under strict regulations should be allowed to invest, and at the same time, make it secure for them. Keeping these objectives in mind, the authors suggest that India's commercial banks, being one of the sound financial institutions, should be given a chance to invest in category III AIF.

A. Ring-Fencing

One of the solutions to supervise, instead of barring, is the adoption of a ring-fencing framework for banks participating in Category III AIFs. Ring-fencing refers to the structural segregation of high-risk activities from the core banking operations. It ensures that losses arising from such activities do not harm the depositors' balance sheet. Using a ring-fenced participation model would permit the banks to invest in Category III AIFs by distinguishing capital pools sourced from retained earnings or surplus buffers, excluding the funds of the depositors. The whole transaction would operate independently of the bank's lending function. Any losses incurred would be absorbed entirely within the ring-fenced structure.

This approach directly addresses regulatory concerns relating to depositors' protection and evergreening. By the elimination of the possibility of indirect borrower support and ensuring transparent loss recognition, ring-fencing targets the conduct that regulators seek to prevent. It offers a proportionate and supervisory-led alternative to exclusion, consistent with the risk-based regulation.

B. Prohibition of Investment in Borrower Linkage Companies

Evergreening is one of the risks assumed in category III. This assumption not only restricts the total commercial banks' exclusion but also limits them from investing in safer funds present in

category III. Evergreening is credit-linked; the borrowers take a series of loans, which in turn into debt rollovers.⁶⁵ SEBI has already made it mandatory for the companies present in all three categories to disclose their information for investing purposes.⁶⁶ Therefore, with the help of this information, the RBI can make sure that the commercial banks are not investing in those funds that have already borrowed money from the RBI. This creates a suitable restriction on banks to keep their money safe and not lead to the practice of evergreening. Through this investment, it will also ensure that commercial banks are not concentrating their fund on a single borrower fund and also restricting them to invest in a borrower's subsidiary company or other fund controlled by the same partners. Therefore, by directly targeting the problem of borrower linkage, i.e., evergreening, commercial banks total exclusion can be uplifted with some discussed restrictions.

C. Strategy-Based Model

All types of funds present in category III are risky; this is one of the major assumptions that restricts commercial banks from investing. All funds in category III follow three main strategies:- Long-Short Strategy, Derivatives and Arbitrage, and Leveraged.⁶⁷ The uncertainty of a fund in category III is dependent upon the strategy adopted by that particular fund. There are some risky strategies and some safe strategies that can help banks create profits through their investments. One of the risky strategies for commercial banks can be “Leveraged” because in this, the fund uses additional capital to increase return, hence putting banks at risk for loss.⁶⁸ The risk in this is that banks need additional capital for profits to the fund, thus putting extra capital at risk in case of loss. In this event, a small market movement can cause huge losses to investors, thus putting banks at huge risk.⁶⁹ The safest strategy for banks can be the “Long-Short” strategy. In this, an investment is made according to two approaches: Long positions, where funds are taken that have superior return

⁶⁵ The Zavo, ‘What Is Loan Evergreening? Is It a Financial Lifeline or a Hidden Risk’ <<https://www.thezavo.com/insights/what-is-%20loan-evergreening-is-it-a-financial-lifeline-or-a-hidden-risk>> accessed 7 January 2026.

⁶⁶ Securities and Exchange Board of India, ‘Meeting Files’ (PDF) <https://www.sebi.gov.in/sebi_data/meetingfiles/1427104871287-a.pdf> accessed 7 January 2026.

⁶⁷ n 40.

⁶⁸ Financial Research, ‘Hedge Fund Monitor — Leverage (Chart 28)’ <<https://www.financialresearch.gov/hedge-fund-monitor/categories/leverage/chart-28/>> accessed 7 January 2026.

⁶⁹ Morgan Stanley, ‘Long-Short Equity Strategies: Hedging Your Bets’ (*Morgan Stanley*, 13 January 2026) <<https://www.morganstanley.com/im/en-us/individual-investor/insights/articles/long-short-equity-strategies-hedging-your-bets4.html>> accessed 7 January 2026.

characteristics, and Short positions those which have weaker characteristics and are sold in case of a predictable fall.⁷⁰ RBI and SEBI, through their collaboration, can help commercial banks in investing in those funds that use safe strategies like the “Long-Short” strategy and protect them from investing in bad portfolios. A strategy-based framework like this will lead to an increase in participation in category III without exposing them to leveraged-based risk.

D. Time Lock Up Period

SEBI, under regulation 13 (1) and 13 (3), has allowed category III to be “open-ended or closed-ended”.⁷¹ This creates a risky position for banks if they invest in a “closed-ended” fund, and they won't be able to withdraw their capital until that fund has been listed.⁷² Therefore, banks won't have a quick exit, early pull out, and will not be able to use the fund as a short-term tool. This will itself lead to risks that SEBI and RBI predict, i.e., “evergreening” and “short-term balance sheet misbalance”.⁷³ The commercial banks, being financially stable institutions, should be allowed to invest in the “open-ended” category of funds or time-bound investments. In the open-ended funds, banks have the opportunity to sell the funds at their own convenience, thus protecting them from losses.⁷⁴ This will help banks in pulling out from predicted losses and help in earning short-term gains. SEBI & RBI, at the same time, can also make banks do time-bound investments, making them invest for a short period of 3 years or more. These investments need to be made under strict supervision, during the time period when the banks cannot sell their allocated funds, cannot allocate their funds to a subsidiary, or during losses, banks must recognize losses and shouldn't pull out because of this. Time-locked regulation with supervision will help in understanding economic realities.

⁷⁰ ShareIndia, ‘Long-Short Equity Strategy’ (*ShareIndia*, 5 January 2026)<<https://www.shareindia.com/knowledge-center/mutual-fund/long-short-equity-strategy>> accessed 7 January 2026.

⁷¹ Securities and Exchange Board of India, ‘SEBI Attachment Document’ (PDF) <https://www.sebi.gov.in/sebi_data/attachdocs/1471519155273.pdf> accessed 7 January 2026.

⁷² The Hedge Fund Journal, ‘Meeting in the Middle’ <<https://thehedgefundjournal.com/meeting-in-the-middle>> accessed 7 January 2026.

⁷³ Vinod Kothari Consultants, ‘Banks’ Exposure to AIFs: Group-wide Limits Introduced’ (*Vinod Kothari Consultants*, 6 December 2025) <<https://vinodkothari.com/2025/12/banks-exposure-to-aifs-group-wide-limits-introduced/>> accessed 7 January 2026.

⁷⁴ LexisNexis UK, ‘Open-Ended AIF’<<https://www.lexisnexis.co.uk/legal/glossary/open-ended-aif>> accessed 7 January 2026.

VIII. CONCLUSION

The existing regulatory framework for Category III Alternative Investment Funds in India is indicative of valid systemic stability and investor protection. The paper focuses on the fact that commercial banks were almost completely avoided, even with their financial capacity, regulatory control, and institutional experience, showing that the design of regulations is so focused on avoiding risks as opposed to handling them. Commercial banks are one of the most scrutinized entities in the Indian financial system and are under constant prudential regulation, capital adequacy standards, and also governance examination by the RBI. Concurrently, other entities that are governed by a similar regulation, like the NBFCs and bank subsidiaries, are allowed to have restricted exposure to the Category III AIFs within specific limits. The experience of jurisdictions like the United States and the European Union suggests that the latter model, which is based on exposure limits, anti-evergreening protection, and high levels of transparency, can permit institutional involvement and not undermine financial stability.

This paper suggests that a well-designed entry of commercial banks into the Category III AIFs with absolute prohibitions on the connection to the borrowers and a stronger supervisory framework would all enhance capital markets, lessen the concentration in Categories I and II, and enhance the participation of institutions in complex investment strategies. Finally, financial regulation should not aim at stopping institutions from dealing with risk at all, but it should make risk visible, measurable, and controllable.

PIERCING THE WRONG VEIL: RECONCILING THE CONTROL CONUNDRUM IN INDIA'S SBO REGIME WITH GLOBAL COMMERCIAL REALITY

- Sameer Panda and Abhishree Anandi*

ABSTRACT

The growing demand for corporate accountability has led governments worldwide to break through the veil of corporate structure to determine who the real owners are. The Indian government has implemented legislation to carry out this goal through Section 90 of the Companies Act, 2013 and through the Significant Beneficial Ownership (SBO) rules. Nevertheless, there has been a recent trend of enforcing these regulations which has created a legal issue by conflating the role of professional management with that of being the owner(s) of a company. This paper explores how the increasing trend of holding Chief Executive Officers of multinational companies liable for SBO status due to their lack of ownership stake has created a control conundrum. This paper will analyse what the legislative intent was when implementing the SBO policy and contrast that with the more aggressive position that the Registrar of Companies took toward high profile cases involving companies such as LinkedIn and Samsung. The paper will also argue that the use of a subjective control test is problematic because it fails to recognize the fiduciary duties associated with professional employment and departs from the risk based approach to determining control used by the Financial Action Task Force (FATF).

Finally, the authors contend that the current regulatory path will create an adverse business environment for foreign investment by punishing professional capacity as if it were illicit activity. The paper therefore proposes the creation of a Commercial Safe Harbor Framework. The authors advocate for the formal implementation of a cascading identification test to determine control, the establishment of an Advance Ruling Mechanism to provide clarity on complex structures and the recognition of entities from FATF compliant countries as White Listed entities. The purpose of these recommendations is to ensure that the goals of increased transparency are met while recognizing the commercial realities of doing business in India and

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preventing the SBO regulations from being used to target corporate stewards rather than the individuals engaged in illicit activities.

Keywords: Significant Beneficial Ownership, Section 90, Corporate Veil, Professional Management, FATF

I. INTRODUCTION

Global commerce today is built upon the corporate form that protects member interests through the separation of legal identity between an entity and its owners. This separation of legal identity between an owner and an owned entity was first identified in *Salomon v A Salomon & Co Ltd*.¹ The separation provides owners protection from risks they undertake when creating new business ventures; and the creation of entities allows them to raise capital for investment into their ventures. However, this protection also creates two sides of the same coin. On one hand, the corporate veil is an incentive for economic development, and therefore allows companies to create value in new and innovative ways. On the other hand, the corporate structure provides a way for individuals to launder money, evade taxes, and even provide funding for terrorist organizations, due to the ability to obscure the true beneficial owner of the corporation. Thus, in response to concerns about the use of opaque corporate forms for illicit purposes, governments worldwide have begun to take action to pierce the corporate veil to determine the natural person(s) who actually owns and/or controls these corporate forms. These efforts at increasing transparency led to the establishment of the concept of Significant Beneficial Ownership (SBO).²

In India, the SBO initiative was mandated through Section 90 of the Companies Act, 2013.³ The purpose of the legislation was to prevent individuals from misusing multi-layered corporate structures to conceal their identities and exercise control over the operations of the corporation without being shown as the actual owners. The statute was intended to identify those individuals who control corporations from behind the scenes, and not those who manage the day-to-day affairs of a corporation as its CEO and/or directors.

However, the Registrar of Companies (RoC), based on recent interpretations of control, has commenced an examination of the Indian subsidiaries of multinational companies (including

¹ *Salomon v A Salomon & Co Ltd* [1897] AC 22 (HL).

² Companies (Significant Beneficial Owners) Rules 2018.

³ Companies Act 2013 (18 of 2013) s 90.

LinkedIn⁴, Samsung Display⁵, and Leixir Resources⁶). The RoC has determined that CEOs such as Satya Nadella and Ryan Roslansky should be considered Significant Beneficial Owners because they possess professional authority to make important decisions on behalf of their respective companies, although neither holds any equity of any significance.

This interpretation essentially confuses management functions with ownership functions and thus creates a significant legal issue. The SBO Rules were originally drafted to unmask illicit actors, but they are now being used against professional executives acting in a fiduciary capacity. Such a stance creates uncertainty for multinational corporations operating in India. It also appears to diverge from the risk-based standards established by the Financial Action Task Force (FATF).⁷ If control is interpreted so broadly that it covers the standard operational authority of a CEO, the vital distinction between governance and ownership collapses.

This article challenges the current regulatory trajectory. It asserts that the application of the control test by the RoC ignores the distinction between an individual who owns a company and one who merely runs it. By comparing India's position against the more nuanced regimes of global jurisdictions, the analysis highlights the gaps in the current enforcement strategy. Ultimately, the paper seeks to balance the need for transparency with the practicalities of corporate governance. It aims to ensure that the burden of compliance falls on genuine beneficial owners rather than professional leadership.

II. THE LEGISLATIVE ARCHITECTURE OF BENEFICIAL OWNERSHIP IN INDIA

A. Genesis and Evolution of the Framework

The regulatory landscape regarding beneficial ownership in India has witnessed a substantial paradigm shift over the past decade. Previously, Indian corporate jurisprudence placed primary

⁴ *In the matter of LinkedIn Technology Information Pvt Ltd* (22 May 2024, RoC NCT of Delhi & Haryana) Order No. ROC/D/Adj/Order/Section 89&90/2246-2256

⁵ *In the matter of Samsung Display Noida Pvt Ltd* (12 June 2024, RoC Uttar Pradesh) Order No. 03/06/SBO/UP/2024/Samsung

⁶ *In the matter of Leixir Resources Pvt Ltd* (6 May 2024, RoC NCT of Delhi & Haryana) Order No. ROC/D/Adj/Order/Section 90/1881-1889

⁷ Financial Action Task Force, 'Who we are' (FATF) <https://www.fatf-gafi.org/en/the-fatf/who-we-are.html> accessed 30 November 2025.

emphasis on legal title, treating the register of members as the conclusive evidence of shareholding. However, this approach proved inadequate in a globalized economy. Complex structures allowed the true owners to remain hidden. The initial attempt to address this was Section 89 of the Companies Act, 2013.⁸ Section 89 requires declarations from persons holding a beneficial interest in shares where the legal name on the register is different.⁹ This covered simple nominee arrangements. It did not address complex holding structures where the ultimate owner was hidden behind layers of corporate entities.¹⁰

The primary impetus for a more robust regime came from international pressure. The Financial Action Task Force (FATF) issued recommendations to combat money laundering.¹¹ Recommendation 24 specifically urged countries to ensure adequate transparency regarding the beneficial ownership of legal persons.¹² The FATF defined a beneficial owner as the natural person who ultimately owns or controls a customer.¹³

India, as a member of the FATF, sought to align its domestic laws with these standards.¹⁴ The report of the Companies Law Committee (CLC) in 2016 is significant because it identified the “true owners” of corporations as a way to stop the abuse of corporations for tax evasion.¹⁵ As such, the Companies (Amendment) Act of 2017 amended section 90 of the Companies Act of 2013 to introduce the term Significant Beneficial Owner (SBO).¹⁶ This amendment marked a shift from merely tracking “beneficial interest” to identifying “significant beneficial ownership.”¹⁷

⁸ n 3.

⁹ n 3, s 89.

¹⁰ Sonakshi Desaf, ‘Significant Beneficial Owners’ (2023) 3.3 JCLJ 211.

¹¹ Financial Action Task Force, *Guidance on Transparency and Beneficial Ownership* (FATF 2014).

¹² Financial Action Task Force, *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation* (FATF 2012) <FATF Recommendations 2012.pdf.coredownload.inline.pdf> accessed 30 November 2025.

¹³ *ibid.*

¹⁴ Financial Action Task Force, ‘India’ (FATF) <<https://www.fatf-gafi.org/en/countries/detail/India.html>> accessed 30 November 2025.

¹⁵ n 10.

¹⁶ n 3.

¹⁷ Ranjeet Pandey, ‘Decoding the SBO Chain: An Insightful Analysis’ (2023) 53(11) Chartered Secretary 89 <<https://www.icsi.edu/media/webmodules/CSJ/November/17.pdf>> accessed 30 November 2025.

B. The Statutory Framework: Section 90 and the SBO Rules

Section 90 of the Companies Act, 2013¹⁸, serves as the primary statutory anchor for the SBO regime. It mandates that every individual who holds beneficial interests of not less than 25% in the shares of a company must make a declaration to the company.¹⁹ The section allows the government to prescribe a lower percentage. It also covers individuals who exercise “significant influence” or “control” over the company.²⁰

The Central Government notified the Companies (Significant Beneficial Owners) Rules, 2018.²¹ These rules were subsequently amended in 2019 to provide greater clarity and reduce thresholds. The 2019 Amendment Rules reduced the reporting threshold from 25% to 10%.²² An individual is now considered an SBO if they hold, indirectly or together with direct holdings, not less than 10% of the shares.²³ This includes equity shares, Global Depository Receipts (GDRs), Compulsorily Convertible Preference Shares (CCPS), and Compulsorily Convertible Debentures (CCDs).²⁴

The framework establishes a specific methodology for identification. It employs a twin test, as laid down in Rule 2(h) of the Rules.²⁵

- **The Objective Test:** This is based on quantitative thresholds. An individual is an SBO if they hold 10% or more of the shares, voting rights, or the right to receive distributable dividends.²⁶ This test is relatively straightforward to apply. It requires tracing the shareholding chain upwards to the ultimate natural person.
- **The Subjective Test:** This applies if an individual exercises significant influence or control in any manner other than through direct holdings.²⁷ This limb is qualitative. It captures

¹⁸ n 3.

¹⁹ *ibid.*

²⁰ Ranjeet Pandey and Bunty Hudda, ‘Law and Procedure Relating to Significant Beneficial Ownership of Shares under Section 90 of the Companies Act, 2013’ (2025) 55(02) Chartered Secretary 89 <<https://www.icsi.edu/media/webmodules/CSJ/February-2025/21.pdf>> accessed 30 November 2025.

²¹ n 2.

²² Hari Prasad MS, ‘FDI Policy: Introduction and Changes’ (2020) SCC OnLine Blog OpEd 46.

²³ n 10.

²⁴ *ibid.*

²⁵ n 2, r 2(1)(h).

²⁶ Joseph George and Shrenitha Anantula, ‘Widening the Scope of SBO Rules; A Lesson From LinkedIn India And Samsung’ (*LiveLaw*, 11 July 2024) <<https://www.livelaw.in/articles/widening-the-scope-of-sbo-rules-a-lesson-from-linkedin-india-and-samsung-263038>> accessed 1 December 2025.

²⁷ *ibid.*

individuals who may not own significant equity but still pull the strings of the company. This subjective limb is the source of the current interpretive controversy.²⁸

The law mandates that SBOs must file a declaration in Form BEN-1 to the reporting company. This must be done within 30 days of acquiring such status or any change therein.²⁹ The company, in turn, must file Form BEN-2 with the Registrar of Companies (RoC).³⁰ Failure to comply attracts severe penalties. SBOs face fines up to INR 1 crore. Companies and officers in default face similar monetary penalties and potential disqualification.³¹

C. Deconstructing “Control” and “Significant Influence”

The precise definitions of control and significant influence” are critical to understanding the conflict. These terms determine the scope of the subjective test.

i. Control

Section 2(27) of the Companies Act defines control.³² It is an inclusive definition. Control includes the right to appoint a majority of the directors as well as the right to control the management or policy decisions.³³ This control can be exercisable by a person acting individually or in concert. It can be derived from shareholding, management rights, shareholders’ agreements or voting agreements.³⁴

The Supreme Court of India interpreted control in the landmark case of *ArcelorMittal India Pvt. Ltd. v. Satish Kumar Gupta*.³⁵ The Court distinguished between “positive control” and “negative control.” Control implies a proactive power to direct decisions. It is the ability to drive the company’s affairs and not merely the power to obstruct or veto special resolutions. The Court emphasized the need to look through the corporate veil to find the individuals exercising real

²⁸ n 17.

²⁹ Deloitte, ‘Beneficial ownership rules amended’ (*Deloitte tax@hand*, 8 February 2019) <<https://www.taxathand.com/article/11142/India/2019/Beneficial-ownership-rules-amended>> accessed 1 December 2025.

³⁰ *ibid.*

³¹ n 10.

³² n 3, s 2(27).

³³ n 10.

³⁴ Mansi Govindswamy, ‘Decoding Control and Influence Under the SBO Regime’ (*Legasis*, November 2025) <<https://legasis.in/decoding-control-and-influence-under-the-sbo-regime/>> accessed 1 December 2025.

³⁵ *ArcelorMittal India Pvt Ltd v Satish Kumar Gupta* (2019) 2 SCC 1.

influence. However, the Court linked control to the ability to appoint management or dictate policy, not necessarily to the day-to-day management itself.³⁶

ii. Significant Influence

Significant Influence (SI) is defined separately in the SBO Rules which refers to the power to participate in the financial and operating policy decisions of the reporting company.³⁷ Crucially, the definition states that SI does not amount to control or joint control rather it represents a lower threshold of authority.³⁸ It implies participation rather than domination.

The SBO Rules place a crucial evidentiary burden on establishing SI. The rules state that if an individual does not hold significant shareholding, SI or control must be proven by a “written agreement or understanding”. This requirement is intended to provide legal certainty. It prevents vague assertions of influence from triggering SBO obligations.³⁹ It ensures that only those with explicit rights to influence the company are captured.

D. The Concept of Indirect Holding

The entire SBO regime rests on a single, fundamental premise of indirect holding. It is crucial to understand that an individual cannot be classified as an SBO if they merely hold shares directly.⁴⁰ Direct shareholders are already visible on the register of members; their identity is a matter of record. Therefore, the SBO provisions are only triggered when an individual exercises rights indirectly, effectively requiring the law to look behind the corporate curtain.⁴¹

To determine who these individuals are, the rules provide specific tests for different structures. In the context of a body corporate, an individual is identified as an SBO if they possess a majority stake strictly defined as holding more than 50% of the equity share capital or voting rights, either in the entity itself or its ultimate holding company.⁴²

³⁶ *ibid.*

³⁷ n 2, r 2.

³⁸ Matthias Reinhard-DeRoo, ‘Beneficial Ownership: Basic and Federal Indian Law Aspects of a Concept’ (2013) Springer.

³⁹ *Id.*

⁴⁰ Mohan Guruswamy, Kamal Sharma, Jeevan Prakash Mohanty, & Thomas J. Korah, ‘FDI in India’s Retail More Bad than Good?’ (2005) *Economic and Political Weekly*, 40(7), 619–623 <<http://www.jstor.org/stable/4416196>>

⁴¹ n 10.

⁴² *ibid.*

The lens shifts slightly for other entities. In partnerships or LLPs, the focus is on the partner or the individual controlling a partner entity.⁴³ In the case of trusts, the regulatory scope is expansive, encompassing the trustee, beneficiary or settlor.⁴⁴ Conversely, for Pooled Investment Vehicles (PIVs) domiciled in FATF-compliant jurisdictions, the framework adopts a pragmatic approach by designating the General Partner, Investment Manager, or CEO as the SBO.⁴⁵

This structural distinction underscores the legislative intent: the law prioritizes the identification of ultimate majority ownership or specific control rights, rather than targeting professional management, except in specific contexts like investment vehicle leadership.”

III. THE ADJUDICATION ORDERS: A PARADIGM SHIFT?

The theoretical framework of the SBO rules faced a practical test in 2024. The Registrar of Companies (RoC) issued a series of adjudication orders that unsettled the corporate sector. These orders adopted an expansive interpretation of control and significant influence.⁴⁶ They implicated professional CEOs of global parent companies as SBOs of Indian subsidiaries.

A. The LinkedIn India Case

A paradigmatic shift in the interpretation of significant beneficial ownership occurred in May 2024 with the adjudication regarding LinkedIn Technology Information Pvt. Ltd.⁴⁷, where the Registrar of Companies (NCT of Delhi & Haryana) penalized the company and global executives, including Microsoft CEO Satya Nadella and LinkedIn CEO Ryan Roslansky. The central contention rested on the corporate structure wherein LinkedIn India is ultimately owned by Microsoft Corporation, a US-listed entity with dispersed shareholding where no single individual holds ten percent or more of the equity.⁴⁸ Relying on this, the company argued that it failed to satisfy the objective test

⁴³ *ibid.*

⁴⁴ *ibid.*

⁴⁵ Erik PM Vermeulen, ‘Beneficial Ownership and Control: A Comparative Study – Disclosure, Information and Enforcement’ (2013) OECD Publishing.

⁴⁶ Civil Forum for Asset Recovery (CiFAR), ‘Where Is Beneficial Ownership Relevant?’ in *Beneficial Ownership: How to Find the Real Owners of Secret Companies: A Guide for Journalists and Civil Society in Ghana, Kenya & Nigeria* (CiFAR, 19 October 2017).

⁴⁷ n 4.

⁴⁸ Ayush Tripathi, ‘Expanding the Contours of Significant Beneficial Ownership: A Critique of the ROC Order in LinkedIn India Private Limited’ (*Indian Review of Corporate and Commercial Laws*, 30 June 2024) <<https://www.ircl.in/post/expanding-the-contours-of-significant-beneficial-ownership-a-critique-of-the-roc-order-in-linkedin>> accessed 4 December 2025.

for identifying an SBO and consequently had no beneficiary to report. However, the adjudicating authority rejected this defense by pivoting to the subjective test through a novel interpretive tool termed the Reporting Channel Test.⁴⁹

By scrutinizing the reporting lines and Microsoft's bylaws, the RoC observed that the directors of the Indian subsidiary were essentially reporting to the global leadership, who held general supervisory charge over the business.⁵⁰ The regulator concluded that this hierarchy granted Nadella and Roslansky significant influence and control over the subsidiary, thereby classifying them as SBOs.⁵¹ This ruling is analytically critical as it effectively conflates professional administrative authority with beneficial ownership which disregards the statutory distinction between executive management and individuals holding an actual proprietary interest in the corporate entity.

B. The Samsung Display Noida Case

An analogous rationale was applied to Samsung Display Noida Private Limited⁵², a subsidiary ultimately owned by Samsung Electronics Co. Ltd. (SEC). Much like the Microsoft scenario, SEC is a publicly listed entity characterized by a diverse and fragmented shareholder base.⁵³ In its assessment, the Registrar of Companies scrutinized the governance structure and focused on the influence of the late Lee Kun-hee's family.⁵⁴ The regulator highlighted the appointment of Lee Jae-yong as Executive Chairman as a decisive factor. Despite the family holding a minority stake

⁴⁹ Rashmi Grover, 'Significant Beneficial Ownership – Impact of Recent RoC Order on MNCs (India)' (*Nagashima Ohno & Tsunematsu*, 28 August 2024) <<https://www.nagashima.com/en/publications/publication20240828-2/>> accessed 4 December 2025.

⁵⁰ Faiza Khanum, Maulin Salvi and Sahil Kanuga, 'Shedding light on the LinkedIn Order – SBO Analysis' (*Nishith Desai Associates*, 12 June 2024) <https://www.nishithdesai.com/fileadmin/user_upload/Html/Hotline/Yes_Governance_Matters_June1224-M.html> accessed 4 December 2025.

⁵¹ Noorul Hassan and Aman Gupta, 'RoC's recent adjudication order against a global corporate – A regulatory oversight on Significant Beneficial Ownership' (*Lakshmikumaran & Sridharan Attorneys*, 4 July 2024) <<https://www.lakshmisri.com/insights/articles/roc-s-recent-adjudication-order-against-a-global-corporate/>> accessed 4 December 2025.

⁵² n 5.

⁵³ Mahi Singh, 'Samsung Display Noida Case and the Expanding Scope of SBO Identification' (*TaxTMI*, 10 July 2024) <<https://www.taxtmi.com/article/detailed?id=12783>> accessed 4 December 2025.

⁵⁴ MCA penalises Samsung Display Noida for breach of Companies Act norms' (*The Economic Times*, 14 June 2024) <<https://economictimes.indiatimes.com/industry/cons-products/electronics/mca-penalises-samsung-display-noida-for-breach-of-companies-act-norms/articleshow/110977498.cms>> accessed 5 December 2025.

in the parent entity, the authority determined that they exercised indirect control through a complex network of cross-ownership and key management positions.⁵⁵

Consequently, the regulator utilized the subjective test to classify Lee Jae-yong as a significant beneficial owner. This decision reinforces the regulatory stance that control can be inferred from family prominence and executive authority rather than relying solely on majority ownership. The ruling demonstrates a clear intent to pierce multiple layers of corporate structure to identify a human controller. It establishes a precedent where professional executives or minority shareholders with operational power can be held accountable as beneficial owners, effectively bypassing the traditional requirement of substantial equity holding.

C. The Leixir Resources Case

The regulatory inclination to expand the scope of beneficial ownership was further evident in the order against Leixir Resources Private Limited.⁵⁶ The adjudicating order dealt with a structure involving a Pooled Investment Vehicle. The Registrar of Companies identified Michael Falk, the CEO of the investment manager, Comvest Advisors LLC, as the significant beneficial owner.⁵⁷ This decision is particularly noteworthy because the SBO Rules ostensibly limit the reporting requirement for such vehicles to the General Partner, Investment Manager or Chief Executive Officer.⁵⁸ By looking past the entity serving as the investment manager to identify its individual CEO, the regulator effectively surpassed the textual boundaries of the provision. This expansive approach creates legal ambiguity regarding the depth of inquiry required by companies to satisfy compliance norms, leaving open the question of how many layers of management must be pierced to locate the ultimate controller.⁵⁹

⁵⁵ Bomi F Daruwala and Krishna Kishore, 'Unveiling the Complex Web of Corporate Ownership: A Detailed Examination of Significant Beneficial Ownership and Contemporary Trends' (2024) 2(1) Indian Business Law Review 1.

⁵⁶ n 4.

⁵⁷ Sidhartha, 'Dental firm penalised for not showing beneficial ownership' (*The Times of India*, 8 May 2024) <<https://timesofindia.indiatimes.com/business/india-business/dental-firm-penalised-for-not-showing-beneficial-ownership/articleshow/109931218.cms>> accessed 5 December 2025.

⁵⁸ Shivesh Didwania, 'Expansion in scope of SBO – Analysis of Recent RoC Orders' (*CBFL Blog*, 22 July 2024) <<https://www.cbflnludhli.in/post/expansion-in-scope-of-sbo-analysis-of-recent-roc-orders>> accessed 5 December 2025.

⁵⁹ *ibid.*

D. Critique of the RoC's Interpretation

These recent adjudication orders mark a concerning drift from established corporate principles by effectively blurring the distinction between professional management and beneficial ownership. A fundamental error in this approach lies in how the regulator applied the subjective test for control.⁶⁰ By designating CEOs as beneficial owners based solely on their professional hierarchy, the RoC overlooked the derivative nature of executive power.⁶¹ A CEO exercises authority purely as an agent of the board and the shareholders rather than as a proprietor.⁶² This authority is transient and contractually revocable. If their employment is terminated, their control vanishes immediately.⁶³ This inherent revocability serves as the critical distinction between a professional manager and a true beneficial owner who holds an enduring proprietary interest in the entity.

Furthermore, the regulator's reliance on standard corporate bylaws and global reporting lines to infer significant influence is legally tenuous. The rules⁶⁴ mandate that such influence be established through specific written agreements yet the RoC treated ordinary multinational governance structures as sufficient evidence.⁶⁵ This interpretation risks setting a precedent where every high-ranking executive is automatically classified as a beneficial owner.

This methodology also appears to invert the logic of the FATF guidelines.⁶⁶ The international standards explicitly treat the identification of a Senior Managing Official as a fallback mechanism

⁶⁰ n 2, r 2(1)(h).

⁶¹ Bharat Vasani and Bharath Reddy, 'Ultimate parent's professional CEO a Significant Beneficial Owner: Do companies have to re-evaluate their corporate approval process and reporting line structures?' (*India Corporate Law*, 6 June 2024) <<https://corporate.cyrilamarchandblogs.com/2024/06/ultimate-parents-professional-ceo-a-significant-beneficial-owner-do-companies-have-to-re-evaluate-their-corporate-approval-process-and-reporting-line-structures/>> accessed 2 December 2025.

⁶² *Ferguson v Wilson* (1866) LR 2 Ch App 77; n 3, s 2(51).

⁶³ Shivesh Didwania, 'Expansion in scope of SBO – Analysis of Recent RoC Orders' (*CBFL Blog*, 22 July 2024) <<https://www.cbflnludelh.in/post/expansion-in-scope-of-sbo-analysis-of-recent-roc-orders>> accessed 2 December 2025.

⁶⁴ n 3, s 2(27).

⁶⁵ Nishith Desai Associates, 'Shedding Light on the LinkedIn Order – SBO Analysis' (*Nishith Desai Associates*, 12 June 2024) <https://www.nishithdesai.com/fileadmin/user_upload/Html/Hotline/Yes_Governance_Matters_June1224-M.html> accessed 2 December 2025.

⁶⁶ Financial Action Task Force, 'The FATF Recommendations' (*FATF*) <<https://www.fatf-gafi.org/en/topics/fatf-recommendations.html>> accessed 3 December 2025.

to be used only when no natural person can be identified through shareholding.⁶⁷ In these instances, the regulator utilized executive hierarchy as a primary tool for identification which effectively bypasses the structured waterfall mechanism intended by the global standards.

IV. THE CONTROL CONUNDRUM: PROFESSIONAL MANAGERS VS. BENEFICIAL OWNERS

A. The Nature of Professional Management

The foundational logic of the modern corporation rests on the separation of ownership and control, a principle famously articulated by Berle and Means in their seminal work, *The Modern Corporation and Private Property*.⁶⁸ In this economic structure, shareholders hold the title to the property, while professional managers are appointed as fiduciaries to operate the entity.⁶⁹ These managers possess authority not as owners, but as stewards accountable to the board and the shareholders.⁷⁰ Their power is derived from their employment and contractual duties, not from an underlying equity stake that grants them the proprietary rights to the company's assets.

Treating a professional CEO as a Significant Beneficial Owner ignores this critical distinction. An executive like Satya Nadella wields immense operational power at Microsoft, yet he cannot unilaterally pocket the company's profits or liquidate its assets for personal gain. His control is, therefore, functional which is strictly defined by corporate governance parameters, rather than beneficial.⁷¹ The SBO regime was designed to expose individuals who conceal their identity behind corporate veils to enjoy the economic benefits of ownership, not to misclassify professional executives who are merely performing their duties.⁷²

⁶⁷ Vinod Kothari Consultants, 'Senior Management Official as Significant Beneficial Owner' (*Vinod Kothari Consultants*, 31 August 2018) <https://vinodkothari.com/wp-content/uploads/2018/08/SMO_as_SBO-1.pdf> accessed 3 December 2025.

⁶⁸ Adolf A Berle and Gardiner C Means, *The Modern Corporation and Private Property* (Macmillan 1932).

⁶⁹ n 61.

⁷⁰ Saurabh Jain, Effectiveness of the Beneficial Ownership Test in Conduit Company Cases (IBFD 2013)

⁷¹ Sri Samarth Dasara, 'Unlocking Transparency: Exploring the Significance of Beneficial Ownership' (2024) SSRN <<https://ssrn.com/abstract=4808278>> accessed 2 December 2025.

⁷² Harshad Narsinhbhai Patel, 'Section 89 & 90: Understanding the Spirit' (2020) 50(11) Chartered Secretary 20 <<https://www.icsi.edu/media/webmodules/CSJ/November/20.pdf>> accessed 6 December 2025.

B. The Supreme Court's View on Control

The Supreme Court of India has provided critical guidance on the definition of control. In *ArcelorMittal India Pvt. Ltd. v. Satish Kumar Gupta*⁷³, the Court interpreted “control” under Section 29A of the Insolvency and Bankruptcy Code.⁷⁴

While interpreting the Insolvency and Bankruptcy Code (IBC), the Court distinguished between positive control and negative control. It established that true control implies a proactive power to direct strategy and drive the company's affairs. To determine this, the Court emphasized the necessity of looking through the corporate veil to find the individuals exercising actual influence.

Crucially, this analysis was aimed at preventing defaulting promoters from regaining control of their assets.⁷⁵ It was not intended to equate professional management with beneficial ownership. The precedent supports identifying the individuals who have the power to *appoint* management, rather than the managers themselves.⁷⁶ The Registrar of Companies is currently stretching this standard. It is applying a test designed for proprietary owners to professional managers who have no personal stake in the company.⁷⁷

C. The Ambiguity of Significant Influence

The term “Significant Influence” remains the most contentious aspect of the SBO framework. While the definition explicitly excludes “control”, it includes “participation in financial and operating policy decisions.” This creates a dangerously broad standard. By nature, every CEO participates in operating policy and every CFO participates in financial policy.⁷⁸ That is their job. If participation alone triggers SBO status, then every senior executive effectively becomes a beneficial owner.

⁷³ *ArcelorMittal India Pvt Ltd v Satish Kumar Gupta* (2019) 2 SCC 1.

⁷⁴ Insolvency and Bankruptcy Code 2016 (31 of 2016) s 29A.

⁷⁵ Mansi Govindswamy, ‘Decoding Control and Influence Under the SBO Regime’ (2025) Legasis <<https://legasis.in/decoding-control-and-influence-under-the-sbo-regime/>> accessed 30 November 2025.

⁷⁶ *ArcelorMittal India Pvt Ltd v Satish Kumar Gupta* (2019) 2 SCC 1.

⁷⁷ Sreetama Sen, Nooreen Haider and Esha Goyal, ‘A Fine Balance: A Perspective on recent RoC Orders’ (*India Corporate Law*, 18 November 2024) <<https://corporate.cyrilamarchandblogs.com/2024/11/a-fine-balance-a-perspective-on-recent-roc-orders/>> accessed 4 December 2025.

⁷⁸ ‘Start-Ups and the CTA: Substantial Control’ (*Taft Law*, 1 August 2024) <<https://www.taftlaw.com/news-events/law-bulletins/start-ups-and-the-cta-substantial-control/>> accessed 3 December 2025.

This interpretation collapses the distinction between a Significant Beneficial Owner and Key Managerial Personnel. KMPs are already disclosed under separate provisions of the Companies Act, so re-classifying them as SBOs adds no new transparency. The SBO regime was designed to uncover hidden influence. It targets individuals who steer the company from the shadows or through informal channels, not the appointed leadership acting in their official capacity.⁷⁹ Applying this rule to visible executives defeats the legislative intent of exposing the individuals who actually pull the strings without accountability.⁸⁰

V. GLOBAL COMMERCIAL REALITY: A COMPARATIVE ANALYSIS

India’s SBO regime does not exist in vacuum and is part of a global push for transparency. However, a comparison with international standards reveals a sharp contrast. Most jurisdictions treat professional managers as a fallback option when no owner exists whereas India differs by classifying these professionals as primary beneficial owners.⁸¹ This unique interpretation makes the Indian regime an outlier on the global stage.

Table 1: Cross-Jurisdictional Comparison of Control Thresholds and Executive Reporting

JURISDICTION	REGULATION	DEFINITION OF BO / CONTROL	TREATMENT OF SENIOR MANAGEMENT
India	Sec 90 Companies Act	>10% Interest OR Significant Influence/Control	Ambiguous: RoC interprets CEOs as SBOs under “Control” limb.
USA	Corporate Transparency Act (CTA)	>25% Interest OR “Substantial Control”	Specific Category: Senior Officers are reportable, but <i>not</i> equated to “owners”. Exemptions for Large Operating Companies.

⁷⁹ For a critique of this interpretation in recent enforcement actions, see *Order of Adjudication in the matter of LinkedIn Technology Information Pvt Ltd* (RoC Delhi, 22 May 2024).

⁸⁰ Daruwala and Kishore (n 53) 28.

⁸¹ Myers, C., & Czarnezki, J. J. (2021). SUSTAINABLE BUSINESS LAW? THE KEY ROLE OF CORPORATE GOVERNANCE AND FINANCE. *Environmental Law*, 51(4), 991–1040.

UK	PSC Register	>25% Interest OR “Significant Influence”	Strict Test: CEOs are generally <i>not</i> PSCs unless they have rights beyond their role (e.g., vetoes, ownership).
Singapore	Register of Registrable Controllars	>25% Interest OR “Significant Control”	Explicit Fallback: If no owner found, <i>must</i> identify Directors/CEO as controllers. Distinct from ownership.
FATF	Recommendation 10 & 24	Cascading test of Ownership, Control and Fallback.	Fallback Only: Identify Senior Managing Official only if no owner/controller is found.

A. The Financial Action Task Force (FATF) Standards

The FATF standards are the genesis of global SBO norms. Recommendation 24 requires countries to ensure access to beneficial ownership information.⁸² The FATF provides a specific methodology for identification. It is a cascading test:

1. **Step 1:** Identify natural persons with a controlling ownership interest.
2. **Step 2:** If no one is identified, identify persons exercising control through other means.
3. **Step 3:** Only if no one is identified under the first two steps, identify the relevant natural person who holds the position of **Senior Managing Official (SMO)**.

The FATF explicitly treats the SMO test as a fallback or default option.⁸³ It is used *only* when no beneficial owner exists or can be identified. It is not a primary test for control. The Indian RoC’s approach in *LinkedIn*⁸⁴ ignored this cascade. It identified the CEOs as SBOs based on “control”

⁸² FATF, ‘Revisions to Recommendation 24 and its Interpretive Note - Public Consultation’(2021) <https://www.fatf-gafi.org/content/dam/fatf-gafi/public-consultation/Pdf-file_R24-Beneficial-Ownership-Public-Consultation.pdf> accessed 6 December 2025.

⁸³ EY Luxembourg, ‘Circular 19/732 on UBO identification’ (EY, 20 February 2020) <https://www.ey.com/en_lu/insights/wealth-asset-management/circular-19-732-on-ubo-identification> accessed 1 December 2025.

⁸⁴ n 4.

(Step 2), rather than treating them as SMOs under the fallback clause (Step 3).⁸⁵ By doing so, it labelled them as beneficial owners rather than complying officials.

B. The United Kingdom: People with Significant Control (PSC)

The United Kingdom's regime mandates that companies maintain a register of People with Significant Control (PSC).⁸⁶ Under this framework, a PSC is defined as an individual holding more than 25% of the shares or voting rights. Crucially, the UK statutory guidance provides explicit safe harbours for professional roles. It clarifies that individuals acting in a professional capacity do not automatically exercise significant control.⁸⁷

Consequently, a managing director or CEO does not become a PSC simply because of their office. To be registrable, they must possess rights or influence that extend beyond their job description, such as owning a golden share or holding personal veto rights. This distinction effectively protects professional managers from being confused with beneficial owners.⁸⁸ Furthermore, the UK protects the residential addresses of PSCs from public view to prevent harassment. In contrast, India's SBO register allows members to inspect these details, creating significant privacy concerns for global executives.⁸⁹

C. Singapore: Register of Registrable Controllers (RORC)

Singapore aligns its framework with the UK and FATF models. Companies must identify Registrable Controllers, defined as individuals holding a "significant interest" of over 25% of shares or exercising significant control.⁹⁰ The regime explicitly utilizes a fallback mechanism. If

⁸⁵ Vinod Kothari Consultants, 'Senior Management Official as Significant Beneficial Owner' (*Vinod Kothari Consultants*, 31 August 2018) <https://vinodkothari.com/wp-content/uploads/2018/08/SMO_as_SBO-1.pdf> accessed 5 December 2025.

⁸⁶ Department for Business, Energy & Industrial Strategy, 'People with significant control (PSCs)' (GOV.UK, 26 January 2016) <<https://www.gov.uk/guidance/people-with-significant-control-pscs>> accessed 5 December 2025.

⁸⁷ CMS Cameron McKenna Nabarro Olswang LLP, 'Persons with significant control: the UK's corporate transparency regime' (2017) <<https://cms-lawnow.com/en/media/law-now/files/5d60c83d94cd4ff5ab9c4de4d225e865>> accessed 4 December 2025.

⁸⁸ Bryan Cave Leighton Paisner, 'PSC Rules – Your Questions Answered' (February 2016) <https://www.bclplaw.com/a/web/150130/PSC_rules_-_Your_questions_answered.pdf> accessed 7 December 2025.

⁸⁹ GUPTA, A., & NASHIER, T. (2017). Family Ownership and Firm Performance: Evidence from India. *Quarterly Journal of Finance and Accounting*, 55(3–4), 37–68

⁹⁰ Accounting and Corporate Regulatory Authority, 'Register of Registrable Controllers (RORC)' (*ACRA*, 24 November 2025) <<https://www.acra.gov.sg/compliance/register-of-registrable-controllers>> accessed 7 December 2025.

no controller is found through ownership or influence, the company must report individuals with executive control, such as directors or the CEO.⁹¹

Crucially, this is a residual category. It applies only when actual beneficial owners remain unidentified and does not serve as a primary test of control. As a result, regulatory filings clearly distinguish between controllers by ownership and those identified by their executive role.⁹²

D. The United States: Corporate Transparency Act (CTA)

The Corporate Transparency Act in the United States mandates that companies report beneficial owners to FinCEN.⁹³ Under this law, a beneficial owner is anyone who owns at least 25% of the entity or exercises substantial control over its operations. Notably, the definition of control explicitly includes senior officers such as the CEO, CFO, and General Counsel.⁹⁴ This specific inclusion marks a clear distinction from the Indian approach.

However, the two regimes function very differently in practice. The US law serves strictly as a reporting requirement to prevent money laundering. It does not carry the broader governance liabilities found in the Indian Companies Act. The US also offers robust exemptions for large operating companies. Firms with over 20 employees and \$5 million in revenue do not need to report.⁹⁵ Publicly traded companies are similarly excluded. Consequently, most multinational subsidiaries face no requirement to pierce the corporate veil.⁹⁶ India applies these rules to all unlisted subsidiaries and imposes a much heavier compliance burden.

⁹¹ *ibid.*

⁹² ‘The Register of Registrable Controllers: Eligibility and Setting Up’ (*BBCIncorp*, 7 June 2023) <<https://bbcincorp.com/sg/articles/register-of-registrable-controllers>> accessed 5 December 2025.

⁹³ CO by US Chamber of Commerce, ‘What Every Small Business Needs to Know About the Corporate Transparency Act’ (19 February 2025) <<https://www.uschamber.com/co/start/strategy/small-business-corporate-transparency-act>> accessed 5 December 2025.

⁹⁴ ‘Start-Ups and the CTA: Substantial Control’ (*Taft Law*, 1 August 2024) <<https://www.taftlaw.com/news-events/law-bulletins/start-ups-and-the-cta-substantial-control/>> accessed 3 December 2025.

⁹⁵ Erik PM Vermeulen, ‘Beneficial Ownership and Control: A Comparative Study – Disclosure, Information and Enforcement’ (2013) OECD Corporate Governance Working Papers No 7 <<https://doi.org/10.1787/5k4dkhwckbzv-en>> accessed 3 December 2025.

⁹⁶ Radon, J., & Achuthan, M. (2017). Beneficial Ownership Disclosure: The Cure for the Panama Papers Ills. *Journal of International Affairs*, 70(2), 85–108. <<https://www.jstor.org/stable/90012622>> accessed 3 December 2025

VI. THE BURDEN ON THE CORPORATE ECOSYSTEM

A. Impact on Ease of Doing Business

The expansive interpretation of SBO norms fosters a precarious environment for foreign investors. Most multinational corporations operate through wholly-owned subsidiaries, often controlled by a listed parent entity with dispersed ownership.⁹⁷ These global operations are typically run by professional managers appointed by the parent board. Designating these managers as SBOs of Indian subsidiaries introduces disproportionate liability, subjecting them to potential prosecution and penalties in India.⁹⁸

While routine non-compliance usually attracts monetary fines, severe cases involving fraud can lead to imprisonment. More critically, the reputational risk is severe. This legal uncertainty creates a “fear of the unknown”, deterring top global talent from overseeing Indian operations.⁹⁹ Consequently, MNCs are forced to construct defensive ring-fenced structures or reconsider expanding their footprint in the Indian market.

B. Redundancy and Over-Compliance

Recent RoC orders compel companies to declare global CEOs as SBOs, even when the parent entity is already compliant with its home jurisdiction laws. This results in regulatory redundancy. A CEO’s identity is already public knowledge, readily available in annual filings and on corporate websites.¹⁰⁰ Re-classifying them as an SBO contributes no new intelligence to the regulatory framework. It fails to uncover any hidden owner and merely satisfies a bureaucratic requirement while significantly increasing personal risk for the executive.¹⁰¹ Moreover, the mandate to update these filings within 30 days of any global management change creates a substantial administrative

⁹⁷ Andres Knobel, ‘Complex Ownership Structures: Addressing the Risks for Beneficial Ownership Transparency’ (2022) SSRN <<https://ssrn.com/abstract=4040794>> accessed 3 December 2025.

⁹⁸ n 10.

⁹⁹ Shivesh Didwania, ‘Expansion in scope of SBO - Analysis of Recent RoC Orders’ (*CBFL Blog*, 22 July 2024).

¹⁰⁰ GUPTA, A., & NASHIER, T. (2017). Family Ownership and Firm Performance: Evidence from India. *Quarterly Journal of Finance and Accounting*, 55(3–4), 37–68

¹⁰¹ Joseph George and Shrenitha Anantula, ‘Widening The Scope of SBO Rules; A Lesson from LinkedIn India and Samsung’ (*LiveLaw*, 11 July 2024) <<https://www.livelaw.in/articles/widening-the-scope-of-sbo-rules-a-lesson-from-linkedin-india-and-samsung-263038>> accessed 3 December 2025.

burden.¹⁰² MNCs are trapped in a perpetual cycle of compliance that offers no tangible benefit to regulatory oversight.

C. The Materiality of Sanctions

The punitive measures for non-compliance are severe. SBOs face fines of up to INR 1 crore, along with daily penalties for continuing defaults.¹⁰³ The reporting company and its officers are subject to similar financial sanctions. In the *LinkedIn* adjudication¹⁰⁴, the regulator imposed a total penalty of INR 27 lakhs. For a professional CEO, this personal liability is a significant hazard. It is entirely disproportionate to their actual economic interest in the Indian subsidiary, which is often non-existent. Furthermore, this liability extends to the officer in default, often implicating local directors who possess no authority over the disclosures made by the global parent.¹⁰⁵

VII. RECONCILING THE CONFLICT: RECOMMENDED SOLUTIONS

The conflict between the SBO rules and commercial reality is evident. To resolve this, India needs to refine its regulatory toolkit. The following novel solutions propose a path forward that balances transparency with practicality.

A. Adopting the Cascading Test Formally

India needs to integrate the FATF's cascading logic directly into its statutory framework to eliminate the current regulatory confusion.¹⁰⁶ At present, the rules are unclear on whether a Senior Management Official (SMO) is a primary target or a last resort. To resolve this, India should emulate the clarity of the **European Union's Fourth Anti-Money Laundering Directive**

¹⁰² n 2, r 2A(7).

¹⁰³ n 3, s 90(10).

¹⁰⁴ n 5.

¹⁰⁵ Faiza Khanum, Maulin Salvi and Sahil Kanuga, 'Shedding light on the LinkedIn Order – SBO Analysis' (*Nishith Desai Associates*, 12 June 2024) <https://www.nishithdesai.com/fileadmin/user_upload/Html/Hotline/Yes_Governance_Matters_June1224-M.html> accessed 7 December 2025.

¹⁰⁶ Financial Action Task Force, *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation* (FATF 2012, updated 2023) Rec 24.

(**AMLD**).¹⁰⁷ The EU framework explicitly mandates that senior managing officials are to be identified as beneficial owners *only* after all means to identify a genuine owner have been exhausted and failed.¹⁰⁸

The Ministry of Corporate Affairs must amend Rule 2(1)(h) to mirror this strict hierarchy.¹⁰⁹ Critically, the amendment should clarify that control refers to powers held *outside* of an employment contract. A CEO exercising authority granted by the board is merely doing their job. However, a CEO pulling strings from the shadows is a beneficial owner. Adopting the EU's proven cascading test ensures that identifying a CEO is understood as a procedural fallback for compliance, rather than a false declaration that they own the enterprise.

B. Defining Professional Capacity Safe Harbors

The Ministry of Corporate Affairs should introduce a specific safe harbor provision. This amendment would clarify that individuals acting in a purely professional capacity do not fall under the definition of significant influence.¹¹⁰ Following the United Kingdom's example, the law should state that a director or manager is not a beneficial owner solely due to their employment, as long as they hold less than ten percent of the shares.¹¹¹

This protection would have clear limits. It would not shield individuals who possess rights beyond a standard employment contract. For instance, a CEO who holds veto powers over shareholder meetings or enjoys a profit-sharing arrangement exceeding ten percent would still be classified as a significant beneficial owner. This nuanced approach effectively separates professional management from actual ownership control.

¹⁰⁷ Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing [2015] OJ L141/73, art 3(6)(a)(ii).

¹⁰⁸ *ibid.*

¹⁰⁹ n 2, r 2(1)(h).

¹¹⁰ Bryan Cave Leighton Paisner, 'PSC Rules – Your Questions Answered' (February 2016) <https://www.bclplaw.com/a/web/150130/PSC_rules_-_Your_questions_answered.pdf> accessed 1 December 2025.

¹¹¹ Földes, Á., Murphy, M., Martini, M., & Unger, D. (2017). WHERE IS BENEFICIAL OWNERSHIP RELEVANT? In *BENEFICIAL OWNERSHIP: HOW TO FIND THE REAL OWNERS OF SECRET COMPANIES: A guide for journalists and civil society in Ghana, Kenya & Nigeria* (pp. 4–7). Transparency International. <<http://www.jstor.org/stable/resrep20573.4>> accessed 30 November 2025

C. Advance Ruling Mechanism for SBO

Global corporate structures are often too complex, making the self-assessment of significant influence legally risky. To fix this uncertainty, the Ministry should introduce an Advance Ruling Mechanism for SBO compliance. This is essentially a verify-before-you-file facility. It would allow companies to voluntarily submit their ownership charts and governing documents to a specialized authority before making a formal declaration. The authority would then examine the specific facts, such as veto rights or participation in policy decision and issue a binding decision on who exactly qualifies as the beneficial owner.

This concept is not experimental since the same is modelled on the Authority for Advance Rulings (AAR) successfully used in tax law.¹¹² A similar approach was also recently recommended by the Parliamentary Standing Committee to settle legal questions under the insolvency code.¹¹³ By shifting the focus from post-facto investigation to pre-compliance certainty, this mechanism would protect honest businesses from retrospective penalties and drastically reduce the volume of avoidable litigation.

D. The White-List for Regulated Entities

The current exemption framework under the SBO Rules is overly conservative and limited primarily to government bodies and select investment vehicles.¹¹⁴ A pragmatic expansion should extend ‘White-List’ status to subsidiaries of companies listed on credible foreign exchanges, such as the NYSE, LSE and NASDAQ. These entities are already governed by rigorous transparency and disclosure norms in their home jurisdictions. Consequently, compelling their Indian subsidiaries to pierce the corporate veil merely to identify a professional global CEO creates regulatory redundancy without enhancing actual ownership transparency.

This proposal draws on the logic of the ‘Trusted Importer’ or ‘Authorized Economic Operator’ (AEO) status in customs law.¹¹⁵ AEO entities with established compliance records receive preferential treatment. A similar approach here would treat subsidiaries of MNCs from FATF-

¹¹² Income Tax Act 1961 (43 of 1961) s 245N.

¹¹³ ‘Parliamentary panel moots advance ruling mechanism in IBC framework to tackle litigations’ (*ETLegalWorld*, 2 December 2025) <<https://legal.economicstimes.indiatimes.com/news/law-policy/parliamentary-panel-proposes-advance-ruling-mechanism-to-enhance-indias-insolvency-framework/125717484>> accessed 29 November 2025.

¹¹⁴ n 2, r 8(1).

¹¹⁵ Central Board of Indirect Taxes and Customs, Circular No 33/2016-Customs (22 July 2016).

compliant jurisdictions as effectively compliant, provided they submit their global regulatory filings.¹¹⁶

Crucially, this would not operate as an absolute immunity. The exemption should remain conditional, preserving the regulator’s power to demand specific SBO details if credible intelligence indicates risks of money laundering. This would, in turn, balance reduced compliance burdens with continued vigilance.

E. Standardized Control Metrics

The current ambiguity surrounding “control” and “significant influence” is a source of potential arbitrary application that requires the Ministry of Corporate Affairs to develop clear-cut standards or bright line tests for the definitions. In order to create the necessary predictability, these definitions will need to be based on quantifiable measures, i.e., the right to appoint at least 25% of the board members and/or other specific veto-type powers, and not vague operational participation.¹¹⁷ The process would require the removal of subjective criteria (participation in financial policy) unless they can be positively identified with action-oriented rights. Control should be determined by the contractual authority to make decisions, not simply by an ability to assist in making those decisions, so that routine management cannot be confused with beneficial ownership.

Adopting such a rigorous standard would also serve the broader goal of legal harmonization. By aligning the Significant Beneficial Ownership rules with the Competition Commission of India’s established understanding of control, regulators can eliminate fragmentation in the legal landscape.¹¹⁸ A unified definition across statutes would reduce compliance burdens and ensure that corporate governance standards remain consistent, coherent and free from conflicting regulatory interpretations.

¹¹⁶ FATF, *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation* (FATF 2012, updated 2023) Recommendation 24.

¹¹⁷ Nishith Desai Associates, ‘Revised Antitrust Playbook for Dealmakers - Takeaways from CCI’s updated Merger Control FAQs’ (*Nishith Desai Associates*, 12 September 2025) <https://nishithdesai.com/fileadmin/user_upload/Html/Hotline/Article_Sep1225-M.html> accessed 2 December 2025.

¹¹⁸ Competition Act 2002, (12 of 2003) s 5 Expl (a); *UltraTech Cement Ltd/Jaiprakash Associates Ltd* (CCI, C-2015/02/246, 12 March 2018).

Table 2: Summary of Recommended Solutions

SOLUTION	MECHANISM	BENEFIT
Cascading Test	Amend Rules to make SMO identification a clear fallback option (Step 3).	Aligns with FATF/Global norms; protects non-owner CEOs.
Professional Safe Harbor	Explicitly exclude employment-based influence from Significant Influence.	Protects professional managers; focuses on true owners.
Advance Ruling	Create a body to give binding rulings on SBO status for complex structures.	Reduces litigation; provides certainty for MNCs,
White-Listing	Exempt subsidiaries of listed companies in FATF-compliant jurisdictions.	Reduces redundancy; recognizes existing global transparency.

VIII. CONCLUSION

India's "Control" conundrum in its SBO (Substance Based Offshore) regime exemplifies how good intent may lead to unintended consequence. The purpose of the law is laudable; namely, to expose illegal wealth and provide corporate transparency so as to safeguard the financial systems from abuses. However, the most recent enforcement action against professional CEOs has pierced the wrong veil; instead of focusing on the hidden hand of the ownership group, it focused on the visible face of management. As such, the above-mentioned approach generates friction with the global commercial realities. Professionals are being penalized for the structures of the organizations they service. Additionally, India is now divergent from internationally accepted best practices which view management as a fall-back for beneficial ownership, not as a replacement. Subsequently, the approach generates uncertainty which negatively impacts the investment climate.

In order to rectify this issue, India must revise its regulatory tools. Specifically, India must not retreat from transparency, however, it must be pursued with precision. A first step in achieving this would be for India to adopt the cascading test used by the FATF. Additionally, providing safe-harbour for professional capacity is vital to protect fiduciary relationships. Furthermore, providing mechanisms for regulatory certainty via advance rulings and white lists will also improve

compliance and create an environment conducive to global commerce while maintaining transparency.

THE IBC'S BLIND SPOT: A CASE OF VALUE EROSION OF IP-CENTRIC FIRMS IN CIRP

- Tejaswini Kaushal and Srija Singh*

ABSTRACT

Intangible assets, particularly intellectual property (IP), have emerged as the primary drivers of enterprise value in contemporary, innovation-driven economies. However, India's insolvency framework, as outlined in the Insolvency and Bankruptcy Code (IBC), 2016, continues to rely on valuation architectures that were historically designed for tangible assets. This misalignment has resulted in the systematic undervaluation of IP during the Corporate Insolvency Resolution Process (CIRP), thereby undermining the IBC's core objective of maximizing value.

This paper examines how the asset-neutral valuation framework under the IBC, coupled with the absence of IP-specific valuation guidance and specialised expertise among registered valuers, structurally disadvantages IP-centric enterprises undergoing insolvency. Despite statutory recognition of intellectual property as part of the insolvency estate, prevailing valuation practices rely predominantly on cost-based approaches that fail to capture the income-generating and strategic commercial potential of patents, trademarks, know-how, and trade secrets. Procedural deficiencies relating to confidentiality, licence continuity, and disclosure during CIRP further exacerbate value erosion, particularly for secrecy-dependent assets.

Through doctrinal analysis and comparative evaluation of insolvency regimes in the United States and the United Kingdom, the paper demonstrates that asset-sensitive valuation frameworks, income-based methodologies, and licence-protection mechanisms significantly enhance

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resolution outcomes for IP-intensive firms without compromising procedural efficiency. It highlights how India's existing approach suppresses bidder confidence, distorts creditor recoveries, and discourages strategic resolution applicants in innovation-driven insolvencies.

The paper proposes targeted statutory and regulatory reforms, including recognition of IP as a distinct asset class under the IBC, mandatory adoption of internationally accepted IP valuation methodologies, early identification of IP assets during CIRP, and enforceable confidentiality safeguards. It concludes that recalibrating India's insolvency valuation architecture to reflect the economic realities of intellectual property is essential to preserving enterprise value and ensuring that the IBC remains responsive to a knowledge-based economy.

Keywords: Insolvency and Bankruptcy Code (IBC); Intellectual Property Valuation; Corporate Insolvency Resolution Process (CIRP); Intangible Assets; Value Maximisation; Comparative Insolvency Law; IP-Intensive Enterprises.

I. INTRODUCTION

"Intellectual capital is recognised as the most important asset of many of the world's largest and most powerful companies; it is the foundation for their market dominance and continuing profitability of leading corporations."

- Kelvin King, Founding Partner, Valuation Consulting¹

In contemporary capital markets, intangible assets have effectively become the true balance sheet. Assets such as intellectual property ("IP"), including patents, trademarks, copyrights, trade secrets, and proprietary know-how, now eclipse physical assets as the principal drivers of corporate value.

¹ Kelvin King, *The Value of Intellectual Property, Intangible Assets and Goodwill* (Valuation Consulting).

In India, the Insolvency and Bankruptcy Code, 2016 ("**IBC**")'s definition of assets² and the duties of the Interim Resolution Professional ("**IRP**")³ and the Resolution Professional ("**RP**")⁴ notionally include IP within the insolvency estate, but the Insolvency and Bankruptcy Board of India ("**IBBI**") (Valuation) Rules, 2017, exclude intangibles and IP as a distinct category,⁵ contributing to systematic undervaluation in the Corporate Insolvency Resolution Process ("**CIRP**").

This paper argues that the undervaluation of intellectual property under the Insolvency and Bankruptcy Code, 2016, is not incidental, but structurally embedded in the Code's asset-neutral valuation architecture and institutional design.

Resolving the paradox surrounding intangible assets is particularly timely in light of the Report of the Expert Committee to Suggest Policy Changes for Valuations under the IBC, released on 4 November 2025.⁶ Although the Report acknowledges deficiencies in the valuation of intangible assets, including IP, several critical issues remain unaddressed.

This article proposes creating a leak-proof regime by addressing critical gaps not identified by the IBBI Expert Committee. Part 2 demonstrates how the IBC's asset-neutral valuation architecture, while administratively efficient for tangible-asset enterprises, systematically destroys value in IP-centric insolvencies. Part 3 undertakes a comparative analysis of Indian provisions with those in the United States (US) and the United Kingdom (UK). Part 4 sets out short- and long-term reform agendas after examining valuation rules, institutional capacity, and licence continuity through doctrinal and comparative lenses, with a view to preventing value erosion through targeted reforms that correct this distortion without undermining CIRP timelines. The article concludes in Part 5.

² *Ibid* s 3(27).

³ Insolvency and Bankruptcy Code 2016, s 18.

⁴ *Ibid* s 20.

⁵ Insolvency and Bankruptcy Board of India (Valuation) Rules 2017, reg 35.

⁶ Insolvency and Bankruptcy Board of India, *Report of the Expert Committee to Suggest Policy Changes for Valuations under the Insolvency and Bankruptcy Code, 2016* (7 November 2025) <https://ibbi.gov.in/uploads/resources/b9954ce17061c3fe24f6a18848f9cd38.pdf> accessed 29 December 2025.

II. ASSETS WITHOUT A CLASS: INTELLECTUAL PROPERTY VALUATION AND THE LIMITS OF INDIA'S CIRP FRAMEWORK

A. Statutory Lapses in Intellectual Property Valuation

Currently, the IRP has the duty to take control and custody of all assets of the corporate debtor ("CD"), including "intangible assets, such as intellectual property" under Section 18(1)(f)(iv),⁷ and a similar responsibility extends to the RP under Section 20.⁸ Moreover, Section 36(3)(d), which pertains to the formation of the liquidation estate, specifies that the estate shall comprise both tangible and "intangible assets, including but not limited to intellectual property."⁹ The valuation framework during the CIRP is anchored in Regulation 35 of the IBBI (CIRP) Regulations, 2016, which requires two RVs to determine both the fair value of the CD as a going concern and its liquidation value in the event of liquidation, based on books of account, market data, and professional judgment.¹⁰ Sections 208(2)(d) and 208(2)(e) of the IBC mandate that RVs maintain independence and adhere to prescribed valuation methodologies.¹¹

However, *firstly*, the framework omits intellectual-property-specific valuation inputs, such as discounted cash flows ("DCFs") derived from exclusivity, enforceability, or comparable licensing transactions. Although the IRP and the RP are required to take control and custody of all assets of the CD and preserve the business as a going concern,¹² Section 3(31) of the IBC adopts an undifferentiated definition of "assets," without distinguishing between tangible and intangible property.¹³ While this approach may suffice for asset-heavy

⁷ The Insolvency and Bankruptcy Code, 2016 (No 31 of 2016) <https://ibbi.gov.in/uploads/legalframework/547c9c2af074c90ac5919fa8a5c60bd4.pdf> accessed 29 December 2025.

⁸ *Ibid* s 20

⁹ *Ibid* s 36

¹⁰ *CIRP Regulation 35 — Fair Value and Liquidation Value* (ibclaw.in) <https://ibclaw.in/cirp-regulation-35-of-ibbi-insolvency-resolution-process-for-corporate-persons-regulations-2016-fair-value-and-liquidation-value/> accessed 29 December 2025.

¹¹ *Section 208 — Functions and Obligations of Insolvency Professionals* (ibclaw.in) <https://ibclaw.in/section-208-functions-and-obligations-of-insolvency-professionals/> accessed 29 December 2025. (ibclaw.in)

¹² Insolvency and Bankruptcy Code, 2016 (No 31 of 2016), ss 17(1), 18(1).

¹³ *Ibid* s 3.

manufacturing entities, it is ill-suited to IP-driven businesses, where value resides primarily in patents, trademarks, copyrights, and technical know-how.

Secondly, although the IBC includes IP as an asset, the current framework does not treat it as a distinct asset class with specific, tailored provisions,¹⁴ unlike jurisdictions such as the US¹⁵ and the UK,¹⁶ which will be discussed later. The IBBI (Valuation) Rules, 2017 primarily identify only three asset classes for valuation purposes: land and building, plant and machinery, and securities or financial assets.¹⁷ The absence of specific guidelines for valuing IP can lead to undervaluation or neglect during the CIRP.

Thirdly, certain forms of IP, such as undisclosed information, trade secrets, and know-how, require special protection during valuation. While Section 14 of the IBC preserves IP from execution during the 180-day moratorium,¹⁸ it still exposes such assets to disclosure risks in the absence of trade secret protocols under Section 43A of the Information Technology Act, 2000,¹⁹ or under common law.

In practice, this results in resolution applicants discounting IP-heavy businesses despite viable licensing and revenue-generating potential.

B. Absence of IP-Specific Expertise in the Valuation Process

A further regulatory gap lies in the absence of IP-specific expertise among RVs. While Section 247 of the Companies Act, 2013²⁰ and the Companies (Registered Valuers and Valuation) Rules, 2017 prescribe general qualifications,²¹ they do not require demonstrable

¹⁴ Reg 35

¹⁵ M P Ram Mohan and Aditya Gupta, *Treatment of Intellectual Property License in Insolvency: Analysing Indian law in comparison with the U.S. and U.K.* (IIMA Working Paper WP 2021-08-01, Indian Institute of Management Ahmedabad, Research and Publication Department, August 2021) <https://www.iima.ac.in/sites/default/files/rnpfiles/2744308692021-08-01.pdf> accessed 29 December 2025.

¹⁶ *Ibid.*

¹⁷ Saptadip Nandi Chowdhury, *Valuation of Intangible Assets in Insolvency Proceedings* (IIPRD, 25 July 2025) <https://www.iiprd.com/valuation-of-intangible-assets-in-insolvency-proceedings/> accessed 29 December 2025.

¹⁸ Insolvency and Bankruptcy Code, 2016 (No 31 of 2016), s 14.

¹⁹ Information Technology Act, 2000, s 43A.

²⁰ Companies Act, 2013, s 247.

²¹ Companies (Registered Valuers and Valuation) Rules 2017

https://www.icsirvo.in/Docs/Companies_Registered_Valuers_Rules_2017.pdf accessed 29 December 2025.

competence in IP law, technology valuation, or intangible asset monetisation. This expertise deficit directly results in conservative or nil valuations of IP assets. RVs that cannot assess enforceability, remaining statutory life, infringement exposure, or licensing viability face heightened uncertainty and, consequently, an elevated risk of *ex post* challenge by resolution applicants (“RAs”), creditors, or adjudicating authorities (“AAs”). To mitigate potential liability and professional scrutiny, RVs often default to cost-based methods or exclude IP from valuation altogether, treating it as speculative rather than income-generating property.²²

This problem is structurally reinforced by the Committee of Creditors’ (“CoC”) reliance on asset-class RVs recognised under the IBBI framework. Since IP is not recognised as a distinct valuation class, CoCs typically appoint RVs trained in land and building or plant and machinery, whose methodologies are ill-suited to capturing the income and market dynamics of intangible assets.²³ As a result, IP valuation is subsumed within tangible asset assessment or omitted entirely, leading to systematic undervaluation of knowledge-intensive enterprises. The combined effect of liability aversion and institutional reliance on non-specialist RVs entrenches a valuation bias that is fundamentally misaligned with the IBC’s mandate of value maximisation.

C. Procedural and Confidentiality Gaps Affecting IP Value

The IBC also fails to address procedural concerns regarding the confidentiality, continuity, and transferability of IP during CIRP, with trade secrets and proprietary know-how being the most acutely affected asset classes. Unlike registered IP, the value of trade secrets is intrinsically dependent on secrecy and controlled access, both of which are routinely compromised during CIRP through broad disclosure obligations to RAs, information memoranda, and CoC deliberations.²⁴ Uncertainty regarding the transferability and

²² *Discussion Paper on Strengthening the Valuation Process under the Insolvency and Bankruptcy Code, 2016* (Insolvency and Bankruptcy Board of India, 14 November 2025) <https://ibbi.gov.in/uploads/whatsnew/07994904562b27286b00c4def2cc79a0.pdf> accessed 29 December 2025.

²³ *Ibid.*

²⁴ *Handbook on Valuation for Insolvency Resolution* (Insolvency and Bankruptcy Board of India, October 2019) <https://ibbi.gov.in/uploads/whatsnew/36cd64096137032d8a949419ec1e85b9.pdf> accessed 29 December 2025, 100.

survivability of licences further constrains valuation. In *Union of India v. Vijaykumar V. Iyer* (2019), the National Company Law Appellate Tribunal (NCLAT) held that telecom spectrum licences could not be transferred under a resolution plan without clearance of licensor dues, effectively limiting the monetisation of a critical intangible asset.²⁵ Such jurisprudence disproportionately undermines trade secrets, whose value collapses when confidentiality is diluted or when regulatory continuity is uncertain.²⁶ This incentivises excessive discounting of IP assets not due to inherent economic weakness but rather to unresolved procedural and regulatory ambiguities.

D. Valuation Distortions in Insolvency

i. Patents, Trademarks, and Copyrights

Patents, trademarks, and copyrights are among the strongest IPs held by corporations, as they are backed by a statutory regime in the country.²⁷ One would expect them to be valued accurately in insolvency proceedings, given their relative prominence; however, this is not the case. For instance, patents, as one of the most widely acquired and enforced forms of IP,²⁸ constitute a significant component of corporate value in technology-driven and research-intensive industries, yet they are routinely undervalued during CIRP. Despite this, nearly 79% of intangible asset value remains unreported on corporate balance sheets, rendering patents effectively "invisible" in insolvency proceedings that rely heavily on book values and conventional valuation methods.²⁹ Under the IBC, the absence of patent-specific valuation guidance, such as consideration of remaining protection term, enforceability, licensing revenues, or technological relevance, often results in the application of generic or cost-based approaches. This mismatch between economic

²⁵ *Vijaykumar Iyer v Union of India* MA-337/2018 in CP (IB)-298/(MB)/2018 (NCLT, Mumbai Bench).

²⁶ World Intellectual Property Organization (WIPO), *Trade Secrets* <https://www.wipo.int/en/web/trade-secrets> accessed 29 December 2025.

²⁷ Patents Act, 1970.

²⁸ National Research Council, *A Patent System for the 21st Century* (National Academies Press 2004) ch 4 <https://www.nationalacademies.org/read/10976/chapter/4> accessed 29 December 2025.

²⁹ Brand Finance, *Value of global intangible assets reaches all-time USD 79.4 trillion high* (Brand Finance, 30 October 2024) <https://brandfinance.com/press-releases/value-of-global-intangible-assets-reaches-all-time-79-4-trillion-high> accessed 29 December 2025.

significance and legal treatment results in systematic undervaluation, diminished recoveries for creditors, and weaker resolution outcomes in IP-intensive CIRPs.

By way of illustration, consider a patented pharmaceutical process owned by a CD undergoing CIRP with a remaining patent life of five years and demonstrable licensing potential. Under an income-based valuation using the relief-from-royalty method, the asset's value is derived from the royalty payments the firm avoids by owning, rather than licensing, the patent, discounted over the remaining term of protection. In contrast, a cost-based approach would confine valuation to historic or book value, disregarding future income streams altogether. Table 1 illustrates how this methodological choice alone can result in a valuation gap exceeding threefold, underscoring that reform of Regulation 35 is a matter of economic necessity rather than academic preference.

Parameter	Cost-Based Approach	Income-Based (Relief-from-Royalty)
Historic / Book Value	₹3 crore	Not relevant
Annual Revenue Base	Ignored	₹100 crore
Royalty Rate	Not applied	4%
Annual After-Tax Benefit	Not applicable	₹2.8 crore
Valuation Outcome	₹3 crore	₹10.09 crore (PV, 5 yrs @12%)

Table 1: Comparative Outcomes Under Cost-Based and Income-Based Patent Valuation

ii. Trade Secrets and Confidential Information

The absence of market comparables and the risk of disclosure of trade secrets and confidential information during insolvency proceedings further complicate valuation. International experience shows that once secrecy is compromised, the value of trade secrets can decline by 30–60%, even where the underlying business remains viable.³⁰ In the Indian insolvency framework, regulatory silence therefore incentivises conservative valuations or outright exclusion of trade secrets, driven not by weak fundamentals but by procedural uncertainty.³¹ Consequently, current insolvency valuations tend to understate the true enterprise value of firms in which confidential information and proprietary data are core drivers of value.³² In practice, bidders price this disclosure risk ex ante, leading either to steep valuation discounts or complete disengagement from IP-sensitive CIRPs.

To address this gap, specific IBBI guidance is required to impose enforceable pre-, peri-, and post-resolution confidentiality obligations on RVs, resolution professionals, interim resolution professionals, the CoC, RAs, and all other participants in the CIRP, including controlled disclosure protocols and liability for unauthorized use. Such safeguards would preserve the economic integrity of trade secrets during valuation and bidding. This reform is both timely and feasible, given that the draft Protection of Trade Secrets Bill, 2024, recommended by the 22nd Law Commission of India in March 2024, is already under consideration and seeks to confer statutory protection, penalties, and remedies for unauthorised use of trade secrets,³³ aligning Indian law with TRIPS-consistent IP frameworks that came into effect from 2005 onwards.³⁴

³⁰ OECD, *Approaches to the Protection of Undisclosed Information (Trade Secreprotocols for controlled disclosure ts)* (OECD Publishing 2014)

https://www.oecd.org/content/dam/oecd/en/publications/reports/2014/01/approaches-to-protection-of-undisclosed-information-trade-secrets_g17a245f/5jz9z43w0jnw-en.pdf accessed 29 December 2025.

³¹ *Valuation of Intangible Assets in Insolvency Proceedings* (n 19).

³² Shivam Tyagi, *IBBI's valuation norms will reduce disputes over intangible assets, say experts* (ETCFO, 26 November 2025) <https://cfo.economicstimes.indiatimes.com/news/governance-risk-compliance/ibbis-valuation-norms-will-reduce-disputes-over-intangible-assets-say-experts/125578159> accessed 29 December 2025.

³³ World Intellectual Property Organization (WIPO), *Valuing Intellectual Property Assets* <https://www.wipo.int/en/web/business/ip-valuation> accessed 29 December 2025.

³⁴ Prabhu Ram, *India's New "TRIPS-Compliant" Patent Regime: Between Drug Patents and the Right to Health* (2005) 11 Chi-Kent J Intell Prop 195 https://studentorgs.kentlaw.iit.edu/ckjip/wp-content/uploads/sites/4/2013/06/11_5JIntellProp1952005-2006.pdf accessed 29 December 2025.

E. Implications of an Inadequate Valuation Framework for Intellectual Property

“Valuation professionals must have the right experience and qualifications to assess intangible assets, because their worth cannot be determined by mechanical rules alone.”

- *World Intellectual Property Organization, IP Valuation Manual*³⁵

The valuation framework under the IBC is primarily designed for tangible assets with observable market benchmarks and does not adequately capture the economic characteristics of intangible assets. The regulatory silence on IP-specific valuation inputs systematically nudges RVs toward cost-based methodologies, which offer procedural defensibility in the absence of explicit income- or market-based guidance for intangible assets.

This disconnect, both empirically and doctrinally, is particularly acute when enterprise value is largely embedded in intangible assets. Empirically, IP assets in Indian CIRPs are often valued at only 10–25% of their estimated income- or market-based value, whereas tangible assets are commonly valued at 80–90% of benchmark values.³⁶ The consequences of such omissions were also evident in the CIRP of Uniply Industries Ltd., where the RV failed to assign any standalone value to the "UNIPLY" brand and trademarks, despite an existing royalty-bearing licence agreement.³⁷ In Uniply's disciplinary proceedings, which led to the dismissal of the RV, the IBBI noted that such omissions reflect a systemic tendency to subsume IP within generic asset categories, thereby understating its independent economic value.³⁸

Doctrinally, this creates a direct tension between the IBC's preambular mandate of value maximisation³⁹ and a valuation architecture that is indifferent to the specific characteristics of intangible assets.⁴⁰ The former is reflected in the IBC's objective of timely resolution of

³⁵ Asia-Pacific Economic Cooperation Intellectual Property Experts Group, *Intellectual Property Valuation Manual: A Preliminary Guide* (APEC Project CTI 14 2016A, January 2018).

³⁶ *Valuation of Intangible Assets in Insolvency Proceedings* (n 19).

³⁷ Insolvency and Bankruptcy Board of India, *Order IBBI/Valuation/Disc./33/2025 dated 27 November 2025* <https://ibbi.gov.in/uploads/order/02987191fc3f9c33acf0a7664ef265a2.pdf> accessed 29 December 2025.

³⁸ *Ibid.*

³⁹ Insolvency and Bankruptcy Code, 2016 (No 31 of 2016), Preamble.

⁴⁰ *Ibid* reg 35.

insolvency with value maximisation for both creditors and debtors. This objective is expressly articulated in the long title and Preamble of the IBC and has been consistently affirmed by judicial interpretation. In *Swiss Ribbons Pvt. Ltd. v. Union of India* (2019), the Supreme Court (“SC”) recognised that timely resolution is essential to prevent erosion of asset value.⁴¹

The latter demands that valuation be performed in a time-sensitive manner while accounting for characteristics such as the remaining protection term, enforceability under the Patents Act, 1970,⁴² and the Trade Marks Act, 1999,⁴³ and the monetisation potential of licensing arrangements. Despite this value-centric orientation, the regulatory framework of the IBC remains predominantly tailored to tangible, physical assets, leaving intangible assets, particularly IP, inadequately addressed in valuation and resolution processes.⁴⁴

1.2. Recognition of the Gaps in Valuation of Intangibles

The Report of the Expert Committee to Suggest Policy Changes for Valuations under the IBC, released on 4 November 2025⁴⁵, acknowledges deficiencies in the valuation of intangible assets, including intellectual property. However, its recommendations are primarily directed at achieving procedural uniformity and methodological consistency across insolvency processes, rather than addressing IP-specific valuation risks such as confidentiality, licence continuity, and income-based valuation of secrecy-dependent assets. As a result, while the Report improves formal coherence, it does not correct the structural disadvantages faced by IP-centric enterprises during CIRP.

⁴¹ *Swiss Ribbons Pvt Ltd v Union of India* (2019) 4 SCC 17.

⁴² Insolvency and Bankruptcy Code, 2016 (n 8), ss 48–53.

⁴³ *Ibid* ss 28–30.

⁴⁴ *Valuation of Intangible Assets in Insolvency Proceedings* (n 19).

⁴⁵ Insolvency and Bankruptcy Board of India, *Report of the Expert Committee to Suggest Policy Changes for Valuations under the Insolvency and Bankruptcy Code, 2016* (7 November 2025) <https://ibbi.gov.in/uploads/resources/b9954ce17061c3fe24f6a18848f9cd38.pdf> accessed 29 December 2025.

III. TREATMENT OF INTELLECTUAL PROPERTY IN INSOLVENCY: LESSONS FROM COMPARATIVE JURISDICTIONS

Notwithstanding the Committee’s recommendations, the current regime is inadequately prepared to confront a range of outstanding challenges. To better prepare the IBC for IP-centric insolvencies, this section examines how leading jurisdictions treat IP in their restructuring frameworks, which India also needs to address.

A. United States

The US provides dual lessons for the Indian insolvency regime. *Firstly*, the US Bankruptcy Code (11 U.S.C.), particularly Chapter 11, treats IP as a core estate asset under Section 541(a)(1), unlike India, where a distinct valuation asset class for IP is absent.⁴⁶ This provision expressly encompasses patents, copyrights, trademarks, trade secrets, and mask works, as defined in Section 101(35A).⁴⁷

Secondly, executory IP licences are governed by Section 365, which allows the debtor-in-possession to assume or reject such licences.⁴⁸ This provision is instructive for India as it prevents value destruction arising from abrupt licence terminations and facilitates structured monetisation and sale of IP assets. In doing so, it directly addresses the uncertainty under the CIRP regarding the transferability and commercial exploitation of IP. Doctrinally, Section 365 governs the assumption and rejection of executory contracts, defined primarily by the Countryman “material breach” test as contracts in which material obligations remain unperformed on both sides.⁴⁹ Once a contract is classified as executory, the debtor-in-possession may assume or reject it, subject to court approval, typically assessed under the “business judgment rule.”⁵⁰ Assumption preserves the contract, with post-assumption breaches accorded administrative-expense priority. In contrast, rejection constitutes a statutory breach under Section 365(g), relegating the counterparty’s claim to a pre-petition

⁴⁶ United States Bankruptcy Code, 11 USC § 541(a)(1).

⁴⁷ *Ibid* § 101(35A).

⁴⁸ *Ibid* § 365.

⁴⁹ United States Bankruptcy Code, 11 USC § 365.

⁵⁰ Bernard S Sharfman, *The Importance of the Business Judgment Rule* (Harvard Law School Forum on Corporate Governance, 19 January 2017) <https://corpgov.law.harvard.edu/2017/01/19/the-importance-of-the-business-judgment-rule/> accessed 30 December 2025.

unsecured claim.⁵¹ Crucially, rejection does not terminate the contract but merely relieves the CD from future performance, a distinction repeatedly emphasised in bankruptcy jurisprudence and legislative structure.

In *Lubrizol Enterprises v. Richmond Metal Finishers* (1985), the Fourth Circuit applied the Countryman test to hold that a non-exclusive patent licence was executory and that its rejection was a valid exercise of business judgment.⁵² However, the court went further and erroneously equated rejection with termination, holding that rejection extinguished the licensee’s right to continue using the patented technology on the ground that continued use would amount to impermissible specific performance. Relying on a negative inference from Section 365(h) and the absence of an explicit statutory safeguard for IP licensees, the court reduced the licensee’s remedy to unsecured damages, effectively treating rejection as rescission.⁵³ This interpretation exposed licensees to severe commercial risk by converting sunk investments into unrecoverable losses upon the licensor’s insolvency.

The *Lubrizol* ruling drew sustained criticism for misreading Section 365(g), conflating rejection with termination, and destabilising IP licensing markets.⁵⁴ In response, Congress enacted the Intellectual Property Bankruptcy Protection Act (“**IPBPA**”) in 1988, which introduced Section 365(n).⁵⁵ This provision allows IP licensees, upon rejection by a bankrupt licensor, either to treat the contract as terminated or to retain their rights to use the licensed IP for the contract term and any contractual extensions, subject to continued royalty payments.⁵⁶ While the IPBPA reversed *Lubrizol* for most forms of IP, trademarks were expressly excluded, allowing *Lubrizol*’s logic to persist in trademark licensing until it was

⁵¹ United States Bankruptcy Code, 11 USC § 365(g).

⁵² *Lubrizol Enterprises Inc v Richmond Metal Finishers Inc* 756 F.2d 1043 (4th Cir 1985).

⁵³ United States Bankruptcy Code, 11 USC § 365(h).

⁵⁴ *Ibid* § 365(g).

⁵⁵ Intellectual Property Bankruptcy Protection Act 1988, Pub L No 100-506, 102 Stat 2538 (codified at 11 USC § 365(n)).

⁵⁶ Richard M Assmus, Matthew V Wargin, Monique J Mulcare and Danielle A Sigal, *Protecting Against Licensor Bankruptcy in Service and License Agreements Utilizing Section 365(n)* (Mayer Brown, 8 December 2021) <https://www.mayerbrown.com/en/insights/publications/2021/12/protecting-against-licensor-bankruptcy-in-service-and-license-agreements-utilizing-section-365n> accessed 30 December 2025.

ultimately rejected by the SC in *Mission Product Holdings v. Tempnology* (2019), which reaffirmed that rejection constitutes breach, not rescission.⁵⁷

The practical implications of this framework are illustrated by Nortel’s 2011 Chapter 11 proceedings, which provide a paradigmatic example of structured IP monetisation in insolvency.⁵⁸ The telecommunications firm’s cross-border reorganisation involved auctioning a portfolio of approximately 6,000 patents and patent applications covering networking technologies, standards-essential patents, and software innovations. The Nortel auction demonstrates how explicit statutory treatment of IP and structured sale mechanisms can transform intangible assets from residual balance-sheet entries into the dominant source of estate realisations. Following the SC’s intervention, the protection afforded to IP licensees under the IPBPA, 1988, was effectively extended to trademark licensees, thereby resolving a judicial uncertainty that had persisted in American bankruptcy jurisprudence for over two decades.

Thirdly, valuation in the US framework is typically undertaken by specialist firms in accordance with the Uniform Standards of Professional Appraisal Practice (USPAP).⁵⁹ India lacks clear guidance and expertise in IP valuation, as in the US.

Overall, India needs to secure recognition of IP as a distinct class, establish an executory IP licensing regime, and build expertise in RV for IP valuation, as in the US. The next section examines the UK insolvency regime to determine whether it contains powers analogous to Section 365 of the US Bankruptcy Code and whether comparable safeguards exist for IP-centric enterprises.

B. United Kingdom

Similar to India, the UK, under its Insolvency Act 1986 (“**IA 1986**”), IP vests in the office-holder as “property” under section 436, encompassing patents, trademarks, copyrights, and

⁵⁷ *Mission Product Holdings Inc v Tempnology LLC* 139 S Ct 1652 (2019).

⁵⁸ *In the matter of the Nortel Companies; In the matter of the Lehman Companies; In the matter of the Lehman Companies (No 2)* [2013] UKSC 52 https://supremecourt.uk/uploads/uksc_it2011_0259_judgment_ce1fe771d0.pdf accessed 30 December 2025.

⁵⁹ Ocean Tomo, *Valuation in Bankruptcy* <https://oceantomo.com/services/valuation-in-bankruptcy/> accessed 30 December 2025.

know-how. Administrators operating under Schedule B1 prioritise corporate rescue, a policy objective reinforced by the Enterprise Act 2002, under section 248.⁶⁰ The UK also has provisions in Sections 178–182 that empower liquidators to disclaim “onerous” property, including IP licences, while Section 181 permits interested parties, such as exclusive licensees, to apply to the court for the vesting of the disclaimed property. Registered IP licences bind successors in title under UK Intellectual Property Office (UKIPO) rules, thereby constraining unnotified transfers and preventing value leakage through silent sales,⁶¹ akin to the effect of India’s moratorium provision.⁶²

Notably, neither English nor Indian insolvency law provides a clear and comprehensive analogue to Section 365 of the US Bankruptcy Code for the rejection of IP licences during reorganisation proceedings. The closest functional parallel lies in the operation of *ipso facto* clauses, contractual provisions that permit termination, modification, or suspension of obligations solely upon the counterparty’s entry into insolvency. While *ipso facto* clauses raise significant concerns for value preservation and going-concern restructuring, English law has historically favoured contractual autonomy, invalidating such clauses only in limited circumstances following the introduction of Section 233B of the Insolvency Act 1986, and then only for contracts involving the supply of goods and services to the CD.⁶³

Indian insolvency law adopts an even more restrained approach, lacking an explicit statutory position on *ipso facto* clauses and relying instead on the moratorium under Section 14 of the IBC and judicial interpretation.⁶⁴ Although amendments such as Sections 14(2) and 14(2A) provide limited protection for essential and critical supplies, they fall short of a

⁶⁰ Enterprise Act 2002, s 248.

⁶¹ Stephens Scown LLP, *How Do I Transfer Intellectual Property?* <https://www.stephens-scown.co.uk/intellectual-property-2/how-do-i-transfer-intellectual-property/> accessed 31 December 2025.

⁶² *Ibid* s 14.

⁶³ Forbes Solicitors, *Transferring Intellectual Property Rights* <https://www.forbessolicitors.co.uk/law-for-business/intellectual-property/transferring-intellectual-property-rights> accessed 31 December 2025.

⁶⁴ *Insolvency and Bankruptcy Code, 2016: Section 3 — Definitions (Part I: Preliminary)* (ibclaw.in) <https://ibclaw.in/section-3-definitions-under-insolvency-and-bankruptcy-code-2016-ibc-2016-part-i-preliminary/> accessed 31 December 2025.

general prohibition on insolvency-triggered terminations and leave substantial discretion with RPs and AAs.⁶⁵

The power to disclaim onerous contracts under both regimes is confined strictly to liquidation proceedings and does not extend to administration or the CIRP. The disclaimer operates only to release the CD from future obligations, without extinguishing the counterparty's proprietary or usage rights, thereby preserving licence use while relegating losses to unsecured claims. Indian tribunals have consistently held that RPs lack authority to unilaterally modify or terminate pre-petition contracts during the CIRP, even with creditor consent.⁶⁶

Consequently, the interplay between statutory design and judicial interpretation in both jurisdictions precludes the rejection or disclaimer of IP licences in reorganisation proceedings. This doctrinal gap highlights the need for India to move towards a framework similar to the US's than the UK's, as jurisdictions with explicit licence-continuity mechanisms achieve materially higher realisations from IP portfolios during restructuring than those without such protections.⁶⁷

IV. A REFORM AGENDA: RECOMMENDATIONS FOR SENSITISED INTELLECTUAL PROPERTY VALUATION UNDER THE IBC

The reform initiatives proposed by the Expert Committee and reflected in IBBI's Discussion article on Strengthening the Valuation Process under the IBC are primarily aimed at correcting procedural fragmentation and methodological inconsistencies in insolvency valuation. These measures seek to achieve uniformity, comparability, and enterprise-level coherence across CIRP, liquidation, and other insolvency processes. However, their focus remains largely asset-agnostic. They do not directly address the distinct legal, commercial,

⁶⁵ *IBBI Discussion Paper on Strengthening the Valuation Process under the Insolvency and Bankruptcy Code, 2016* (ibclaw.in) <https://ibclaw.in/ibbi-discussion-paper-on-strengthening-the-valuation-process-under-the-insolvency-and-bankruptcy-code-2016/> accessed 31 December 2025.

⁶⁶ *Jaypee Infratech Ltd* (NCLT, Chandigarh-Haryana Bench, CP(IB) No 147/Chd/Hry/2018, 23 May 2019) <https://ibclaw.in/nclt-order-jaypee-infratech/> accessed 31 December 2025.

⁶⁷ Guillem Gabriel-Pizarro, *Mirroring the American Bankruptcy Code? IP Licences in the European Insolvency Harmonisation Project* (2024) 73 *GRUR International* 128.

and informational risks associated with IP, including confidentiality concerns, licence encumbrances, transferability constraints, and the valuation of secrecy-based assets such as trade secrets. Accordingly, the recommendations set out below are additions to the Committee’s proposals to better address IP-specific gaps that may persist even after the IBBI-envisioned harmonised valuation framework is implemented.

A. Statutory Reforms

i. *The Case for an Amendment*

This issue is particularly significant for intangible property valuation because IP derives much of its value from stability, predictability, and the enforceability of licensing arrangements during financial distress. The *Principles of Effective Insolvency*, published by the World Bank in 2016, recognise that insolvency regimes must permit calibrated interference with executory contracts to prevent value erosion and avoid saddling the estate with net-burden obligations that exacerbate losses.⁶⁸ Consistent with this approach, several jurisdictions permit the rejection or modification of onerous pre-petition contracts, as in the US. Recent reforms in Canada have extended explicit statutory protection to IP licensees, whereas Germany has acknowledged the issue but has not implemented comprehensive reforms.⁶⁹

Against this comparative backdrop, introducing a provision analogous to Section 365 of the US Bankruptcy Code within the Insolvency and Bankruptcy Code, 2016 would permit calibrated interference with executory intellectual property licences where continuing obligations impose a net burden on the insolvency estate. Such interference should be permitted only where it demonstrably reduces estate liabilities and preserves going-concern value, with judicial oversight ensuring that the exercise is economically justified and proportionate. Any interference must operate as an election to breach rather than termination, thereby confining licensees to pre-petition unsecured damages claims while

⁶⁸ Morgan, Lewis & Bockius LLP, *Assumption and Rejection of Midstream Contracts in Bankruptcy* (Morgan Lewis, 17 June 2021) <https://www.morganlewis.com/pubs/2021/06/assumption-and-rejection-of-midstream-contracts-in-bankruptcy> accessed 31 December 2025.

⁶⁹ *Protecting IP rights in bankruptcy — a look at US section 365(n)* (Mondaq, 3 July 2024) <https://www.mondaq.com/home/redirect/original/1710476> accessed 31 December 2025.

preserving their choice to continue or exit the licence.⁷⁰ This approach would reduce prospective liabilities without conferring a unilateral rescission power on the corporate debtor, aligning insolvency outcomes with general principles of contract law, and safeguarding the valuation integrity of intellectual property during restructuring.

ii. Early Identification, Audit, and Preservation of IP Assets at CIRP Commencement

International best practices consistently emphasize that the real value of an insolvent enterprise can be preserved only if its assets are identified and protected at the earliest stage of the process. The UNCITRAL Legislative Guide on Insolvency Law reflects this concern by emphasising the importance of timely identification and management of assets to prevent value erosion. This concern is not alien to Indian insolvency law. The Insolvency and Bankruptcy Code, 2016, requires the resolution professional to prepare an Information Memorandum that captures the assets and liabilities of the corporate CD in a manner sufficient for valuation.⁷¹

However, while Regulation 36 of the IBBI (CIRP) Regulations, 2016 formally covers both tangible and intangible assets, it does not require the disclosure of IP with any meaningful specificity. In practice, this often results in patents, licences, trade secrets, or technical know-how being listed cursorily, without clarity on ownership, licensing arrangements, subsistence and maintenance status, encumbrances, or linkage to revenue streams.⁷² Although recent amendments to Regulation 36 have strengthened disclosure norms to improve transparency, for example, by mandating the identification of avoidance

⁷⁰ *Comparative Analysis of the Insolvency and Bankruptcy Code of India and the US* (TaxGuru, 26 September 2023) <https://taxguru.in/corporate-law/comparative-analysis-insolvency-bankruptcy-code-india-u-s.html> accessed 31 December 2025.

⁷¹ United Nations Commission on International Trade Law (UNCITRAL), *UNCITRAL Legislative Guide on Insolvency Law* (United Nations, adopted 25 June 2004) https://www.iiiglobal.org/file.cfm/159/docs/UNCITRAL_Legislative_Guide_Insolvency_Law.pdf accessed 31 December 2025.

⁷² Insolvency and Bankruptcy Board of India, *Discussion Paper – Strengthening safeguards and transparency in the CIRP* (17 November 2025) <https://ibbi.gov.in/uploads/whatsnew/a7bfbe7ab72d0416cca0031427f7b0f8.pdf> accessed 31 December 2025.

transactions, IP continues to be treated as an afterthought rather than as a central value driver in IP-intensive enterprises.

To address this gap, the IBBI should require, by mandate, the inclusion of a dedicated IP-specific schedule in the Information Memorandum at the commencement of the CIRP. Such a schedule should, at a minimum, disclose the nature of each IP right; ownership and registration status; subsistence period; licensing or encumbrance arrangements; revenue attribution; and any legal or contractual restrictions on transfer or use. Introducing this requirement would not alter the architecture of the IBC, but would operationalise its value-maximisation objective by ensuring that RAs assess enterprise value based on complete and commercially meaningful information, thereby preserving economically significant intangibles from inadvertent erosion during CIRP.⁷³

iii. Recognition of Intellectual Property as a Distinct Asset under IBC

IP should be expressly recognised as a distinct asset category under the Insolvency and Bankruptcy Code, rather than being subsumed under the generic category of intangible assets. Academic and empirical analyses demonstrate that the absence of IP-specific statutory recognition leads to systematic undervaluation in insolvency, particularly for innovation-driven enterprises in which enterprise value is predominantly embedded in patents, know-how, and confidential information. Treating IP as an undifferentiated subset of intangibles expands RV discretion, encourages conservative assumptions, and contributes to inconsistent outcomes and valuation-related litigation during CIRP.

Judicial recognition of the independent commercial and contractual value of IP further strengthens the case for distinct statutory treatment. In *Enercon (India) Ltd. v. Enercon GmbH*, the SC addressed whether disputes arising from an IP Licence Agreement (IPLA) could be referred to arbitration when the underlying agreement was alleged to be unenforceable. The Court held that the arbitration clause embedded in the IPLA was

⁷³ Insolvency and Bankruptcy Board of India, *Discussion Paper – Strengthening safeguards and transparency in the CIRP* (17 November 2025) <https://ibbi.gov.in/uploads/whatsnew/a7bfbe7ab72d0416cca0031427f7b0f8.pdf> accessed 31 December 2025.

independently enforceable and that IP-linked contractual rights could not be disregarded on the basis of technical objections concerning the status of the substantive agreement.

The Court observed that “*The doubt raised by the Appellant is that there is no concluded IPLA [...] But this cannot affect the existence of a binding Arbitration Agreement.*”⁷⁴

This reasoning reflects a broader judicial understanding that IP arrangements carry autonomous commercial significance and generate enforceable legal obligations even where formal uncertainty surrounds the underlying contract. By recognising the separability and enforceability of IP-linked rights, the Court implicitly affirmed that such arrangements are central to commercial value creation and cannot be dismissed as merely technical or contingent interests.⁷⁵

In the context of insolvency, where resolution outcomes depend on the continuity, enforceability, and monetisation of IP and associated contractual rights, this approach is particularly instructive. Explicit statutory recognition of IP as a distinct asset class under the IBC would reduce reliance on *ad hoc* judicial interpretation, constrain excessive RV discretion, and minimise valuation disputes by anchoring IP treatment within a clear legislative framework. Such recognition would align valuation practice with economic reality, enhance predictability for RAs, and ensure that IP-centric enterprises are not structurally disadvantaged during CIRP due to formal or procedural uncertainty.

iv. Adoption of Internationally Accepted IP Valuation Methodologies

The valuation of IP under the IBC should mandatorily prioritise internationally accepted income, market-, and cost-based valuation methodologies, rather than treating them as optional best practices. While the World Intellectual Property Organization (WIPO) recognises these approaches as global best practices for assessing the economic value of patents, know-how, and other technology-driven intangible assets, the current Indian insolvency framework does not require their application. As a result, RVs frequently rely

⁷⁴ *Enercon (India) Ltd v Enercon GmbH* (2014) 5 SCC 1 [75]–[77].

⁷⁵ *Ibid.*

on historic cost or book-value proxies, which are ill-suited to capturing the future income-generating potential of IP and systematically understate IP value during CIRP.⁷⁶

This deficiency is not merely methodological but structural. The absence of a mandatory preference for income-based techniques, particularly the relief-from-royalty method, distorts resolution outcomes by anchoring valuations to accounting artefacts rather than commercial reality. WIPO recognises the relief-from-royalty method as a standard income-based technique for valuing patents and other technology assets, under which IP is valued as the present value of royalty payments that a hypothetical licensee would have paid but for ownership of the asset. Where reliable royalty benchmarks exist, failure to apply such methods results in a material divergence between legal valuation and economic value.⁷⁷

Accordingly, the IBBI should require the application of internationally accepted IP valuation methodologies through binding circulars or amendments to valuation guidelines, subject to reasoned deviation only where such methods are demonstrably inapplicable. This would not require a statutory overhaul, but would decisively recalibrate valuation practice under Regulation 35 toward economic substance. Making income-based methodologies the default rule for IP-intensive assets would materially enhance valuation accuracy, reduce inter-valuer divergence, and directly advance the IBC's value-maximisation objective.

B. Regulatory Reforms

i. Establishing Synergetic Dual-regulator Oversight

Effective regulation of IP valuation and protection in insolvency will necessarily require coordinated oversight by the IBBI and the Controller General of Patents, Designs and Trade Marks (CGPDTM). While this may raise concerns of regulatory overlap, Indian jurisprudence already recognises that parallel or complementary regulatory action by

⁷⁶ World Intellectual Property Organization (WIPO), *Learning Points: Intellectual Property Panorama, Issue 11* (WIPO, 2023) https://www.wipo.int/documents/d/business/docs-en-pdf-ip_panorama_11_learning_points.pdf accessed 1 January 2026.

⁷⁷ *Ibid.*

multiple authorities is not per se impermissible.⁷⁸ The SC's jurisprudence in competition–IP interface cases demonstrates that sectoral regulators and generalist regulators may simultaneously exercise jurisdiction, provided each acts within its statutory mandate.

Earlier decisions, such as *CCI v. Bharti Airtel Ltd.*⁷⁹, emphasised the need for deference to sectoral regulators at the threshold stage. At the same time, subsequent cases, including *Lava International Ltd. v. Telefonaktiebolaget LM Ericsson*⁸⁰, clarified that the existence of specialised IP fora does not automatically oust the jurisdiction of the Competition Commission of India where competition concerns arise. More recently, the SC's September 2025 order in the *Monsanto/Ericsson* litigation did not conclusively endorse or reject dual-regulator proceedings on a single factual matrix, instead leaving the issue for case-by-case assessment. Importantly, however, the Court did not characterise parallel regulatory action as illegal or *ultra vires*.

This jurisprudential position supports a model of dual oversight in the insolvency context, whereby breaches relating to IP valuation, disclosure, or misuse during a CIRP can trigger regulatory scrutiny under both insolvency and IP law. Accordingly, any framework governing IP valuation in insolvency should envisage coordinated action, with IBBI guidance operating alongside CGPDTM expertise, particularly in matters involving enforceability, scope of rights, licensing integrity, and confidentiality. Such a synergetic approach would enhance valuation accuracy, deter opportunistic conduct during CIRP, and align insolvency practice with India's broader statutory IP regime.⁸¹

⁷⁸ Axiom5 Law Chambers LLP and Shivanghi Sukumar, *The CCI and the New Boundaries of Competition Enforcement* (Axiom5, 18 September 2025) <https://blog.axiom5.in/p/the-cci-and-the-new-boundaries-of> accessed 1 January 2026.

⁷⁹ *Competition Commission of India v Bharti Airtel Ltd* (2019) 2 SCC 521.

⁸⁰ *Lava International Ltd v Telefonaktiebolaget LM Ericsson* 2024 SCC OnLine Del 1075.

⁸¹ World Intellectual Property Organization (WIPO), *Intellectual Property for SME's: WIPO Guide — Reference T15* (WIPO, 2016) https://www.wipo.int/edocs/mdocs/sme/en/wipo_smes_tlv_11/wipo_smes_tlv_11_ref_t15.pdf accessed 1 January 2026 .

V. CONCLUSION

As India's economy increasingly pivots toward innovation-driven growth, IP has become central to enterprise valuation and commercial viability. Yet, the current insolvency valuation framework under the IBC remains structurally ill-equipped to address the distinctive economic characteristics of IP-centric firms. The resulting undervaluation is not incidental but embedded within the IBC's asset-neutral design, procedural silences, and institutional limitations.

Without targeted reform, the IBC risks operating as a value-destructive mechanism for technology- and knowledge-driven enterprises, discouraging strategic investment and undermining creditor recoveries. Aligning insolvency valuation practices with the realities of intangible-dominated business models is therefore no longer optional but imperative. Sensitising the insolvency framework to intellectual property is essential to ensuring that the IBC fulfils its mandate of value maximisation while remaining responsive to the evolving contours of India's corporate economy.

DATA, DOMINANCE, AND DENIAL OF MARKET ACCESS IN DIGITAL ECOSYSTEMS

- Tanya Verma and Akshat Puhania*

ABSTRACT

Market power in digital economies is increasingly exercised not through prices or entry, but through the architecture of data.” This paper attempts to examine how Competition Law should respond to data-driven, exclusionary behaviour in the presence of dominance and harm to competition in legally distinct but functionally integrated markets. Based on the WhatsApp/Meta case study by the Competition Commission of India (CCI) and the National Company Law Appellate Tribunal (NCLAT), this paper will suggest that Indian Competition Law has developed a new approach to market disjunction and functional connection. Within this strategy, market dominance is established within a strictly localized, relevant market, and exclusionary effects are exerted in adjacent markets through the control of data flows, user networks, and monetization pipelines, without collapsing markets or applying classical leveraging doctrine. Three-fold claims arise. First, it demonstrates that zero-price digital markets can be thoroughly analyzed in terms of dominance, data extraction power, and network lock-in, and that these factors are not a direct expression of market power in terms of price. Second, it brings back a conceptualization of data as a competitively relevant input whose asymmetric internal redistribution may be doomed under Section 4(2)(c) of Competition Act, with no reference to price impacts, contractual exclusivity, or formal entry into the market. Third, it explains why solutions based on consent and those based on mere behavioral redress are structurally unable to rectify architectural data abuse, as well as identifying the institutional barriers to structural intervention that exist in India at present. In the comparative context of the European Union, the United States, China, and emerging market jurisdictions, the paper argues that the rationale of NCLAT represents a convergence in doctrine, but should not be interpreted as regulatory aggression. It concludes by identifying Section 4(2)(c) as a principled ramification of data foreclosure analysis in the modern digital marketplace.

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Keywords: Zero-pricing, network lock-in, data dominance, abuse of dominant position.

I. PREMISE

India's data landscape illustrates how platform dominance and competitive harm can diverge structurally. In early 2025, India had more than 806 million internet users¹ and around 491 million social media profiles,² with platforms like WhatsApp penetrating deep into this market. WhatsApp alone had over 2.7 billion monthly active users globally by Q1 2025,³ with 850 million of those daily active users being in India, which is its largest single-country base.⁴ Concurrently, digital media accounted for nearly 46% of India's Rs. 1 lakh crore advertising market, highlighting the scale and economic centrality of data-driven advertising.⁵ This divergence gives rise to a doctrinal challenge; traditional abuse of dominance analysis presumes that market dominance and competitive foreclosure arise within the same relevant market, typically assessed through price, output, or explicit exclusionary conduct.⁶ Platform ecosystems challenge this price. Dominance may be entrenched in zero-price markets via network effects and lock-in, while competitive harm materializes in monetized markets that rely on upstream inputs, most notably user data which cannot be priced or quantified in conventional ways.⁷

¹ DataReportal, 'Digital 2025: India' (25 February 2025) <<https://datareportal.com/reports/digital-2025-india>> accessed 2 January 2026.

² Id.

³ Statista, Number of monthly active WhatsApp users worldwide from 2013 to 2025 (in billions) (Statista) <<https://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/>> accessed 2 January 2026.

⁴ World Population Review, WhatsApp Users by Country 2025 (*WorldPopulationReview.com*, 2025) <<https://worldpopulationreview.com/country-rankings/whatsapp-users-by-country>> accessed 2 January 2026.

⁵ Digital advertising share in India rises to 46 % in FY25 (*MediaBrief.com*, 9 August 2025) <<https://mediabrief.com/digital-advertising-share-india-46-percent-fy25/>> accessed 2 January 2026.

⁶ Pankhudi Khandelwal, 'Tying, Self-preferencing and the Digital Competition Bill: A Changing Landscape for Competition Intervention?' (2024) 19(2) *Indian Journal of Law and Technology* 69, 72.

⁷ OECD, *Big Data: Bringing Competition Policy to the Digital Era* (OECD Publishing 2016) 22–25.

The NCLAT's decision in *WhatsApp LLC v. Competition Commission of India*⁸ confronts this problem head-on. The Tribunal affirmed WhatsApp's dominance in the OTT messaging market and upheld findings of abuse arising from the 2021 privacy-policy change.⁹ At the same time, it rejected CCI's leveraging theory under Section 4(2)(e)¹⁰ but sustained 'denial-of-market-access' under Section 4(2)(c).¹¹ The court reasoned that the mandatory sharing of WhatsApp user data with Meta entities foreclosed competition in the online display-advertising market, even though WhatsApp neither operated in, nor held dominance within that downstream market.¹² That combination of doctrinal restraint in form, effects-based breadth in substance, marks a notable inflexion point in Indian competition jurisprudence.

The authors herein argue that judgment implicitly recognizes a theory of data-driven denial of market access, pursuant to which exclusionary abuse may be established across legally and economically disjunct markets without meeting classical doctrinal requirements of leveraging. By decoupling Section 4(2)(c) from intent and structure-dependent logic traditionally associated with Section 4(2)(e), the Tribunal reorients abuse analysis toward the foreclosure of non-replicable competitive inputs, most notably, user data, rather than toward formal market entry or dominance within affected markets. Empirical foundation for this doctrinal shift lies in the role of data as a central competitive input in digital advertising.¹³ Messaging platforms generate datasets that are neither substitutable with browser data nor with third-party identifiers.¹⁴ As such identifiers are phased out, first-party data increasingly determines competitive performance. Mandatory aggregation of

⁸ National Company Law Appellate Tribunal, *WhatsApp LLC v Competition Commission of India* (Judgment 4 November 2025 and Interim Order 23 January 2025) <https://nclat.nic.in/display-board/view_order_pdf?d=2025-11-04&fid=9910110000492025&l=delhi&order_type=J> accessed 2 January 2026.

⁹ *Id.*

¹⁰ The Competition Act 2002, s 4(2)(e).

¹¹ The Competition Act 2002, s 4(2)(c).

¹² *WhatsApp LLC v Competition Commission of India* (NCLAT, Competition Appeal (AT) No 1 of 2025, judgment dated 4 November 2025) para 223.7 <https://nclat.nic.in/display-board/view_order> accessed 2 January 2026.

¹³ Maurice E Stucke and Allen P Grunes, *Big Data and Competition Policy* (Oxford University Press 2016) <<https://academic.oup.com/oxford-law-pro/book/57680>> accessed 2 January 2026.

¹⁴ In Re: Updated Terms of Service (WhatsApp Policy Case) *Suo Motu* Case No 01 of 2021 (CCI, 18 November 2024) para 238; Ministry of Corporate Affairs, Report of the Committee on Digital Competition Law (2024) 47.

WhatsApp data into Meta's advertising infrastructure thus alters competitive conditions through informational asymmetry rather than conventional price or output effects. The resulting harm is exclusionary: *rivals cannot compete on an equivalent informational footing*.

Existing literature has yet to fully theorise this form of harm. European competition law has approached ecosystem power largely through self-preferencing and leveraging doctrines, while privacy-competition scholarship has tended to focus on exploitative abuse and user consent.¹⁵ Both strands leave a conceptual lacuna in which dominance, conduct, and harm are dispersed across distinct markets linked primarily through data flows. The NCLAT judgment exposes this gap by sustaining denial of market access without collapsing markets or imputing dominance in the downstream market, while raising unresolved tensions, most notably concerning corporate attribution and the outer boundaries of Section 4(2)(c).¹⁶ For the purpose of this paper, Section-II sets out the factual and procedural background of the dispute, then Section-III analyses market definition and structural disjunction between messaging and advertising markets. Section-IV further reconstructs the abuse doctrine in the data economy by demonstrating why classical leveraging theory fails and how Section 4(2)(c) can accommodate input foreclosure. Section-V then situates the Indian approach within a comparative global context, with Section-VI critiquing remedial design and limits of enforcement, alongside Section-VII, thereby providing a synthesis doctrinal framework for data-access abuse and proposing normative guardrails for its application.

II. THE CROSS-MARKET ABUSE PROBLEM, VIS-À-VIS DATA & DOMINANCE

For specific clarity, the issue of the WhatsApp dispute becomes quintessential. The proceedings raised a critical question for competition law jurisprudence to confront a

¹⁵ Elias Deutscher, *Regulating Competition in the Digital Network Industry* (Cambridge University Press 2025); Ben Rininger, 'The Ecosystem Theory of Harm in Merger Enforcement: A Transatlantic Comparison' (2025); U Cin L Rev 830.; 3 Arletta Gorecka, *The Interface between Competition Law and Data Privacy Law: Violation of Privacy as an Exploitative Theory of Harm under Article 102 TFEU* (Springer 2024) 14.

¹⁶ *Supra* n12.

preliminary but decisive question of *whether data governance practices formulated through privacy policies and consent architectures fall within CCI's jurisdiction when they simultaneously engage constitutional privacy and data-protection concerns*. WhatsApp's challenge was not merely jurisdictional; it sought to conceptually insulate data extraction from competition law scrutiny by recharacterizing the impugned conduct as a matter of user consent and informational autonomy rather than as an exercise of market power.¹⁷ This attempt was decisively rejected. Drawing on Section 18¹⁸ and the expansive language of Section 4,¹⁹ the Delhi High Court²⁰ and the Supreme Court²¹ affirmed that where data practices alter competitive conditions, distort bargaining power, or restructure access to markets, they fall squarely within the CCI's mandate. The holding aligns with the Supreme Court's earlier reasoning in *CCI v. Bharti Airtel Ltd*²² that sectoral or regulatory overlap cannot immunize conduct from competition law where exclusionary or exploitative effects are plausibly alleged.

This jurisdictional affirmation does more than allocate institutional competence, it performs a foundational doctrinal role. It allows data to be conceptualized not as a passive residue of user interaction, but as a competition-relevant input through which market power can be exercised. Comparative jurisprudence supports this understanding. In *Facebook v. Bundeskartellamt*,²³ the German Federal Court treated coercive data practices formally articulated as privacy concerns potentially being exploitative conduct when sustained by dominance. Similarly, the European Commission's clearance of Google/DoubleClick accepted that data concentration, even in absence of immediate price effects, could reshape competitive conditions.²⁴ Policy developments move in the same direction. OECD's work on data-driven innovation and the EU Digital Markets Act proceeds on the premise that data

¹⁷ *Supra* n8.

¹⁸ The Competition Act 2002, s 18.

¹⁹ The Competition Act 2002, s 4.

²⁰ *WhatsApp LLC v Competition Commission of India & Anr*, LPA 163/2021, Delhi High Court (Division Bench).

²¹ *WhatsApp LLC v Competition Commission of India & Anr*, SLP (C) No 17772/2022, Supreme Court of India.

²² *CCI v Bharti Airtel Ltd* (2019) 2 SCC 521.

²³ *Facebook v Bundeskartellamt* KVR 69/19 (BGH, 23 June 2020).

²⁴ Case COMP/M 4731 Google/DoubleClick [2008] OJ C184/10, paras 360-366.

accumulation functions as a structural source of market power.²⁵ Seen against this background, the Indian courts' refusal to displace CCI is not merely deferential. It reflects a deliberate recognition of data as a competition variable, rather than a concern to be exhausted within privacy regulation alone. Within this jurisdictional frame, the 2021 WhatsApp privacy policy represents a paradigmatic non-price exercise of dominance. By eliminating opt-out mechanisms and conditioning continued access to a dominant messaging service on expanded data sharing with Meta entities. Policy imposed a unilateral alteration on users with no meaningful exit. In a zero-price market marked by strong network effects and social lock-in, this modification operated as a coercive extraction of consideration rather than a voluntary exchange.

Indian competition law does not confine unfairness to monetary terms. Section 4(2)(a)(i)²⁶ proscribes unfair conditions as such, and the CCI's jurisprudence, most clearly in *Fx Enterprise Solutions v. Hyundai Motor India*²⁷ recognizes that abuse may stem from structural imbalance even in the absence of price exploitation. This understanding aligns with *United Brands v. Commission*,²⁸ where the ECJ rejected the reduction of unfairness to excessive pricing, and with *Facebook v. Bundeskartellamt*,²⁹ which treated coerced data collection as exploitative abuse in zero-price markets. The competitive significance of the WhatsApp policy lies not in the formal presence of consent, but in its inevitability. Behavioural economics literature consistently demonstrates that consent in network markets is systematically distorted by switching costs and coordination barriers.³⁰ Users could not realistically exit WhatsApp without sacrificing social connectivity itself. On this basis, CCI and NCLAT were correct to treat privacy degradation as a non-price manifestation of market power. This finding is not an endpoint. It functions as a doctrinal hinge, establishing the upstream dominance necessary to explain how data extraction subsequently operates as the conduit for downstream exclusion.

²⁵ OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being* (OECD Publishing 2015) 195–197.

²⁶ The Competition Act 2002, s 4(2)(a)(i).

²⁷ *Fx Enterprise Solutions India Pvt Ltd v Hyundai Motor India Limited* CCI Case No 36/2014.

²⁸ *United Brands v Commission* 61976CJ0027-EN-EUR-Lex.

²⁹ *Supra* n26.

³⁰ *Supra* n7.

That exclusion materializes through data integration.³¹ Investigation showed that WhatsApp-generated datasets' social graphs, communication metadata, and behavioral signals were systematically integrated into Meta's advertising infrastructure.³² These datasets are neither substitutable nor replicable through participation in the online display advertising market. As empirical studies by the UK Competition and Markets Authority³³ and OECD³⁴ demonstrate that first-party data has become the decisive competitive input in digital advertising, particularly as third-party tracking mechanisms are progressively withdrawn.

The resulting harm is therefore not contractual denial or explicit refusal. It is input foreclosure achieved through the asymmetrical accumulation of non-replicable data. Indian competition law has long treated denial of market access under Section 4(2)(c)³⁵ as an effects-based inquiry. In *MCX Stock Exchange v. NSE*,³⁶ foreclosure arose from structural advantages rather than overt exclusion; in *Dhanraj Pillay v. Hockey India*,³⁷ form was expressly subordinated to effect. Comparative jurisprudence points in the same direction. From *United States v. Microsoft*³⁸ to *Google Android*,³⁹ courts and regulators have recognized that control over data flows and interoperability can operate as exclusionary bottlenecks even where rivals are not formally denied market entry. The collapse of the leveraging charge must be read against this factual architecture. Section 4(2)(e) presumes a familiar template: dominance, conduct, and competitive effect traceable to the same enterprise as it enters or protects a secondary market.⁴⁰ NCLAT rejected leveraging because it treated that template as a corporate formality. WhatsApp neither operated in nor sought

³¹ *In Re: Updated Terms of Service (WhatsApp Policy Case)* Suo Motu Case No 01 of 2021 (CCI, 18 November 2024) para 235.

³² *Supra* n8.

³³ Competition and Markets Authority, *Online Platforms and Digital Advertising Market Study: Final Report* (2020) paras 5.25-5.28

³⁴ OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being* (OECD Publishing 2015) 197

³⁵ *Supra* n18.

³⁶ *MCX Stock Exchange v NSE* CCI Case No 13/2009.

³⁷ *Dhanraj Pillay v Hockey India* CCI Case No 73/2011.

³⁸ *United States v Microsoft Corp* 253 F 3d 34 (DC Cir 2001).

³⁹ *Case T-604/18 Google and Alphabet v Commission (Google Android)* [2022] ECLI:EU:T:2022:541.

⁴⁰ *Supra* n11.

entry into online advertising, and Meta’s downstream monetizing conduct was treated as analytically distinct rather than imputable to WhatsApp as a single economic unit.

That does not mean competitive harm is absent, rather, it exposes the limits of leveraging doctrine when applied to platform ecosystems organized around data flows rather than formal market participation. European leveraging jurisprudence from Tetra Pak II to Google Shopping proceeds on an implicit assumption of a unitary enterprise in which dominance and downstream expansion are institutionally aligned.⁴¹ Platform conglomerates routinely disaggregate those functions: data extraction is separated from monetization, even where economic integration remains in substance. Procedural trajectory matters for this reason. Jurisdictional affirmation opens the door to scrutinize data practices; exploitative-abuse findings establish upstream dominance; empirical evidence shows downstream foreclosure; and the rejection of leveraging forces a doctrinal pivot. Read together, these moves supply a factual and analytical foundation for treating denial of market access under Section 4(2)(c) as a standalone, effects-based response to data-driven exclusion across disjunct markets.⁴² For brevity, competition law can address cross-market harms without collapsing market definition, imputing dominance where none exists, or contorting platform ecosystems to fit doctrinal categories meant for industrial markets.

III. CCI’S MARKET DEFINITION

Market definition in the WhatsApp/Meta case is not merely an initial procedural step but constitutes the conceptual framework in which the ultimate rationale of NCLAT’s decision is constructed.⁴³ While purposefully specifying two separately legal markets (while also recognizing existence of their operational unity based on data flows), the competition regulator maintains internal coherence of abuse of dominance analysis while ensuring that

⁴¹ The Competition Act 2002, s 4(2)(e).

⁴² *Supra* n40.

⁴³ *WhatsApp LLC v Competition Commission of India* Competition Appeal (AT) No 01 of 2025 (NCLAT, 4 November 2025).

cross-market harm is not obscured from legal view.⁴⁴ This section suggests that *it is the distinction between markets rather than their aggregation into a “ecosystem” market that constitutes the necessary precondition for the development of data-driven denial of market-access as a doctrine.* Section 4⁴⁵ defines dominance in functional terms. Capacity to act independently of the force of competition or to impact its opponents or consumers in its own favour, price is irrelevant in determining this.⁴⁶ Determination of dominance in the upstream market of over-the-top messaging services proves the resilience of competition law in addressing zero-price digital markets consistent with its core analytical frameworks.⁴⁷

In consonance with its precedent decisions on *Fast Track Call Cab v. ANI Technologies*⁴⁸ and *MakeMyTrip-GoIbibo*,⁴⁹ CCI found dominance on the basis of non-price factors such as network effects, switching costs, and user lock-in. The ability of WhatsApp to unilaterally establish a privacy policy that substantially curtailed user choice, without triggering significant user churn, is itself evidence of such authority. The relevant barrier was not cost, but users’ tolerance of non-price deterioration. This aligns with the spirit of comparative developments. In *Facebook v. Bundeskartellamt*,⁵⁰ German Federal Court stated, focus of dominance analysis in zero-price social media platforms lies with the exercise of data and lock-in power and not with freedom of price setting. By the *Google Android* decision,⁵¹ the Commission drew a conclusion of dominance from the extent of the controlled sector and default status. The SSNDQ test approved by the OECD identifies the above two aspects with functional equivalents of price increases.⁵²

⁴⁴ Rupperecht Podszun, ‘The Tip of the Iceberg: Market Definition and the Digital Markets Act’ (2024) 15(3) *Journal of European Competition Law & Practice* 175.

⁴⁵ The Competition Act 2002, s 4.

⁴⁶ *Matrimony.com Ltd v Google LLC* Case Nos 07 and 30 of 2012 (CCI, 8 February 2018) para 86.

⁴⁷ *Supra* n7.

⁴⁸ *Fast Track Call Cab v ANI Technologies* CCI Case No 6/2015.

⁴⁹ *In re Federation of Hotel & Restaurant Associations of India* CCI Case No 14/2019.

⁵⁰ *Supra* n34.

⁵¹ European Commission, Case AT.40099 Google Android (Decision of 18 July 2018) <https://ec.europa.eu/competition/antitrust/cases/dec_docs/40099/40099_9993_3.pdf> accessed 2 January 2026.

⁵² OECD, ‘Quality Considerations in Digital Zero-Price Markets’ (2018) DAF/COMP(2018)14, 2.

If dominance in the OTT messaging market was properly understood, it would not be paradoxical that such a market exists without monetization. In fact, it is because monetization is postponed that the power to extract data becomes economically valuable. Most importantly, CCI did not give in to the temptation of enlarging the relevant market by including adjacent communication or social media services. By applying demand-side substitutability principles under Section 19(7)⁵³, it ruled out SMS, email, and broadcast-oriented social networks.⁵⁴ This exclusion is doctrinally necessary. Private, real-time, directed communication serves a different economic function that public or semi-public platforms cannot replicate.⁵⁵ As acknowledged in Microsoft/Skype and subsequent market studies on messaging services, competitive constraint on a dominant messaging platform is not the availability of alternative media in abstract, but the possibility of collective migration by an entire communication network. Combining these services into a single market would hide the exact point of WhatsApp’s power and thus dilute the dominance inquiry beyond its usefulness. For more clarity, the following table can be read.

*Table: Disjunct-markets analysis*⁵⁶

Feature	Market I: OTT Messaging	Market 2: Display Advertising
Primary Model (pricing)	Zero-Price (Data/Attention)	Monetary (CPM/CPC)
Dominant Player	WhatsApp (undisputed)	Meta (Leading, not dominant)
Key Input	User Network (Contact Graph)	User Data (Behavioral/Demographic)
Primary Competitors	Telegram, Signal	Google, Amazon, Ad Networks
Nature of Abuse	Exploitative (Unfair conditions)	Exclusionary (Denial of Access)

This analytical discipline extends downstream. CCI’s definition of a separate market for online display advertising and its express finding that Meta is not dominant therein is a deliberate and consequential choice. Display advertising is structurally distinct from search advertising and other monetization models. As recognized in *Google/DoubleClick* and

⁵³ The Competition Act 2002, s 19(7).

⁵⁴ *Harshita Chawla v WhatsApp Inc* Case No 15 of 2020 (CCI, 18 August 2020) paras 11-13.

⁵⁵ *Case M.7217 Facebook/WhatsApp* [2014] OJ C417/6, paras 94-101, 164-167.

⁵⁶ *The authors, vide table, posit that the structural separation is what makes NCLAT’s rejection of s4(2)(e), ie, leveraging, and acceptance of s4(2)(c), ie, denial of access, doctrinally insignificant.*

reaffirmed by UK Competition and Markets Authority, display advertising depends on behavioural profiling and data aggregation rather than query-based intent.⁵⁷ By acknowledging robust competition from Google, Amazon, and programmatic intermediaries, CCI foreclosed any attempt to shoehorn the case into a conventional single-market abuse framework. The result is a controlled doctrinal tension: *exclusionary harm is alleged in a market where dominance is absent*. It is this disjunction dominance without immediate exclusionary harm in the upstream market, and exclusionary effects without dominance in the downstream market that exposes the limits of classical antitrust categories. Traditional abuse of dominance doctrine presumes that harm manifests where dominance resides.⁵⁸ WhatsApp/Meta factual matrix violates this assumption. Comparative antitrust law has encountered similar anomalies. In *United States v. Microsoft*,⁵⁹ monopoly power in operating systems sustained exclusionary practices affecting adjacent software markets without requiring dominance in each affected market. More recent European ecosystem cases assess harm to the competitive process rather than market shares in isolation.⁶⁰

NCLAT's approach situates Indian competition law within this trajectory without abandoning market definition orthodoxy. Crucially, the Tribunal refused the easy path of collapsing two markets into a single "ecosystem" or an abstract "data" market. That shortcut would have produced two doctrinal pathologies. *First*, it would dilute the concept of dominance by aggregating heterogeneous competitive arenas with different demand conditions. *Second*, it would elevate data into an independent product market without statutory or analytical warrant, precisely the move European courts have resisted, most notably in *Google/DoubleClick*.

⁵⁷ *Supra* n24.

⁵⁸ Or Brook and Magali Eben, 'Abuse without Dominance and Monopolization without Monopoly' in Pinar Akman, Or Brook and Philippa Watson (eds), *Research Handbook on Abuse of Dominance and Monopolization* (Edward Elgar Publishing 2023) 259-281.

⁵⁹ *Supra* n43.

⁶⁰ William Ward and Joe Minichiello, 'The Risks of a Form-Based Approach to Exclusionary Abuses of Dominance-An Economic Perspective' (2023) 22(3) *Competition Law Journal* 125-130.

Instead, NCLAT adopted a functional-linkage approach: *markets remain legally distinct, but conduct in one can produce legally cognizable effects in another*.⁶¹ Back-end integration through data flows does not redraw market boundaries; it alters competitive conditions that operate across them.⁶² The payoff is doctrinally important. By affirming upstream dominance while rejecting downstream dominance, and by preserving market separation, authorities create exact analytical space in which Section 4(2)(c)⁶³ can function as an effects-based provision. Market disjunction is not a defect to be erased; it is the very condition that permits data-driven denial of market access to be conceptualized without collapsing dominance requirements or stretching leveraging doctrine beyond recognition.

IV. THE CLASSICAL ‘LEVERAGING’ PROBLEM

The central contribution of the *WhatsApp/Meta* litigation lies in its implicit recognition that abuse of dominance under Section 4 can arise through cross-market data reconfiguration even where the dominant firm neither enters nor seeks to protect a downstream market.⁶⁴ This marks a departure from classical abuse paradigms that tether exclusionary harm to formal market participation. Instead, NCLAT’s reasoning reorients abuse analysis toward distortion of competitive conditions through control over non-replicable inputs, most prominently, data. Section 4 does not textually confine abusive conduct to the market in which dominance is established.⁶⁵ Section 4(1) proscribes abuse simpliciter,⁶⁶ while Section 4(2)(c) captures practices that deny market access “in any manner,” deliberately eschewing form-based limitations.⁶⁷ Indian jurisprudence has consistently interpreted these provisions through an effects-based lens. In *DLF v. CCI*,⁶⁸ the Supreme Court emphasized that abuse

⁶¹ *Matrimony.com Ltd v Google LLC* Case Nos 07 and 30 of 2012 (CCI, 8 February 2018)

⁶² Ariel Ezrachi and Maurice E Stucke, *Virtual Competition* (Harvard University Press 2016) 93-99.

⁶³ *Supra* n47.

⁶⁴ *Supra* n21.

⁶⁵ Taxmann, Abuse of Dominance u/s 4 of the Competition Act – Case Laws (*Taxmann Blog*, 22 December 2025) <<https://www.taxmann.com/post/blog/abuse-of-dominance-u-s-4-of-the-competition-act>> accessed 2 January 2026.

⁶⁶ The Competition Act 2002, s 4(1).

⁶⁷ *Supra* n72.

⁶⁸ *DLF Ltd v Competition Commission of India* (Supreme Court of India, Civil Appeal No 7399 of 2010, judgment dated 19 April 2013).

analysis turns on market impact rather than formal characterization of conduct. In *MCX Stock Exchange v. NSE*,⁶⁹ foreclosure was established through structural advantages that impaired rivals' viability without explicit exclusion. More recently, CCI's *Google Android* decision accepted that non-price, architectural conduct could entrench competitive advantage across markets.⁷⁰

Against this backdrop, WhatsApp's 2021 privacy policy does not resemble classical leveraging.⁷¹ It does not signal entry into online advertising, nor does it involve product tying or contractual exclusivity. Its competitive significance lies elsewhere: *in the re-engineering of data flows between a dominant messaging platform and Meta's advertising stack*. Harm arises not through substitution in the downstream market, but through amplification of data asymmetries that shape competitive outcomes within it. This logic is familiar in comparative antitrust law. In *United States v. Microsoft*,⁷² architectural redesigns that entrenched ecosystem control were treated as exclusionary, notwithstanding the absence of formal entry into adjacent software markets. European jurisprudence from Microsoft to Google Shopping likewise recognizes that dominance in one market may distort competition in another through control over critical inputs rather than direct participation.⁷³ NCLAT's refusal to conflate markets, coupled with its willingness to acknowledge cross-market effects, situates Indian law squarely within this trajectory.

This transition relies on a thorough understanding of data as a competitive resource that can be "foreclosed" without necessarily involving price or contractual denial. The phrase "*in any manner*" in Section 4(2)(c)⁷⁴ refers to the denial of market access, thus humanizing the idea of market going to extremes of non-price mechanisms. Indian competition law has

⁶⁹ *Supra* n41.

⁷⁰ Competition Commission of India, CCI imposes a monetary penalty of Rs 1337.76 crore on Google for anti-competitive practices (*Press Release No 55/2022-23*, 20 October 2022) <<https://www.cci.gov.in/antitrust/press-release/details/261/0>> accessed 2 January 2026.

⁷¹ WhatsApp, Privacy Policy (WhatsApp, January 2021, revised privacy and terms update) <<https://www.whatsapp.com/legal/privacy-policy?lang=en>> accessed 2 January 2026.

⁷² *Supra* n68.

⁷³ *Case AT.39740 Google Search (Shopping)* (Commission Decision of 27 June 2017) [2017] OJ C9/11, paras 334-341, 593-597.

⁷⁴ *Supra* n78.

already taken steps in this direction with recognition of network markets' non-price foreclosure, most famous being the *Fast Track Call Cab v. ANI Technologies* case,⁷⁵ where data hoarding and network effects were identified as the major sources of competitive advantage. In the meantime, comparative doctrines confirm this perception. So, during these proceedings, *IMS Health* and *Magill*⁷⁶ are the cases inter alia, in which the indispensability of the inputs is considered a basis for exclusionary abuse.⁷⁷ German Meta, in turn, sees the issue of excessive and asymmetric data accumulation both as an exploitative and exclusionary practice.⁷⁸ Additionally, academic works and regulatory studies, eg, UK CMA's Digital Advertising Market Study,⁷⁹ argue that first-party behavioural data is the main generator of feedback loops that competitors cannot reproduce just by participating in the market.⁸⁰ The WhatsApp data in question were social graphs, metadata, and behavioural signals, which are perfect examples of such an input.⁸¹ The 2021 policy did not refuse rivals access directly; rather, it embedded exclusivity within Meta's ecosystem.⁸² This internal rearrangement results in foreclosure's effects, which are, from the standpoint of competition, hardly distinguishable from the case of an explicit refusal. Price analysis is irrelevant here. In fact, it is data accumulation that is the competitive currency, and gaps in access lead, almost immediately, to differences in the precision of targeting.

Notably, however, the existence of user consent does not negate this analysis. Existence of formal consent has never been considered dispositive in competition law where dominance over choice is at issue.⁸³ In the case of *DLF*,⁸⁴ the Supreme Court held that contractual

⁷⁵ *Fast Track Call Cab Pvt Ltd v ANI Technologies Pvt Ltd* (CCI, Case Nos 06 of 2015 & 74 of 2015, order dated 19 July 2017).

⁷⁶ *Case C-418/01 IMS Health GmbH & Co OHG v NDC Health GmbH & Co KG* [2004] ECR I-5039.

⁷⁷ *Case C-241/91 P Radio Telefis Eireann (RTE) and Independent Television Publications Ltd v Commission* [1995] ECR I-743 (commonly referred to as *Magill*).

⁷⁸ *Id.*

⁷⁹ *Facebook v Bundeskartellamt* KVR 69/19 (BGH, 23 June 2020).

⁸⁰ Competition and Markets Authority, *Online Platforms and Digital Advertising Market Study: Final Report* (2020) paras 5.25-5.28.

⁸¹ *In Re: Updated Terms of Service (WhatsApp Policy Case)* Suo Motu Case No 01 of 2021 (CCI, 18 November 2024) para 235.

⁸² WhatsApp, *Privacy Policy* (WhatsApp, January 2021, revised privacy and terms update) <<https://www.whatsapp.com/legal/privacy-policy?lang=en>> accessed 2 January 2026.

⁸³ Stefan Vogenauer, 'Regulatory Competition through Choice of Contract Law and Choice of Forum in Europe: Theory and Evidence' (2013) 21(1) *European Review of Private Law*.

⁸⁴ *Supra* n79.

consent based on an unequal bargain does not militate against a claim of abuse.⁸⁵ Indeed, European law is clear on this issue; consent does not serve as a shield when data sharing is compelled based on the indispensable nature of platforms, as governed by the GDPR, which holds that an imbalance of power vitiates consent.⁸⁶ The existence of consent based on monopoly power, as illustrated in the *Kodak* case,⁸⁷ is similarly disregarded in US antitrust law. WhatsApp occupies an infrastructural position within India's digital communication ecosystem. Exit carries significant social and coordination costs, making departure practically implausible for most users. Consent obtained under such conditions is not an expression of autonomous choice. It is an operationalization of dominance. To treat 'take-it-or-leave-it' consent as exculpatory would permit platforms to translate structural power into legal immunity through interface design alone. Competition law's concern, therefore, is not the formal existence of consent, but whether the conditions under which it is extracted distort competitive outcomes.

Read in this light, the trajectory adopted by NCLAT becomes intelligible. The pivot away from leveraging under Section 4(2)(e)⁸⁸ toward an effects-based application of Section 4(2)(c)⁸⁹ reflects a structural fit rather than an analytical retreat. Leveraging doctrine presumes market entry, exclusionary intent, and a unitary enterprise identity assumption poorly suited to platform ecosystems organized around data flows rather than direct participation in downstream markets.⁹⁰ Section 4(2)(c),⁹¹ by contrast, is structurally agnostic. It centres access, effects, and foreclosure, allowing competition law to respond to data-driven exclusion without stretching dominance beyond recognition or collapsing distinct markets into artificial unities.⁹² The significance of this shift is not merely interpretive. It marks the emergence of a data-centric abuse doctrine within Indian competition law, one that aligns with global antitrust evolution while remaining anchored

⁸⁵ *DLF Ltd v Competition Commission of India* Appeal No 19 of 2012 (COMPAT, 19 May 2014).

⁸⁶ *Supra* n84.

⁸⁷ *Eastman Kodak Co v Image Technical Services Inc* 504 US 451 (1992).

⁸⁸ *Supra* n45.

⁸⁹ The Competition Act 2002, s 4(2)(c).

⁹⁰ Georgios I Zekos, 'Digital Economy and Competition' in *Artificial Intelligence and Competition: Economic and Legal Perspectives in the Digital Age* (Springer 2023) 293.

⁹¹ *Supra* n85.

⁹² The Competition Act 2002, s 4(2)(c).

in statutory text. Section 4(2)(c)⁹³ thus becomes the principal vehicle through which cross-market data foreclosure can be addressed, not as an exceptional deviation, but as a logical extension of effects-based abuse analysis.⁹⁴ This doctrinal reorientation sets the stage for the paper’s final inquiry: *how such a framework can be rendered predictable, bounded, and institutionally coherent without tipping into over-enforcement.*

V. DATA-CENTRIC FORECLOSURE AND GLOBAL EVOLUTION OF ABUSE DOCTRINE WHILST READING INTO NCLAT’S DECISION

NCLAT’s willingness to recognize cross-market competitive effects arising from data reconfiguration raises an obvious concern: *does this approach represent an idiosyncratic expansion of Indian abuse doctrine, or does it reflect a broader convergence in global competition law?* A comparative examination suggests the latter. Across jurisdictions, competition authorities have increasingly abandoned rigid market-entry and leveraging requirements in data-intensive markets, shifting instead toward an effects-based assessment of how control over data, algorithms, and feedback loops structures competitive opportunity.

Indian competition law offers a conducive statutory basis for such a transition. Section 4 does not have a textual stipulation of leveraging or market entry, and Indian jurisprudence has for a long time been effects-oriented.⁹⁵ In *Excel Crop*,⁹⁶ the Supreme Court held that competition analysis should concentrate on market impact rather than doctrinal labels. Hence, NCLAT’s decision in WhatsApp/Meta is not an interpretive shift but a continuation of this trajectory, adapted to the platform markets’ realities.⁹⁷ This transition reflects similar

⁹³ *Supra* n104.

⁹⁴ Andrea Coscelli and Geoff Edwards, ‘Dominance and Market Power in EU Competition Law Enforcement’ in Ioannis Lianos and Damien Geradin (eds), *Handbook on European Competition Law* (Edward Elgar Publishing 2013) 350-384.

⁹⁵ *Competition Commission of India v Steel Authority of India Ltd* (2010) 10 SCC 744.

⁹⁶ *Excel Crop Care Ltd v Competition Commission of India* (Supreme Court of India, Civil Appeal No 2480 of 2014, 8 May 2017).

⁹⁷ *Supra* n7.

changes in European competition law. Article 102 jurisprudence has gradually moved away from the classical leveraging concept towards self-preferencing, data aggregation, and ecosystem foreclosure doctrines.⁹⁸ In *Google Shopping*,⁹⁹ harm was recognised not through market entry but through preferential access to a competitive advantage. In the *Meta/Bundeskartellamt*, a data aggregation was considered a source of both exploitative and exclusionary abuse.¹⁰⁰ The EU’s Digital Markets Act¹⁰¹ is codifying this change at the regulatory level by treating access to data as the asymmetry of a structural harm that goes against contestability regardless of price or formal exclusion. The reasoning is clear: *competitive advantage in digital markets is determined by control over data and interoperability rather than mere presence in a given product market.*

The UK has framed this reasoning most lucidly. Access to user data for CMA’s Digital Advertising Market Study serves as a leading determinant of market power in online advertising, beyond traditionally adopted price-related parameters.¹⁰² The Digital Markets, Competition and Consumers Act has then gone on to abrogate product substitution as the point around which intervention is organised, acting instead through “strategic market status” and related abilities to shape market conditions across services.¹⁰³ It is thus that the UK approach vindicates the focus of NCLAT upon functional competitive effects rather than formal market overlap. Competition policy in *Australia* has evolved similarly.¹⁰⁴ Various Digital Platforms Inquiries by ACCC have considered data accumulation and cross-service integration to be competition concerns distinct from pricing conduct.¹⁰⁵ Data is

⁹⁸ Treaty on the Functioning of the European Union-Part Three: Union Policies and Internal Actions: Title VII: Common Rules on Competition, Taxation and Approximation Laws-Article 102 (ex Article 82 TEC).

⁹⁹ European Commission, Case AT.39740 Google Search (Shopping) (Decision of 27 June 2017) [2017] OJ C9/11.

¹⁰⁰ *Supra* n57.

¹⁰¹ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector (Digital Markets Act) [2022] OJ L265/1.

¹⁰² Competition and Markets Authority, Online Platforms and Digital Advertising: Market Study Final Report (CMA, July 2020) paras 2.3–2.15, 3.134–3.140.

¹⁰³ Digital Markets, Competition and Consumers Act 2024.

¹⁰⁴ Digital Markets, Competition and Consumers Act 2024 (UK), ss 2–6; Competition and Markets Authority, Online Platforms and Digital Advertising: Market Study Final Report (CMA, July 2020) paras 2.3–2.15, 3.134–3.140; Competition and Consumer Act 2010 (Cth) (Australia), s 46; Australian Competition and Consumer Commission, Digital Platforms Inquiry – Final Report (ACCC, July 2019) 39–45, 97–105.

¹⁰⁵ ACCC, Digital Platforms Inquiry: Final Report (2019) 11, 74.

examined as an infrastructural factor that can lock in leadership and shut out competitors through feedback loops. Various reports by OECD synthesize these findings across regimes, highlighting the fact that data control is a non-price entry barrier and an exclusion practice even without contractual refusal or market entry.¹⁰⁶

The *US*, traditionally regarded as a jurisdiction that resists expansive abuse of dominance principles, offers far greater support for data-flow reconfiguration on effects grounds than is presently recognized.¹⁰⁷ Though US antitrust law maintains significant scepticism about essential facilities claims, the architectural exemption was recognized long ago. In *United States v. Microsoft*,¹⁰⁸ the design of products to cement dominance was regarded as abusive conduct despite its transformative nature. In *Aspen Skiing*,¹⁰⁹ disruption in the provision of cooperation was found to constitute an abuse where it harmed competitors due to the lack of efficiency. Current litigation in *FTC v. Facebook* equates data consolidation and intra-group rearrangement with entry prevention measures to cement monopoly power.¹¹⁰ Rationale for all of these litigations is not about refusal to deal, but about the recoding of systems to reduce the capability of competitors to compete. This rationale automatically justifies an effects assessment of data-flow recoding approved in the NCLAT judgment.

China's competition regime lends even more explicit validation. Anti-Monopoly Law and Guideline on Platform Economy¹¹¹ take data, algorithms, and traffic as part of competitive resources whose unjustified restriction may amount to abuse. Disciplinary measures taken against *Alibaba* and *Meituan* are directed at platform dependence and data leverage rather than price effects or formal exclusivity.¹¹² The Chinese approach is more structural and

¹⁰⁶ ACCC, Digital Platform Services Inquiry: Interim Report No 5 – Regulatory Reform (2022) 53–55.

¹⁰⁷ *Id.*

¹⁰⁸ *Supra* n83.

¹⁰⁹ *Aspen Skiing Co v Aspen Highlands Skiing Corp* 472 US 585 (1985).

¹¹⁰ Facebook, Inc, *FTC v (FTC v Meta Platforms, Inc)* 191 0134, 20-cv-3590, <<https://www.ftc.gov/legal-library/browse/cases-proceedings/191-0134-facebook-inc-ftc-v-ftc-v-meta-platforms-inc>> accessed 2 January 2026.

¹¹¹ Jingyuan Ma, 'Competition Law in China: An Overview' in *Competition Law in China (Springer, Singapore 2020)* <https://doi.org/10.1007/978-981-15-5105-5_2> accessed 2 January 2026.

¹¹² Hedvig Schmidt, 'Competition Law, Innovation and Antitrust: An Analysis of Tying and Technological Integration' in Josef Drexl, Wolfgang Kerber and Rupprecht Podszun (eds), *Competition Law, Innovation and Antitrust* (Edward Elgar Publishing 2009) 115–142.

outcome-oriented, incorporating recognition that control over digital infrastructure can coerce counterparties and foreclose competition even where services remain nominally free. It follows that this approach reinforces the legitimacy of treating data control itself as a locus of competition power.

The differences in power over data no longer concern only developed economies. Emerging market jurisdictions are increasingly viewing data asymmetry as a developmental competition issue. *Brazil's* CADE has criticized Google and Meta for using their data advantages to create barriers to entry for local firms.¹¹³ Market Inquiry into Online Intermediation Platforms in *South Africa* highlights that data concentration is the main source of the lack of market contestability.¹¹⁴ KPPU, *Indonesia's* competition commission, has identified data accumulation as a contributing factor in determining dominance in digital markets.¹¹⁵ These locations focus on issues concerning innovation, local entry, and ecosystem openness that strongly resonate with India's competition policy goals. NCLAT's stance not only seems to be aligned with but also extremely appropriate for the conditions of the emerging market. Moreover, the Indian system is less likely to be over-enforced, unlike other regimes, which is another advantage. A number of European criticisms of DMA argue that it is too broad and that it presumes harm, while US law cautions that intervention should not be excessive so as not to stifle innovation (as explained in *Trinko*).¹¹⁶ NCLAT's approach to market disjunction alleviates these dangers. Tribunal decides on dominance in the upstream market, maintains a strict market definition, and, instead of relying on presumptions, it bases liability on the effects that can be demonstrated, it is not engaged in collapsing markets or imputing abuses solely on the basis of size or integration. It remains possible to have proportionate, conduct, specific remedies instead of structural ones.

¹¹³ Alibaba antitrust fine (RMB 18.23 billion) (*South China Morning Post*, 16 September 2025) <<https://www.scmp.com/tech/big-tech/article/3181005/alibaba-meituan-paid-bulk-chinas-us3-billion-antitrust-fines-2021>> accessed 2 January 2026.

¹¹⁴ Administrative Council for Economic Defense (CADE), Administrative Proceeding No 08700.003745/2015-21 (Google Search – Abuse of Dominance) (Brazil, decision of 9 December 2020).

¹¹⁵ Business Competition Supervisory Commission (KPPU, Indonesia), Guidelines for the Assessment of Monopoly Practices and Unfair Business Competition in the Digital Economy (KPPU Regulation No 4 of 2022).

¹¹⁶ Giuseppe Colangelo and Mariateresa Maggiolino, 'Antitrust, Data and Digital Platforms: The Limits of the DMA' (2023) 14 *Journal of European Competition Law & Practice* 1.

The comparative picture points to a clear conclusion. NCLAT's recognition of cross-market data effects does not amount to doctrinal excess. It reflects a broader convergence in competition law away from formalistic leveraging models and toward a data-centered, effects-based account of foreclosure. Jurisdictions differ in doctrinal vocabulary, but the underlying move is shared: *competitive harm is increasingly understood to arise from control over data and architecture, not merely from price or formal market entry*. What distinguishes the Indian approach is not ambition, but restraint. NCLAT accommodates realities of platform power without dispensing with the discipline of dominance analysis, relevant market definition, or demonstrable effects. Rather than collapsing markets or imposing dominance across corporate boundaries, it insists on doctrinal coherence while remaining responsive to new forms of exclusion. This balance situates Indian competition law neither as a laggard nor as an outlier, but at the doctrinal frontier of contemporary antitrust engaged with global developments, yet attentive to institutional limits.

VI. ANALYTICAL PAYOFF

The preceding analysis establishes that data-centric foreclosure is now recognised across jurisdictions as a locus of competitive harm. What remains unsettled is not liability, but remedy. The central question is how competitive conditions can be restored where abuse is embedded not in discrete conduct, but in data concentration, platform architecture, and asymmetric information flows that shape market access itself.¹¹⁷ This section argues that conventional consent-based and behavioural remedies are structurally incapable of addressing such harms. They operate at level of formal compliance while leaving underlying mechanisms of exclusion intact. Structural remedies, by contrast, are normatively defensible in data-driven markets precisely because they target source of competitive distortion.¹¹⁸ Yet Indian enforcement context imposes real institutional constraints on their deployment. NCLAT must therefore be read as operating within a narrow remedial corridor seeking to

¹¹⁷ *WhatsApp LLC v Competition Commission of India* (National Company Law Appellate Tribunal, Competition Appeal (AT) No 1 of 2025, judgment dated 4 November 2025).

¹¹⁸ OECD, *Ex Post Assessment of Competition Policy Enforcement* (OECD Publishing 2016) 42–45.

preserve doctrinal coherence and institutional feasibility rather than retreating from remedial ambition altogether.

A. Structural Fragility of Consent-Centric Remedies

Remedies grounded in user consent and disclosure are doctrinally misaligned with objectives of competition law. Under Indian law, Section 27 empowers CCI to impose measures that restore competitive conditions, not merely to secure procedural regularity.¹¹⁹ As the Commission itself emphasised in *Belair Owners' Association v. DLF*,¹²⁰ remedies must correct distortions of market power rather than confer legitimacy upon them. In data-driven markets, consent is structurally compromised.¹²¹ Network effects, switching costs, and ecosystem dependence deprive user choice of competitive significance long before any disclosure is made. European jurisprudence has recognised this limitation with unusual clarity. In *Meta v. Bundeskartellamt*,¹²² court rejected the premise that consent extracted under conditions of dominance can neutralise exploitative abuse. That position is now reflected in positive law through Digital Markets Act, which restricts consent-based data combination by gatekeepers precisely because formal agreement cannot cure structural coercion.¹²³ Empirical evidence reinforces the doctrinal point. Findings of the OECD on consent fatigue and dark patterns confirm that consent neither reflects autonomous choice nor constrains data accumulation in practice. Applied to the WhatsApp/Meta context, consent-based remedies merely regularise data extraction while leaving untouched the underlying asymmetry in data access, feedback loops, and advertising market foreclosure. Such remedies convert structural dominance into formal compliance. Competitive harm persists even where consent is nominally valid. Consent-based interventions are therefore remedially fragile and analytically incapable of addressing data-driven abuse within the logic of competition law.

¹¹⁹ The Competition Act 2002, s 27.

¹²⁰ *Belair Owners' Association v DLF Ltd* (Competition Commission of India, Case No 19 of 2010, order dated 12 August 2011).

¹²¹ *DLF Ltd v Competition Commission of India* (Supreme Court of India, Civil Appeal No 7399 of 2010, 19 April 2013).

¹²² Case C-252/21 *Meta Platforms Inc and Others v Bundeskartellamt* EU:C:2023:537.

¹²³ OECD, *Dark Commercial Patterns* (OECD Publishing 2022) 11–18, 29–34.

B. Limits of Behavioural Remedies in Architectural Abuse

Behavioural remedies assume that harmful competition can be identified and proven from a small number of discrete, observable acts.¹²⁴ This assumption fails when abuse is deeply embedded in the platform's architecture. Indian competition law does not favour behavioural remedies and only allows them to be effective where they are efficient.¹²⁵ Structural or hybrid remedies are explicitly allowed when conduct-based interventions have failed. The comparative experience shows this failure. In *United States v. Microsoft*,¹²⁶ conduct remedies were insufficient to eliminate the architectural exclusion that was deeply rooted in system design. EU enforcement also showed the limitations of behavioural commitments when there were no interoperability mandates, thus leading to introduction of ex-ante structural obligations under DMA.¹²⁷ In the WhatsApp/Meta case, harm results from internal data pipelines, cross-platform integration, and algorithmic optimization rather than from isolated contractual terms. Behavioural remedies need continuous oversight of opaque systems, but regulators do not have real-time visibility into data flows, algorithmic weighting, or internal integration logic. Compliance becomes unmonitorable, and enforcement becomes trust-based monitoring. In cases where the abuse is architectural, conduct remedies are structurally mismatched to the harm.

C. The Illusion of Firewalls and the Problem of Auditability

Internal firewalls and data silos are frequently proposed as a middle course between conduct remedies and structural separation.¹²⁸ In theory, they promise to retain integration

¹²⁴ Patrice Bougette and Frédéric Marty, *The Proper Scope of Antitrust: Behavioural Remedies Between Competition Law Enforcement and Regulatory Interventions* (HAL Working Paper No halshs-05327874, 2025).

¹²⁵ *Competition Commission of India v Steel Authority of India Ltd* (2010) 10 SCC 744.

¹²⁶ *Supra* n122.

¹²⁷ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L265/1, recitals 5 and 8.

¹²⁸ Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, *Competition Policy for the Digital Era* (European Commission 2020) 92–98, 104–108.

efficiencies while containing competitive spillovers. That promise rarely survives contact with enforcement reality. Firewalls function with credibility in sectors such as telecommunications and finance only because they are embedded within dense supervisory ecosystems, intrusive audits, mandatory access logs, and continuous regulatory oversight.¹²⁹ Digital markets offer none of these conditions. European experience makes the point starkly. The remedy framework imposed on *Google* illustrates how internal separation commitments erode into compliance theatre once active monitoring weakens. Separation is asserted formally, while data flows, optimization incentives, and learning processes remain functionally integrated.¹³⁰ The Indian context compounds this weakness. CCI lacks both the technical infrastructure and statutory authority required for continuous audits of algorithms, training datasets, and internal data pipelines across vertically integrated platforms.¹³¹ Claims of internal separation, therefore cannot be independently verified without regulator access to system architecture, training data, and optimization pathways. In the absence of such access, firewalls depend almost entirely on self-reporting by dominant firms. That dependence is not a neutral administrative choice. It is an institutional failure. Without auditability, firewall-based remedies deliver symbolic compliance rather than competitive correction, and risk entrenching the very exclusionary dynamics they are meant to restrain.

D. Structural Remedies: Normatively Sound, Institutionally Constrained

From the viewpoint of competition policy, structural remedies like functional unbundling or separation of data pools are measures that go right to the root of the problem of data, driven market power. Indian law, in fact, makes provision for such interventions on a statutory level. Section 27,¹³² *inter alia*, authorises “any other order” necessary to restore competition. Comparative practice also supports their validity, e.g., from AT&T’s divestiture in the US to the EU’s growing willingness for structural separation under the

¹²⁹ Siddharth Tandon and Knaishk Agarwal, ‘Structural vs. Behavioral: Why CCI’s Google Settlement Repeats International Antitrust Mistakes’ (2025) 3(2) *The Competition and Commercial Law Review*.

¹³⁰ Johnny Ryan, ‘Response to the Competition and Markets Authority: Consumer-led functional separation of platforms’ (Brave Software, 12 February 2020) paras 3–8.

¹³¹ Standing Committee on Finance, *Anti-Competitive Practices by Big Tech Companies* (Lok Sabha Secretariat 2022) 53rd Report, paras 2.2–2.5.

¹³² *Supra* n134.

DMA framework.¹³³ However, Indian enforcement is functioning under considerable institutional constraints. Courts have, in past, been reluctant to take a heavy hand with intrusive remedies, the risk of appellate scrutiny leads to dilution, and political economy considerations are heavily stacked against structural intervention in the case of major digital platforms. These limitations do not, however, negate normative argument in favour of structural remedies, rather, clarify the explanation for caution with which tribunals approach them. Hence, NCLAT's restraint should be interpreted as a realistic institutional view rather than a doctrinally timid one. It is a reflection of understanding that remedial ambition needs to be in line with enforcement capacity and judicial tolerance.

E. Non-Delegability of Data Governance in Competition Law

Competition law should not hand over responsibility of data governance to privacy regulation as if it were a different department, without considering that it goes against the essence of its core mandate.¹³⁴ Doctrinal separation is evident: *competition law aims at protecting market structure and the competitive process; privacy law is about safeguarding individual rights*. Even though the EU allows regimes to interact, *Meta/Bundeskartellamt*¹³⁵ clearly states that one cannot be replaced by the other. In India, this difference is even more evident. DPDP Act focuses on consent, processing, and individual control.¹³⁶ It neither addresses nor is capable of addressing advertising market dominance, data feedback loops, or exclusionary advantages resulting from aggregation.¹³⁷ Passing on competition issues to data protection law leads to regulatory blind spots where market power gets entrenched through data practices that are formally lawful but not beneficial for the market. Therefore, competition authorities should be allowed to have independent jurisdiction over data-driven

¹³³ United States v American Telephone and Telegraph Co 552 F Supp 131 (DDC 1982); Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector (Digital Markets Act) [2022] OJ L265/1, art 8(3).

¹³⁴ Francisco Costa-Cabral and Orla Lynskey, 'Family Ties: The Intersection between Data Protection and Competition in EU Law' (2017) 54

¹³⁵ *Supra* n23.

¹³⁶ Digital Personal Data Protection Act 2023 (India), ss 4–6, 7–11.

¹³⁷ Aman Sonkar, 'The Digital Personal Data Protection Act, 2023: Analysing Its Implications, Challenges, and Future Prospects' (2025) International Cybersecurity Law Review 6 547–569 <<https://doi.org/10.1365/s43439-025-00164-2>> accessed 3 January 2026.

market power. Compliance with privacy regulations cannot be considered a defence or remedy to competition harm.

Analytical payoff is clear. Data, driven abuse destabilises traditional remedial hierarchies. Consent-based remedies serve to legitimise dominances; behavioural commitments are ineffective against architectural harms; firewalls become vulnerable in the absence of auditability; and although structural remedies are normatively justifiable, they are institutionally limited in India. NCLAT's *modus operandi* does not convey the idea of remedial minimalism, but rather that of an attempt to function within these limitations while simultaneously maintaining analytical integrity of competition law. This insight has the effect of changing the frame of discussion. The question is no longer whether data-centric foreclosure is cognizable under the abuse doctrine; it is. Real challenge lies in designing remedies that are both theoretically sound and institutionally enforceable in the age of platform power.

VII. CRITIQUE AND RISKS

Recognizing data-driven foreclosure as a form of abuse under Section 4 is not without risk.¹³⁸ Poorly specified doctrine can collapse markets, dilute evidentiary thresholds, or substitute regulatory intuition for legal analysis. This section responds to these concerns by identifying analytical guardrails necessary to preserve doctrinal legitimacy while remaining responsive to the realities of platform power.

A. Market Disjunction with Functional Linkage as a Governing Framework

The main cross-market abuse criticism of analysis is that it threatens to completely dissolve the definition of market. If competitive harm in any closely related activity can be a basis of liability, dominance becomes detached from its analytical foundation.¹³⁹ This concern is doctrinally serious, but doctrinally misplaced. Section 4 prohibits abuse of dominance “in any manner,” without requiring that abuse occur within the same relevant market in which

¹³⁸ *Supra* n21.

¹³⁹ *Id.*

dominance has been established. Indian courts have consistently supported effects-based analysis, and NCLAT's reasoning is in line with this trend by recognizing cross-market effects without merging markets into a single unit of analysis.¹⁴⁰ Comparative jurisprudence from EU self-preferencing cases to US architectural harm doctrine also accepts that exclusionary effects may occur outside the market in which the power is exercised.¹⁴¹ The correct framework is therefore market disjunction with functional linkage. Dominance must be established in a clearly defined relevant market. Competitive harm can then be assessed in an adjacent market only if there is a demonstrable functional linkage, such as data flows, user networks, or monetisation pipelines that make the adjacent market dependent on an input controlled by the dominant firm.¹⁴² Analytical focus moves away from market overlap to functional dependence on a controlled resource. This framework retains doctrinal discipline while being able to accommodate structural realities of digital markets.

B. Data Foreclosure as Input Control, Not Leveraging or Privacy Harm

The second line of critique concerns doctrinal misclassification. Data-driven competitive harm is frequently forced into classical leveraging theories or reframed as privacy exploitation.¹⁴³ Both moves distort the analysis. Leveraging doctrine presupposes market entry or the coercive extension of dominance into a secondary market. Applied to data ecosystems, it encourages artificial market collapsing and diverts attention from the actual mechanism of harm: *exclusion through asymmetric control over a critical input*. Privacy-based framing commits a different error.¹⁴⁴ It misidentifies the protected interest, substituting individual autonomy for market contestability, and in doing so shifts the inquiry

¹⁴⁰ *WhatsApp LLC v Competition Commission of India* (Competition Appeal (AT) No 1 of 2025, NCLAT, 23 January 2025) paras 112–115.

¹⁴¹ Case T-612/17 *Google and Alphabet v Commission* (Google Shopping) [2021] ECLI:EU:T:2021:763; US House of Representatives Subcommittee on Antitrust, Commercial, and Administrative Law, *Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations* (2020) 378–382.

¹⁴² Ministry of Corporate Affairs, *Report of the Committee on Digital Competition Law* (February 2024) para 5.14.

¹⁴³ Viktoria HSE Robertson, 'Antitrust Law and Digital Markets: A Guide to the European Commission's Policy and Case Law' (2020) 11(1) *Journal of European Competition Law & Practice* 42.

¹⁴⁴ *In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users* (Suo Moto Case No 01 of 2021, CCI, 18 November 2024) paras 240–242.

away from competitive structure toward consent formalism.¹⁴⁵ Neither framework captures the competitive logic of data concentration. Section 4(2)(c) provides a more coherent doctrinal anchor.¹⁴⁶ Denial of market access “in any manner” is broad enough to encompass exclusion achieved through control of an indispensable input, even where there is no price, no contractual refusal, and no formal denial of dealing. What matters is effect, not form. Comparative practice supports this orientation. European competition law increasingly treats asymmetric access to data as an exclusionary concern independent of leveraging, while US antitrust analysis has moved toward identifying exclusionary design and bottlenecks rather than insisting on formal refusal.¹⁴⁷ Analysing data abuse through lens of input foreclosure allows authorities to do three things the alternative frames cannot: A) identify the relevant input (data), B) assess its indispensability and asymmetry, and C) evaluate effects on market contestability rather than individual choice. This approach avoids both doctrinal over-expansion and analytical mischaracterisation, while remaining anchored in effects-based logic of competition law.

C. Guardrails Against Over-Enforcement as Conditions of Legitimacy

The most serious risk associated with a data-centric abuse doctrine is over-enforcement.¹⁴⁸ Digital markets evolve rapidly, and intervention grounded in speculative harm risks chilling innovation or, worse, locking regulatory error into market structure. Indian courts have traditionally resisted competition liability premised on conjecture rather than demonstrated effects. Comparative caution points in the same direction. From *Verizon v. Trinko*¹⁴⁹ in the US to sustained academic and institutional critiques of the Digital Markets Act in Europe,¹⁵⁰ the warning is consistent. Expansive theories of harm must be matched by rigorous

¹⁴⁵ European Data Protection Board & European Data Protection Supervisor, 'Joint Statement on the Digital Markets Act' (2021) 3.

¹⁴⁶ *Supra* n106.

¹⁴⁷ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector.

¹⁴⁸ US Department of Justice and Federal Trade Commission, Merger Guidelines (December 2023) Guideline 5.

¹⁴⁹ *Supra* n131.

¹⁵⁰ European Research Centre for Economic and Financial Governance (EURO-CEFG), 'The Digital Markets Act: A Critical Assessment' (Scientific Opinion, 2021).

thresholds and proportional restraint. Guardrails are therefore indispensable. A disciplined enforcement approach demands, at a minimum, five conditions. *First*, clear proof of dominance in a properly defined relevant market. *Second*, a demonstrable functional link between control over data and alleged competitive harm. *Third*, evidence that data input is genuinely non-replicable or cannot be competitively substituted. *Fourth*, measurable foreclosure effects rather than hypothetical or inferred leverage. *Finally*, remedies calibrated not only to scale of harm but also to institutional capacity and error costs. These requirements do not dilute enforcement. They define its legitimacy. By insisting on structure, evidence, and proportionality, they ensure that intervention operates as principled adjudication rather than discretionary market management.

D. Remedial Design Must Follow Harm Theory, Not Regulatory Convenience

The final risk is remedial mismatch. Competition authorities typically resort to consent-based or behavioural remedies as these are procedurally convenient or institutionally familiar.¹⁵¹ In cases where harm results from data asymmetry and architectural integration, such remedies are designed to fail. Section 27 requires remedies that not only restore competition but also go beyond mere formal compliance.¹⁵² Comparative experience shows that behavioural remedies often fail in cases of architectural abuse, while monitoring constraints limit their effectiveness even further.¹⁵³ Therefore, remedies should be taken from harm theory itself. Harm, responsive remedies should directly address data asymmetry, not rely on consent as a cure, and prioritize verifiable obligations rather than symbolic compliance.¹⁵⁴ While structural separation may remain as an exception, functional unbundling, data access obligations, or enforceable purpose, limitation mechanisms may be intermediate tools capable of addressing harm without going beyond institutional limits.¹⁵⁵ Data-driven abuse analysis is not overdoing the work, but if it is analytically untethered, it can go wrong. Disjunction of the market with functional linkage, input-based foreclosure

¹⁵¹ Competition and Markets Authority, *Mobile Ecosystems: Market Study Final Report* (10 June 2022) paras 7.12–7.20.

¹⁵² *Supra* n154.

¹⁵³ Thomas Höppner, 'Google's (Non-) Compliance with the EU Shopping Decision' (2020) 11(5) *Journal of European Competition Law & Practice* 297.

¹⁵⁴ Commission Regulation (EU) 2022/1925 (DMA) Recital 63.

¹⁵⁵ Draft Digital Competition Bill 2024 (India) ss 10–12.

analysis, evidentiary guardrails, and harm, aligned remedies together provide a disciplined framework for intervention. When properly constrained, a data-centric abuse doctrine can be a tool for competition law that enhances it rather than destabilizes it.

VIII. CONCLUDING CONTEMPLATIONS

This paper has argued that the WhatsApp/Meta litigation marks an important turning point in how Indian competition law deals with data-driven market power. What matters most about NCLAT's judgment is not the final outcome, but the way the Tribunal reasons through the problem. It affirms WhatsApp's dominance in a zero-price messaging market, rejects dominance in online advertising, and still allows competitive harm to be assessed across those markets. In doing so, it stays within statute while adapting abuse analysis to the realities of digital platforms. A key feature of this approach is the Tribunal's refusal to collapse multiple markets into a single "ecosystem" market. Market definition remains grounded in substitutability, not in backend data integration.

Simultaneously, the effects of conduct are not artificially confined to market boundaries. Where data flows connect distinct markets, harm can arise across them. This resolves a long-standing difficulty in competition law: *how to deal with exclusion when dominance exists in one market and harm appears in another*. The answer is neither to stretch dominance nor to hide behind formal categories, but to recognize data control as a mechanism that distorts competition elsewhere. This reasoning has clear doctrinal consequences. It allows Section 4(2)(c) to operate as an effects-based provision addressing data-driven denial of market access, without importing the rigid requirements of leveraging or recasting competition harm as a privacy issue. Data is treated not as a standalone market, but as a critical input. When control over that input is asymmetric, it can foreclose rivals, reinforce feedback loops, and reduce contestability.

The paper has also shown why remedies must follow this logic. Consent-based and purely behavioural remedies cannot fix exclusion that is rooted in data integration and opacity. Concurrently, India's enforcement institutions face real limits in implementing structural separation. NCLAT's approach reflects this constraint. It does not claim to solve data power

completely, but it avoids the more serious mistake of shielding it through doctrinal rigidity. A broader lesson is that Indian competition law is not expanding the abuse doctrine indiscriminately. It is clarifying what abuse looks like in data-intensive markets. Focus shifts from price and formal exclusion to control over inputs that shape competitive conditions across markets. If applied with clear evidence and proportionate remedies, this approach preserves both legal certainty and regulatory flexibility. Seen in this light, the WhatsApp/Meta case is not an exceptional response to an exceptional firm; it offers a ‘workable’ template for applying existing competition law principles to new forms of economic organization. Challenge ahead is not to invent new doctrines, but to apply established ones with care, discipline, and precision. This paper outlines one way to do so.

TOKENIZATION AS AN ALTERNATIVE TO SECURITIZATION: BUZZWORD HYPE OR THE REAL FINANCE REVOLUTION?

- Abhishek Tak and Akshat Jindal*

ABSTRACT

The financial system majorly depends upon securitization to convert illiquid assets into marketable securities for improving liquidity and capital allocation. Securitization has resulted in the creation of efficient capital market growth by allowing for structured financing through structures like Special Purpose Vehicles. However, the 2008 financial crisis has exposed securitization with regard to its structural complexity. In addition to it, information asymmetry and settlement inefficiencies are also one of the major issues. In this context, tokenization, enabled by blockchain and smart contract technology, has been considered as a viable option for substituting the traditional securitization process. In light of this, this paper explores the evolution of securitization by analysing the limitations inherent in the traditional securitization process and evaluating whether tokenization can address these challenges.

Against this backdrop, Part I of the paper is an introduction, followed by Part II of the paper, which delves into the traditional securitization process, explaining how Special Purpose Vehicles, tranches, and payment waterfalls function, alongside the inherent risks such as complex structures, information asymmetry, and legal ambiguities. Part III of the paper delves into the tokenization process and also checks how tokenization performs the functions of securitization. Part IV critically assesses whether tokenization can entirely answer the concerns raised in the traditional securitization structure, examining its strengths and weaknesses. Part V provides an analysis of theory into the practicality. Followed by Part VI the proposes a hybrid model that integrates tokenization into the existing securitization structure, leveraging automation and transparency while preserving legal safeguards. lastly, Part VII advocates for an equitable approach that combines technological innovation with traditional frameworks to create more effective and inclusive markets for finance.

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I. INTRODUCTION

The evolution of the financial system is based on the principle of transforming illiquid assets into tradable instruments and securities, for enhancing liquidity into the market.¹ For a decade securitization has been one of the key frameworks by facilitating this principle.² Financial institutions and corporations time and again, have adopted the mechanism of securitization to access new sources of funding.³ By enabling efficient capital mobilization, securitization has contributed to the growth of global capital markets.⁴ Moreover, by enhancing liquidity in the financial system and by creating a more formalized and structured framework for financing it has improved the efficient allocation of capital.⁵

Securitization is one of the modern financial innovations,⁶ which has bridged the gap between the originators in need of capital and investors seeking predictable cash flows.⁷

¹ See Elena Loutskina, ‘The Role of Securitization in Bank Liquidity and Funding Management’ (2011) 100 *Journal of Financial Economics* 663 <https://doi.org/10.1016/j.jfineco.2011.02.005> accessed 7 January 2026. See also *S J Coutts, ‘Liquidity Transformation Risks and Stabilization Tools: Evidence from Open-End Private Equity Real Estate Funds’ (2025) Real Estate Economics 1* <https://doi.org/10.1111/1540-6229.12532> accessed 7 January 2026.

² Charles Austin Stone and Anne Zissu, ‘Securitization: The Transformation of Illiquid Financial Assets into Liquid Capital Market Securities—Examples from the European Market’ (2000) 9 *Financial Markets, Institutions & Instruments* 133 <https://doi.org/10.1111/1468-0416.00037> accessed 7 January 2026.

³ Fenghua Song and Anjan V Thakor, ‘Financial System Architecture and the Co-evolution of Banks and Capital Markets’ (2010) 120 *Economic Journal* 1021 <https://doi.org/10.1111/j.1468-0297.2009.02345.x> accessed 7 January 2026; see also Benjamin H Mandel, Donald Morgan and Chenyang Wei, ‘The Role of Bank Credit Enhancements in Securitization’ (2019) 25 *Economic Policy Review*, Fed Reserve Bank of NY 41; N Cetorelli and S Peristiani, ‘The Role of Banks in Asset Securitization’ (2019) 25 *Economic Policy Review*, Fed Reserve Bank of NY 41.

⁴ Mark Ferguson, Joseph McBride and Kevin Tripp, ‘Securitization Process’ in H Kent Baker, Greg Filbeck and Andrew C Spieler (eds), *Debt Markets & Investments* (New York, 2019; online edn, Oxford Academic, 18 June 2020) <https://doi.org/10.1093/oso/9780190877439.003.0020> accessed 7 January 2026.

⁵ Lakshman Alles, *Asset Securitization and Structured Financing: Future Prospects and Challenges for Countries in Emerging Markets* (IMF Working Paper No 147, 2001) 1 <https://doi.org/10.5089/9781451856736.001> accessed 7 January 2026.

⁶ Vinod Kothari, *Securitization: The Financial Instrument of the Future* pt. I, ch. 1, at 21 (John Wiley & Sons (Asia) Pte Ltd. 2006). (hereinafter “**Securitization: The Financial Instrument of Future**”)

⁷ Clifford Chance, *Forward Flow Securitisation: The Right Tool for the Right Job?* (29 September 2023) <https://www.cliffordchance.com/briefings/2023/09/forward-flow-securitisation-the-right-tool-for-the-right-job-.html> accessed 13 September 2025.

However, every coin has two sides; securitization also has flaws in its framework.⁸ The process of securitization is inherently complex, with different intermediaries such as the Special Purpose Vehicle (“SPV”), trustees, custodian, and credit rating agencies, etc., makes a transaction more complicated and costlier.⁹ The 2008 global financial crisis has exposed different kinds of structural vulnerabilities in the traditional securitization framework.¹⁰

Against this backdrop, there is a new paradigm shift in the financial market, which is going to take place with tokenization taking the driving seat.¹¹ With emerging technologies such as the Blockchain or Decentralized Ledger Technology (“DLT”), tokenization has introduced a new dimension of asset monetization.¹² Tokenization, with its unique features such as automation by the deployment of the smart contract and by eliminating the various intermediaries through embedding the asset rights in the programmable tokens, promises to disrupt the financial industry and lead towards an evolution.¹³ However, whether these technological promises can be translated into legally enforceable financial structure remains deeply contested.

Despite the advantages offered by the tokenization, it does not come without challenges. The existing securities laws were made to regulate the centralized, paper-based system and not the decentralized digital platforms.¹⁴ Questions regarding the legal status of blockchain

⁸ L. Gauthier, ‘Problems with Securitization’ in *Securitization Economics*, Springer Texts in Business & Economics (2020) https://doi.org/10.1007/978-3-030-50326-0_5 accessed 7 January 2026.

⁹ PwC Luxembourg, Parties Involved in Securitisation Transactions <https://www.pwc.lu/en/securitisation/parties-involved-in-securitisation-transactions.html> accessed 13 September 2025.

¹⁰ Lucia Quaglia, ‘Securitization: A Problem or a Solution?’ in *The Perils of International Regime Complexity in Shadow Banking* (Oxford, 2022; online edn, Oxford Academic, 18 August 2022) <https://doi.org/10.1093/oso/9780192866523.003.0007> accessed 13 September 2025.

¹¹ Duane Block and Drew Propson, *Asset Tokenization in Financial Markets: The Next Generation of Value Exchange*, Insight Report (World Economic Forum, May 2025).

¹² P. Laurent, T. Chollet, M. Burke and T. Seers, ‘The Tokenization of Assets Is Disrupting the Financial Industry. Are You Ready?’ *Inside Magazine* no 19 (2018).

¹³ Anutosh Banerjee, Julian Sevillano, Matt Higginson, Donat Rigo and Garry Spanz, *From Ripples to Waves: The Transformational Power of Tokenizing Assets* (McKinsey & Co, 20 June 2024) <https://www.mckinsey.com/industries/financial-services/our-insights/from-ripples-to-waves-the-transformational-power-of-tokenizing-assets> accessed 13 September 2025.

¹⁴ Dixuan Wang et al, *Tokenization Matters! Degrading Large Language Models through Challenging Their Tokenization*, arXiv:2405.17067v2 (27 May 2024) <https://arxiv.org/abs/2405.17067> accessed 13 September 2025.

and smart contracts remain unresolved.¹⁵ In addition to it the scepticism persists as to whether tokenization can become an alternative to securitization or it is just securitization in a fancy jacket?

Securitization has been deeply entrenched in financial systems, backed by decades of legal precedent and infrastructure.¹⁶ Accordingly, the question is not whether tokenization can substitute the function of securitization but whether it can surpass it to become a mainstream mechanism enhancing liquidity and capital formation.

In light of the discussion made, this article aims to critically examine tokenization vis-à-vis securitization. It explores the framework of securitization and tokenization, and conducts a comparative analysis across efficiency, risk, and regulatory dimensions. In addition to it, this article seeks to deliver a balanced evaluation of tokenization's potential to transform the future of finance by contextualizing the discussion various frameworks. The central contribution of this paper lies in its functional comparison of securitization or tokenization and in proposing a legally grounded model that reconciles technological innovation with investor protection safeguards.

II. THE TRADITIONAL SECURITIZATION PROCESS AND ISSUES

A. The Traditional Securitization Process

Securitization is the process through which the financial relations are converted into a transaction¹⁷ wherein the illiquid assets are converted into marketable securities.¹⁸ At the core of this process lies the SPV which facilitates this conversion.¹⁹ The SPV, funds the purchase of the cash flows generating assets by issuing securities called asset backed

¹⁵ Jenny Szabo, Charles Bernard and Laurent Philip, 'Legal Implications and Challenges of Blockchain Technology and Smart Contracts' (2024) 12 *Computer Life* 6 <https://doi.org/10.54097/ztn2w848> accessed 7 January 2026.

¹⁶ Omneya Abdelsalam, Marwa Elnahass, Habib Ahmed and Julian Williams, 'Asset Securitizations and Bank Stability: Evidence from Different Banking Systems' (2022) 51 *Global Finance Journal* 100551 <https://doi.org/10.1016/j.gfj.2020.100551> accessed 7 January 2026.

¹⁷ Securitization: The Financial Instrument of Future, (n 6) at 4.

¹⁸ Id 3.

¹⁹ Gary B Gorton and Nicholas S Souleles, *Special Purpose Vehicles and Securitization* (FRB Philadelphia Working Paper No 05-21, 1 September 2005) <https://ssrn.com/abstract=713782> accessed 7 January 2026.

securities (“**ABS**”).²⁰ The purpose of the SPV is to purchase assets and pay for them by issuing securities, ABS, and selling them to investors.²¹

The transfer of assets from the originator to the SPV is structured as a *true sale*.²² The idea behind this arrangement is to lawfully isolate the receivables from the originator,²³ ensuring that bankruptcy risk present in the regular unsecured and secured lending arrangements is not present in a true sale securitization.²⁴ Unlike a secured lending, which grants a security interest in the asset of the borrower, a true sale securitization treats the transfer as an outright disposition of assets.²⁵ Through this process of *asset segregation*, the assets are ring-fenced with the SPV to achieve *bankruptcy remoteness* for enhancing investor confidence.²⁶

After the completion of the transfer, pooled assets are repackaged into the ABS, these are structured into different *tranches* i.e., senior, mezzanine and junior reflecting different levels of risk and returns.²⁷ Tranches with senior ranking are considered safer, providing lower yields along with reduced risk, while mezzanine and junior tranches may carry a higher return but can expose investors to greater risk.²⁸ As the tranches carry both risk and returns, to strengthen *risk mitigation*, credit enhancement such as excess spread, over-collateralization, reserve accounts and external guarantees are also embedded in these structures.²⁹

²⁰ Charles-Henri Larreur, *The Securitization Process*, in *Structured Finance: Leveraged Buyouts, Project Finance, Asset Finance and Securitization* ch. 10 (1st ed. 2021). (hereinafter “**The Securitization Process**”)

²¹ Daniel I. Castro, Jr., *Securitization*, in Gary Strumeyer with Sarah Swammy, *The Capital Markets: Evolution of the Financial Ecosystem* 304, ch. 17 (John Wiley & Sons, Inc. 2017).

²² Moorad Choudhry et al, ‘An Introduction to Securitisation’ in *Structured Credit Products: Credit Derivatives and Synthetic Securitisation* (2nd ed, 2010) <https://doi.org/10.1002/9781118390504.ch12> accessed 7 January 2026.

²³ *Id.*

²⁴ See P L Mancini, ‘Bankruptcy and the UCC as Applied to Securitization: Characterizing a Mortgage Loan Transfer as a Sale or a Secured Loan’ (1993) 73 *Boston University Law Review* 873.

²⁵ T J Gordon, ‘Securitization of Executory Future Flows as Bankruptcy-Remote True Sales’ (2000) 67(4) *University of Chicago Law Review* 1317.

²⁶ Gabriella Chiesa, ‘Bankruptcy Remoteness and Incentive-Compatible Securitization’ (2015) 24 *Financial Markets, Institutions & Instruments* 241 <https://doi.org/10.1111/fmii.12029> accessed 7 January 2026.

²⁷ Ingo Fender and Janet Mitchell, *Incentives and Tranche Retention in Securitisation: A Screening Model* (BIS Working Paper No 289, 29 September 2009) <https://www.bis.org/publ/work289.htm> accessed 7 January 2026.

²⁸ *Id.*

²⁹ Timothy Cleary and Charles HR Morris, *Credit Risk Mitigation and Synthetic Securitization: Law and Regulation* (2025; online edn, Oxford Law Pro) <https://doi.org/10.1093/law/9780198891062.001.0001> accessed 13 September 2025.

After the issuance of the tranches, the originators continue to collect the payments from the underlying asset and it is channelled to the SPV.³⁰ The role of the SPV is to distribute this payment to investors, in accordance with a specific golden rule.³¹ According to this rule, senior tranches with lower risk and lower returns are paid first, followed sequentially by mezzanine and junior tranches.³² This cascade effect is known as the *payment waterfall*.³³

To further safeguard this structure, mechanisms such as reserve accounts and excess spread mop up possible shortfalls,³⁴ while rating agencies and trustees monitor compliance and disclosure to ensure transparency.³⁵ With time, as the receivables are being repaid or amortized, the securities decline gradually toward maturity, concluding the cycle of converting illiquid assets into marketable and liquid investment securities.³⁶

B. Issues with the Traditional Securitization Process

As discussed in the previous subpart, the basic principle of the securitization is to achieve *bankruptcy remoteness* by the way of *true sale* through *asset segregation*. The core function of the securitization includes *risk mitigation*, *enhancing liquidity*, *enhancing transparency*, *providing investors protection*, and distribution of the structured cash flow through a *payment waterfall*. However, despite all these objectives, the practical implementation of the securitization has been exposed to several shortcomings that undermine its effectiveness.³⁷

³⁰ S Legenchuk, M Pashkevych, O Usatenko, O Driha and V Ivanenko, ‘Securitization as an Innovative Refinancing Mechanism and an Effective Asset Management Tool in a Sustainable Development Environment’ (2020) 166 *E3S Web of Conferences* 13029, EDP Sciences.

³¹ The Securitization Process, (n 20) 259

³² Id 259.

³³ Id.

³⁴ FJ Fabozzi, HA Davis and M Choudhry, ‘Basic Principles of Securitization’ in *Introduction to Structured Finance* (Wiley, 2013) 87–128.

³⁵ SY Deku and A Kara, ‘Trustee Reputation in Securitization: When Does It Matter?’ (2019) 28(2) *Financial Markets, Institutions & Instruments* 61.

³⁶ Basel Committee on Banking Supervision, *CRE40 – Securitisation: General Provisions*, in *Basel Framework* (15 December 2019) https://www.bis.org/basel_framework/chapter/CRE/40.htm accessed 13 September 2025.

³⁷ Lucia Quaglia, (n 10)

i. Structural and Financial Issues

One of the drawbacks of the securitization is its complex structure of tranches and risk opacity.³⁸ Standard securitization structures such as multi-tranche CMOs, CDOs, etc majorly rely on the hierarchical credit rating and aggregate disclosures about the collateral.³⁹ As a result, investors find it difficult to determine whether an underlying exposure was subprime or if the underlying exposure was itself exposed to subprime obligors.⁴⁰ This kind of opacity makes it harder for the investor to understand how the losses will flow through the structures. This opacity undermines accurate risk pricing and weakens market discipline, contributing to systemic vulnerability.

In the 2008-2009 global financial crisis, ABS were combined and packaged into CDOs, where the holders received income from the underlying obligation.⁴¹ However, in many cases, ABS may contain thousands of debts backed by a single CDO.⁴² This link between the CDO value and asset performance is highly complex and non-linear.⁴³ As a result, investors may not be able to parse the exposure of tranches, essentially leading towards the freezing of liquidity.⁴⁴

Information asymmetry is yet another issue associated with the securitization. Originators typically possess better information about the loan quality than investors.⁴⁵ As a result,

³⁸ See, D Echeverry, 'Information Frictions in Securitization Markets: Investor Sophistication or Asset Opacity?' (2017). See also, MÁ Peña-Cerezo, A Rodríguez-Castellanos and FJ Ibáñez-Hernández, 'Primary Yield and Multitranches Structure in Securitization Issues: Explicative Factors. A Review' (2016) 22(3) *European Research on Management and Business Economics* 111 <https://doi.org/10.1016/j.iedee.2015.08.001> accessed 7 January 2026.

³⁹ CRISIL Ratings, *Criteria for Securitisation Transactions* (September 2025) <https://www.crisilratings.com/content/dam/crisilrating/criteria-and-methodology/criteria-for-securitisation-transactions.pdf> accessed 13 September 2025.

⁴⁰ AB Ashcraft and T Schuermann, 'Understanding the Securitization of Subprime Mortgage Credit' (2008) 2(3) *Foundations and Trends® in Finance* 191 <http://dx.doi.org/10.1561/05000000024> accessed 7 January 2026.

⁴¹ SY Deku, A Kara and N Karimov, 'Do Investors Value Frequent Issuers in Securitization?' (2021) 57 *Review of Quantitative Finance and Accounting* 1247 <https://doi.org/10.1007/s11156-021-00977-2> accessed 7 January 2026.

⁴² Lucia Quaglia, (n 10)

⁴³ VV Acharya, M Richardson, S van Nieuwerburgh and LJ White, 'Guaranteed to Fail: Fannie Mae, Freddie Mac, and the Debacle of Mortgage Finance' (2011) 25(1) *Journal of Economic Perspectives* 71.

⁴⁴ Adonis Antoniadis and Nikola Tarashev, 'Securitisations: Tranching Concentrates Uncertainty' *BIS Quarterly Review*, December 2014, 37 https://www.bis.org/publ/qtrpdf/r_qt1412f.htm accessed 7 January 2026.

⁴⁵ Ugo Albertazzi, Ginette Eramo, Leonardo Gambacorta and Carmelo Salleo, 'Asymmetric Information in Securitization: An Empirical Assessment' (2015) 71 *Journal of Monetary Economics* 33 <https://doi.org/10.1016/j.jmoneco.2014.11.002> accessed 7 January 2026.

originators may engage in adverse selection, i.e. where ‘lemons’ or risky assets are more likely to be securitized rather than the high-quality ones.⁴⁶ This creates a classic moral hazard problem, where originators lack incentives to maintain post-origination credit quality. As the information might not be credibly transferred to the market where the loans are securitised, originators may lack the incentive to screen borrowers or continue monitoring thereafter,⁴⁷ this undermines the foundational credit discipline that securitization seeks to build.

In addition to it, the settlement complexity is a major concern faced during securitization.⁴⁸ The payments by the borrowers first flow through servicers, which are reconciled by the trustee and after that it is distributed to investors.⁴⁹ Similarly, secondary trading of the ABS requires trustee and the custodians, verification of the transfer claims and updates to the beneficial owner records.⁵⁰ Due to this multi-layered approach the settlement cycle stretch over several days, which results in raising the cost and counterparty issues.⁵¹

Lastly, securitization is heavily dependent on the intermediaries and highly complex in its operation.⁵² The process involves various actors such as the arrangers, servicers, custodians, underwriters and rating agencies with different types of roles.⁵³ This fragmentation creates errors and delays, with investors receiving performance data only monthly or quarterly.⁵⁴ As a result timely response to risk is often delayed.⁵⁵ In addition to it, securitization is also associated with high compliance cost.⁵⁶ Structuring involves substantial documentation,

⁴⁶ CA Hill, ‘Securitization: A Low-Cost Sweetener for Lemons’ (1997) 10(1) *Journal of Applied Corporate Finance* 64 <https://doi.org/10.1111/j.1745-6622.1997.tb00126.x> accessed 7 January 2026.

⁴⁷ Ugo Albertazzi, Ginette Eramo, Leonardo Gambacorta and Carmelo Salleo, *Securitization Is Not That Evil After All* (BIS Working Paper No 341, March 2011) <https://www.bis.org/publ/work341.pdf> accessed 7 January 2026.

⁴⁸ Moody’s Investors Service, *Structured Settlement Securitizations Methodology* (27 April 2020) <https://ratings.moody.com/api/rmc-documents/67219> accessed 7 January 2026.

⁴⁹ Chang, C., 2020. 5. from securitization to tokenization. *Building the New Economy*.

⁵⁰ Id.

⁵¹ Id.

⁵² L Jassur, G Favato and C Print, ‘The Flaws of Securitisation’ (2009) 1 *International Journal of Corporate Governance* <https://doi.org/10.1504/IJCG.2009.032727> accessed 7 January 2026.

⁵³ Id.

⁵⁴ SY Deku, A Kara and Y Zhou, ‘Securitization, Bank Behaviour and Financial Stability: A Systematic Review of the Recent Empirical Literature’ (2019) 61 *International Review of Financial Analysis* 245 <https://doi.org/10.1016/j.irfa.2018.11.013> accessed 7 January 2026.

⁵⁵ G Gorton and A Metrick, ‘Securitized Banking and the Run on Repo’ (2012) 104(3) *Journal of Financial Economics* 425.

⁵⁶ LT Kendall and MJ Fishman (eds), *A Primer on Securitization* (MIT Press, 2000)..

legal opinions, and various credit ratings, while continuous trustee and servicer fees impact deal economics.⁵⁷

ii. Legal Issues

One of the most critical and challenging issues is to determine the true sale. In the securitization, the originator sells the assets to the SPV, however, they continue to receive rewards from the assets and some sort of rewards from the same.⁵⁸ In addition to it there is no outward manifestation to sale, raising questions about the legal isolation of assets. Therefore, it is possible that the courts and other authority may recharacterize (i.e., assigning to the transaction a character different from its apparent one) the securitization transaction.⁵⁹

The recharacterization may treat a transaction as a loan rather than a sale; as a result, the transaction may lose its substance.⁶⁰ As a consequence, it is likely that such recharacterization may occur during the insolvency of the originator,⁶¹ subsequently defeating the foundation of the securitization i.e., achieving bankruptcy remoteness through true sale.⁶² Thus, achieving true sales is a fundamental concern, since without them the whole structure would become ineffective.

The perfection of the buyer's interest is another critical issue.⁶³ According to several framework such as Uniform Commercial Code, even if a transfer is characterised as true sale, the buyer (SPV) has to perfect its interest in receivables to avoid recharacterization risk.⁶⁴ However, issues arise when the receivables are themselves secured by the underlying asset. If the seller's (originators) interest is not perfected before the assignment, the claim

⁵⁷ Hyun Song Shin, *Financial Intermediation and the Post-Crisis Financial System* (BIS Paper No 53, 8th BIS Annual Conference, 25–26 June 2009) <https://www.bis.org/events/conf090625/hyunshinpaper.pdf> accessed 7 January 2026.

⁵⁸ A Shtatnov, 'The Elusive True Sale in Securitization' (2012) <https://ssrn.com/abstract=2115054> accessed 7 January 2026..

⁵⁹ Sanjev Warnakulasuriya and Kamal Dalal, 'Securitisation: Law and Practice – United Kingdom' in *Global Legal Insights: Securitisation 2021* (Latham & Watkins LLP eds, 2021) https://www.lw.com/admin/upload/SiteAttachments/019_UK.pdf accessed 7 January 2026.

⁶⁰ O Vygovskyy, 'Re-Characterization Risk and True Sale Principle within the Context of Asset Securitization' (2020) 20(1) *Global Jurist* 20190027.

⁶¹ Id.

⁶² K Ayotte and S Gaon, 'Asset-Backed Securities: Costs and Benefits of "Bankruptcy Remoteness"' (2011) 24(4) *The Review of Financial Studies* 1299.

⁶³ RM Rosenberg and JHP Kravitt, 'Legal Issues in Securitization' (1988) 1(3) *Journal of Applied Corporate Finance* 62.

⁶⁴ Id.

of the buyers may be compromised.⁶⁵ In addition to it, as already stated the sellers continue to service receivable and collect proceeds, this commingling may result in the imperfection of the purchaser's interest in cash proceeds.⁶⁶ This would result in exposing them to clawback as “voidable preferences” if the owner enters bankruptcy.⁶⁷

In addition to all this one of the major concerns is the information asymmetry, as discussed in the previous subpart, originators may retain crucial information about the underlying asset. This non-disclosure by the originators or servicers, rating agencies operating under an issuer-paid model, faces inherent conflicts of interest that may compromise their independence.⁶⁸ Lastly, securitization is heavily regulated among different jurisdictions.⁶⁹ Divergent rules on the disclosures, risk retention and treatment of capital across different frameworks make the process complicated, severely impacting both investors and market stability.⁷⁰

III. TOKENIZATION AND THE PERFORMANCE OF THE TRADITIONAL SECURITIZATION FUNCTIONS

A. Tokenization Process

As discussed in part II of the paper, the traditional finance (“**TradFi**”) structure i.e. securitization, although beneficial, has some flaws in its structure. However, in counter to the same, tokenization is emerging as an alternate to securitization. Tokenization is a decentralized finance (“**DeFi**”) model that uses modern technologies such as the blockchain, DLT, smart contracts, etc., for structuring, transferring and accessing the asset.⁷¹

⁶⁵ Id.

⁶⁶ Id.

⁶⁷ Id.

⁶⁸ M Farboodi and A Babus, ‘Strategic Opacity: A Cautionary Take on Securitization’ (2015) 2015 Meeting Papers 692, Society for Economic Dynamics.

⁶⁹ International Finance Corporation, *Securitization: Key Legal and Regulatory Issues* (2004) <https://documents1.worldbank.org/curated/en/747401468092077080/pdf/395540Securitization.pdf> accessed 7 January 2026.

⁷⁰ Id.

⁷¹ ‘Decentralized Finance (DeFi) and the Tokenization of Real-World Assets’, OSL Academy (15 April 2025) <https://www.osl.com/hk-en/academy/article/decentralized-finance-defi-and-the-tokenization-of-real-world-assets> accessed 7 January 2026.

Tokenization refers to the process of representing ownership rights or claims to real-world assets in the form of *digital tokens*.⁷² Each token acts as a digital certificate of ownership or entitlement backed by legal right over the underlying asset.⁷³ These assets can range from real estate and commodities to financial instruments and intellectual property.⁷⁴

The initial step of the tokenization involves the identification of the tangible or intangible asset, such as the real estate, receivables or commodities.⁷⁵ This asset is digitised, and details of this asset are recorded on a *DLT*.⁷⁶ This serves as a foundational technology which ensures that all the transactions are traceable as well as transparent.⁷⁷ The ownership of such an asset is embedded in a digital token, which represents the rights associated with an asset.⁷⁸

The central to the whole process of tokenization is the deployment of the *smart contract*,⁷⁹ These self-executing digital agreements are deployed on blockchain networks and operates according to predefined logic.⁸⁰ Their primary role is to automate core processes such as token issuance, ownership tracking, and the distribution of financial benefits, ensuring that these activities are executed transparently, securely, and without the need for

⁷² Ning Xia, Xiaoyu Zhao, Yan Yang, Yutong Li and Yuxuan Li, *Exploration on Real World Assets and Tokenization*, arXiv:2503.01111 (2025) <https://arxiv.org/abs/2503.01111> accessed 7 January 2026.

⁷³ Mikus Baltais, Elīna Sondore, Tālis J Putniņš and Jonas R Karlsen, *Economic Impact Potential of Real-World Asset Tokenization*, UTS Business School, University of Technology Sydney, Report No 2024-06 (2024).

⁷⁴ Sergey A Andryushin, 'Tokenization of Real Assets: Classification, Platforms, Applications, Opportunities and Challenges of Development' (2024) 88 *Russian Journal of Economics & Law*.

⁷⁵ R Heines, C Dick, C Pohle and R Jung, 'The Tokenization of Everything: Towards a Framework for Understanding the Potentials of Tokenized Assets', *Proceedings of the Pacific Asia Conference on Information Systems (PACIS)* 40 (2021).

⁷⁶ OECD Blockchain Policy Series, *The Tokenisation of Assets and Potential Implications for Financial Markets* (OECD, 2020) 107.

⁷⁷ SK Dutta, 'Tokenization' in *The Definitive Guide to Blockchain for Accounting and Business: Understanding the Revolutionary Technology* (Emerald Publishing Ltd, 2020) 79–105.

⁷⁸ P Kijkasiwat, 'Tokenized Real Estate Investments' in *Blockchain in Real Estate: Theoretical Advances and New Empirical Applications* (Springer Nature Singapore, 2024) 257–71.

⁷⁹ A Gupta, J Rathod, D Patel, J Bothra, S Shanbhag and T Bhalerao, 'Tokenization of Real Estate Using Blockchain Technology' in *International Conference on Applied Cryptography & Network Security* (Springer International Publishing, 2020) 77–90.

⁸⁰ VJ Oza, A Nikte, V Bhanushali and U Rote, 'Smart Contracts and Tokenization: Revolutionizing Real Estate Transactions with Blockchain Technology' in *2024 International Conference on Inventive Computation Technologies (ICICT)* (IEEE, 2024) 1598–1604.

intermediaries.⁸¹ One of the core functions of the smart contract is to create and allocate tokens to investors upon initiation, in accordance with the investment structure defined in the contract.⁸²

Once the tokens are created and allocated, the next step is token issuance and listing these tokens on a digital marketplace or an exchange platform.⁸³ Through this exchange platform, the investors can onboard and can engage in buying, selling and trading of the tokens.⁸⁴ This platform utilizes and leverage the blockchain ensuring that transactions are processed with high resilience to cybersecurity threats and without single points of failure.⁸⁵ The leveraging of the blockchain ensures that the transactions are secure and immutable, with the real time access to ownership and transaction histories.⁸⁶

As the tokens are traded, ownership is transferred using secure and automated procedures based on cryptographic algorithms and digital signatures.⁸⁷ Every transaction is recorded on a ledger to ensure that every change in ownership is transparent and cannot be altered retrospectively.⁸⁸ In addition to it, governance and compliance measures are leveraged into tokenization structure.⁸⁹ Regulatory standard like know-your-customer (“**KYC**”) and anti-money laundering (“**AML**”) norms and tax compliance can be embedded into the smart contract to ensure that all stakeholders adhere to the applicable laws.⁹⁰

⁸¹ L Swinkels, ‘Empirical Evidence on the Ownership and Liquidity of Real Estate Tokens’ in *Blockchain, Crypto Assets, and Financial Innovation: A Decade of Insights and Advances* (Springer Nature Singapore, 2025) 434–467.

⁸² M Tarhini, ‘Application of Asset Tokenization, Smart Contracts and Decentralized Finance in Agriculture’ (2021) 6 *Revue de Studii Financiare* 152, 163.

⁸³ E Popov, A Veretennikova and S Fedoreev, ‘The Model of OTC Securities Market Transformation in the Context of Asset Tokenization’ (2022) 10 *Mathematics* 3441.

⁸⁴ M Sockin and W Xiong, ‘Decentralization through Tokenization’ (2023) 78 *Journal of Finance* 247, 299.

⁸⁵ J Chod, N Trichakis and SA Yang, ‘Platform Tokenization: Financing, Governance, and Moral Hazard’ (2022) 68 *Management Science* 6411, 6433.

⁸⁶ A Sinha, R Muthalagu, P Pawar, A Panthakkan and S Atalla, ‘Blockchain-Powered Asset Tokenization Platform’ in *2024 7th International Conference on Signal Processing and Information Security (ICSPIS)* (IEEE, November 2024) 1–6.

⁸⁷ I Dubrovina, *Tokenization of Real Estate: The Future Trend in Investments* (2023).

⁸⁸ M Riabokin and Y Kotukh, ‘RWA-Tokenization as a Tool for Attracting Investments and Developing Post-War Ukraine’ (2024) 3 *Global Scientific & Academic Research Journal of Economics, Business & Management* 64, 77.

⁸⁹ M Riabokin and Y Kotukh, ‘The Role of RWA-Tokenization in the Innovative Transformation of the Financial Sector: Essence, Features, Market Overview’ (2024) 11 *Finance of Ukraine* 101, 116.

⁹⁰ Y Kotukh and M Riabokin, *RWA Tokenization: A Step Forward to Invest in Ukraine* (SSRN, 2025) <https://ssrn.com/abstract=5362221> accessed 7 January 2026.

Lastly, post tokenization management involves corporate actions, including the dividend distribution and investor voting.⁹¹ All these processes can be automated through a smart contract and can continue throughout the life of the token until maturity or redemption.⁹² At the final stage, if the value of the tokenized asset is realised, the token holder can trade tokens with another investor in an over-the-counter arrangement or on an exchange.⁹³

B. The Performance of the Traditional Securitization Function

In the previous part of the section, it has been discussed that traditional securitization functions for a long time have been utilized by financial institutions for enhancing liquidity and remove bad debt from the books. However, as the world of finance is evolving, proponents argue that tokenization can act as an alternative to securitization.⁹⁴ For tokenization to be considered as a viable alternative to securitization, it is essential to examine whether tokenization can perform the traditional function of securitization.

As stated in part II of the paper the one of the core functions of securitization is to achieve asset segregation, by ring-fencing an asset with an SPV.⁹⁵ Tokenization achieves asset segregation through blockchain and smart contracts.⁹⁶ The usage of blockchain links a digital token to an underlying asset, which creates an immutable record of ownership.⁹⁷ This record of ownership is digitally separate from the physical asset.⁹⁸ The underlying base of the segregation is the usage of smart contracts and cryptographic methods, governing the tokens and establishing immutable records.⁹⁹ This creates a technological form of

⁹¹ Philip Pang *et al*, **Real Estate Tokenization** (KPMG, April 2020) 8.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ Chang, (n 49)

⁹⁵ CS Handbook, *Asset Securitization* (1997).

⁹⁶ I Agur, G Villegas Bauer, T Mancini-Griffoli, MS Martinez Peria and B Tan, *Tokenization and Financial Market Inefficiencies* (Fintech Notes 2025/001, A001, 2025) <https://doi.org/10.5089/9798400298905.063.A001> accessed 13 September 2025.

⁹⁷ Spydra, *Decoding Blockchain Immutability: What Keeps Networks Unchangeable?* (30 March 2024) <https://www.spydra.app/blog/decoding-blockchain-immutability-what-keeps-networks-unchangeable> accessed 13 September 2025.

⁹⁸ Debduitta Banerjee, Renaisa Das and Sharan Bathija, *How Asset Tokenization Unlocks Liquidity in Capital Markets* (Infosys Knowledge Institute, 25 April 2025) <https://www.infosys.com/iki/perspectives/asset-tokenization-unlocks-liquidity.html> accessed 13 September 2025.

⁹⁹ *Id.*

separation, though its legal effectiveness ultimately depends on off-chain legal recognition.¹⁰⁰

The DLT and smart contracts can also be leveraged by tokenization to achieve bankruptcy remoteness. By embedding the ownership rights, governance mechanism and payment rules into token's, assets can be separated from the originator's financial condition.¹⁰¹ However, practically without a legal entity like SPV it is very difficult to achieve bankruptcy remoteness.¹⁰² Since blockchain and smart contract lacks legal status, assets managed on such platforms could be clawed back in the case of originator's bankruptcy.¹⁰³ Accordingly, technological segregation cannot substitute the legal personality and statutory recognition provided by an SPV.

One of the crucial aspects of the securitization is to structure ABS into different tranches with different kinds of risk and returns. With tokenization, owners can issue a tranche of a structured product as separate tokens, each with its own risk/reward profile.¹⁰⁴ Tokenization has the potential to issue the digital tranches by issuing multiple classes of tokens with different risks and rewards.¹⁰⁵

The payment waterfall is another function of securitization, which determines the order and priority for the distribution of cash flows among investors.¹⁰⁶ The structure involves multiple tranches (senior, junior, and mezzanine), each with specific rights and rewards and

¹⁰⁰ Bank for International Settlements and Committee on Payments and Market Infrastructures, *Tokenisation in the Context of Money and Other Assets: Concepts and Implications for Central Banks* (October 2024) <https://www.bis.org/cpmi/publ/d225.pdf> accessed 7 January 2026.

¹⁰¹ Id.

¹⁰² Vaidehi Gulati, *Navigating Bankruptcy Remoteness: Mechanisms and Pitfalls* (Insolvency Law Academy, 15 January 2024) <https://insolvencylawacademy.com/navigating-bankruptcy-remoteness-mechanisms-and-pitfalls/> accessed 13 September 2025.

¹⁰³ Debevoise & Plimpton LLP, *Can Crypto Debtors Claw Back Pre-Bankruptcy Transfers?* (23 January 2023) <https://www.debevoise.com/insights/publications/2023/01/can-crypto-debtors-claw-back-pre-bankruptcy> accessed 13 September 2025.

¹⁰⁴ See Organisation for Economic Co-operation and Development, *The Tokenisation of Assets and Potential Implications for Financial Markets* (OECD Blockchain Policy Series, March 2020) https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/03/the-tokenisation-of-assets-and-potential-implications-for-financial-markets_370f9853/83493d34-en.pdf accessed 13 September 2025.

¹⁰⁵ See Daljit Singh, *What Is Debt Tokenization – Key Insights Inside* (24 July 2025) <https://www.debutinfotech.com/blog/what-is-debt-tokenization> accessed 13 September 2025.

¹⁰⁶ Alper Deniz, *Navigating Payment Waterfalls: A Key Mechanism in Structured Finance Transactions* (Truva Corp, 8 April 2023) <https://truvacorp.com/navigating-payment-waterfalls-a-key-mechanism-in-structured-finance-transactions/> accessed 13 September 2025.

each receiving payment in accordance with priority, risk, and rewards.¹⁰⁷ In tokenization, the smart contract can be embedded into the tokenized structure that enforces the payment waterfall.¹⁰⁸

Smart contract automates the payment waterfall by executing the transaction based on some predefined rules and conditions, such as the priority in the payment, available funds and the achievement of an event.¹⁰⁹ Smart contracts can also integrate the feature of the pro rata distribution and clauses that can adjust distribution based on a particular criterion.¹¹⁰ This structure makes the waterfall mechanism tamper-proof and it can work without any kind of manual intervention.¹¹¹

Tokenization also results in risk mitigation and investor protection through transparency, security and automation in financial transactions. The automation provided by the smart contract reduces human error, counterpart credit risk, operational risk, etc.¹¹² Moreover, the leveraging of DLTs allows all participants to access a real-time record of asset ownership, which minimizes the chance of misreporting.¹¹³ In addition to it, tokenization enables continuous settlement, which allows collateral to be transferred instantly and even during market distress, thereby preventing liquidity gaps and reducing counterparty credit risk.¹¹⁴

¹⁰⁷ Mark Ferguson and Kevin Tripp, 'Securitization Process' in H Kent Baker, Greg Filbeck and Andrew C Spieler (eds), *Debt Markets and Investments* (2019) 365.

¹⁰⁸ Stuart D Levi and Alex B Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations* (Harvard Law School Forum on Corporate Governance, 26 May 2018) <https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/> accessed 13 September 2025.

¹⁰⁹ F Bassan and M Rabitti, 'From Smart Legal Contracts to Contracts on Blockchain: An Empirical Investigation' (2024) 55 *Computer Law & Security Review* 106035 <https://doi.org/10.1016/j.clsr.2024.106035> accessed 7 January 2026; see also M Raskin, 'Law and Legality of Smart Contracts' (2017) 1 *Georgia Law Technology Review* 305, 309.

¹¹⁰ Lawrence Emma, 'Blockchain and Smart Contracts for Secure and Transparent Transactions' (2024).

¹¹¹ Stephanie Ellul Sullivan, 'Immutability in a Smart Contract: A Blessing or a Curse?' (Lexology, 26 February 2019) <https://www.lexology.com/library/detail.aspx?g=9b0e1787-f6cc-428a-8d55-93e5994bf416> accessed 13 September 2025.

¹¹² Outman Guelida, Said Jai Andaloussi and Ouail Ouchetto, 'Smart Contracts in Finance and Banking Systems in the Era of Industry 5.0: A Systematic Review' in Azzedine Chakir, Rajesh Bansal and Mohamed Azzouazi (eds), *Industry 5.0 and Emerging Technologies* (2024) 317–346 https://doi.org/10.1007/978-3-031-70996-8_16 accessed 7 January 2026.

¹¹³ Antier Solutions, *Smart Contract: An Essential Component of a Frictionless Financial Ecosystem* (25 July 2024) <https://www.antiersolutions.com/blogs/smart-contract-an-essential-component-of-a-frictionless-financial-ecosystem/> accessed 13 September 2025.

¹¹⁴ Chang, (n 49).

Investor protection in tokenization is achieved through the transparency offered by the blockchain.¹¹⁵ As already stated, every transaction is recorded on the DLT, which provides an immutable record of ownership and asset history.¹¹⁶ This transparency provided by the DLT, allows the investors to verify the performance of their investment, thereby reducing the risk of fraud and enhancing trust in the whole process.

Lastly, proponents of tokenization also enhance liquidity in the market by enabling fractional ownership.¹¹⁷ The fractional ownership allows the investors to purchase smaller portions of the high-value assets, such as real estate property, fine arts, etc.¹¹⁸ Furthermore, the tokenized assets can be traded on the secondary market 24/7. This provides for the continuous liquidity and lowers reliance on the conventional banking hours.¹¹⁹ These advancements results into the creation of a dynamic and accessible financial system.

i. Tabular Representation

ASPECT	SECURITIZATION	TOKENIZATION
Asset Segregation	The assets are legally isolated through an SPV. The assets are ring-fenced with an SPV, to ensure that the assets are separated from the originator's liability.	This is achieved through linking digital tokens to an underlying asset with the help of the blockchain and smart contract, creating an immutable and unique record of ownership.

¹¹⁵ Giovanni Bandi, Olivier Fines CFA and Urav Soni, *An Investment Perspective on Tokenization - Part II: Policy and Regulatory Implications* (CFA Institute Research and Policy Center, 5 May 2025) <https://rpc.cfainstitute.org/research/reports/2025/investment-perspective-tokenization-part-ii> accessed 13 September 2025.

¹¹⁶ SoluLab, *What Is Immutable Ledger in Blockchain and Its Benefits* (15 July 2023) <https://www.solulab.com/what-is-immutable-ledger-in-blockchain-and-its-benefits/> accessed 13 September 2025.

¹¹⁷ Léna Le Gal, Mayank Nagayach and Romain Swertvaeger, *Real Estate Tokenization: A New Era for Property Investment and Luxembourg's Strategic Role* (EY Luxembourg, 24 February 2025) https://www.ey.com/en_lu/insights/real-estate-hospitality-construction/real-estate-tokenization-a-new-era-for-property-investment-and-luxembourg-s-strategic-role accessed 13 September 2025.

¹¹⁸ KPMG Assurance and Consulting Services LLP, *The New Frontier in Real Estate Investment: Unlocking the Potential Through Fractional Ownership* (18 July 2024) <https://assets.kpmg.com/content/dam/kpmgsites/in/pdf/2024/07/the-new-frontier-in-real-estate-investment-unlocking-the-potential-through-fractional-ownership.pdf.coredownload.inline.pdf> accessed 13 September 2025.

¹¹⁹ Julia Kreppmeier, Ralf Laschinger, Bertram I Steininger and Gregor Dorfleitner, 'Real Estate Security Token Offerings and the Secondary Market: Driven by Crypto Hype or Fundamentals?' (2023) 154 *Journal of Banking & Finance* art 106940 <https://doi.org/10.1016/j.jbankfin.2023.106940> accessed 7 January 2026.

Bankruptcy Remoteness	It is achieved through the true sale of the assets to SPV, isolating the assets from the originator's bankruptcy.	It embeds the ownership rights into tokens to separate assets from the originator's bankruptcy. However, without any separate legal entity, the threat of clawback remains.
Tranches	ABS are structured into various tranches i.e., junior, senior and mezzanine, reflecting risk and rewards, supported by credit enhancement.	Multiple classes of the tokens representing different kinds of risk and reward levels can be issued, in addition to programmable or digital tranches that can be created through a smart contract.
Payment waterfall	Payments are distributed in accordance with the tranche priority.	A smart contract can automate the waterfall with the predefined rules, ensuring the priority-based distribution without any external assistance.
Risk Mitigation	Relies on the structural safeguards like the reserve account, over-collateralization and external guarantees to manage operational and credit risk.	Utilizes the automation to mitigate human error, counterparty risk and operational lapses, enabling instant collateral transfer during the crisis.
Investor Protection and Transparency	Rating agencies and trustee monitors compliance and disclosures, and structured reporting ensures transparency.	All the transaction is recorded immutably on the DLT, allowing the investors to independently verify ownership and the asset history, reducing fraud and increasing trust.
Enhancing Liquidity	It converts the illiquid assets into tradable securities, providing the periodic repayments as assets mortise.	It provides for the fractional ownership and continuous 24/7 trading on the secondary market, so that the token issued with an underlying asset can be traded 24/7.

IV. CAN TOKENIZATION RESOLVE THE ISSUES OF SECURITIZATION?

As outlined in the previous part of the paper, tokenization has the potential to perform the traditional securitization function. However, to become a viable option, it is important that tokenization can address the issue in the traditional securitization function.

As already discussed in Part II of the paper, one of the issues in the traditional securitization structure is the tranche complexity and risk opacity. Tokenization address this issue by leveraging the blockchain; through tokenization, each unique token issued on the underlying asset is represented on the blockchain.¹²⁰ This representation provides the investor with the records of the performance of the individual loan that makes up the collateral pool. In addition to it, the blockchain acts as an immutable and cannot be tampered with, due to which it creates a permanent audit trail, ensuring that all the data and ownership details cannot be tampered with or altered.¹²¹ This eliminates the risk of the hidden subprime exposures and allows for more precise risk assessment.

Tokenization can also address the issue of information asymmetry, information about transactions, addresses, and quantities of tokens is immutably stored on the ledger.¹²² If it is a public blockchain, all internet users have real-time access to the information.¹²³ This real-time access to immutable data increases the confidence of users and simplifies the due diligence process.¹²⁴ The public disclosure of offering documents makes it easier for the

¹²⁰ Subhojit Shome, 'Tokenisation of Real World Assets – The Way Ahead for Creating Securities' (Vinod Kothari Consultants, 6 February 2025) <https://vinodkothari.com/2025/02/tokenisation-of-real-world-assets-the-way-ahead-for-creating-securities/> accessed 13 September 2025.

¹²¹ Anutosh Banerjee, Ian De Bode, Matthieu de Vergnes, Matt Higginson and Julian Sevillano, 'Tokenization: A Digital-Asset Déjà Vu' (McKinsey & Company, 15 August 2023) <https://www.mckinsey.com/industries/financial-services/our-insights/tokenization-a-digital-asset-deja-vu> accessed 13 September 2025.

¹²² World Economic Forum, *Digital Assets, Distributed Ledger Technology and the Future of Capital Markets* (2021) https://www3.weforum.org/docs/WEF_Digital_Assets_Distributed_Ledger_Technology_2021.pdf accessed 1 August 2025.

¹²³ Yifeng Tian, Chaofeng Wang, Ashish Asutosh, Junghoon Woo and Peter Adriaens, 'Blockchain-Enabled Tokenization for Sustainable and Inclusive Infrastructure Investment' (arXiv, 16 July 2022) <https://arxiv.org/pdf/2208.04709> accessed 13 September 2025.

¹²⁴ Julia Kreppmeier and Ralf Laschinger, 'Signaling in the Market for Security Tokens' (2023) 93 *Journal of Business Economics* 1515.

investor to have access to the relevant information needed for due diligence.¹²⁵ Listing a token subjects the originator to marketplace and listing regulations, establishing the level of transparency that institutional investors expect.¹²⁶ It often involves standardised disclosures, KYC/AML checks, and regular reporting, which simplifies due diligence and enhances investor confidence.¹²⁷

As it has been stated, the settlement process for the securitization is majorly complex and technical in nature, with a lot of intermediaries involved in it. Tokenization in comparison to the securitization offers an instant settlement process, where the exchange of assets and payments takes place simultaneously in a single transaction.¹²⁸ Through the usage of the blockchain and smart contract, delivery-versus-payment (“**DvP**”) can be automated, thereby reducing time from days to seconds.¹²⁹ This reduces the time counterparties remain exposed to risk, allowing them to free up the capital and react faster to the market disruption.¹³⁰

One of the examples of the same is the crypto or token exchange leverages smart contracts, where the parties transfer the assets into the smart contract, but still the asset are there in control and it can be withdrawn at any point in time.¹³¹ Orders are matched on the on-chain and after the execution, assets are automatically transferred and returned to the investor’s wallet.¹³² The investor holds the private key, which makes the whole settlement procedure faster and more transparent with fewer intermediaries.¹³³

¹²⁵ Synpulse and Standard Chartered Bank, *Real-World Asset Tokenisation: A Game Changer for Global Trade* (July 2024) <https://www.hkdca.com/wp-content/uploads/2024/07/rwa-tokenization-game-changer-global-trade-synpulse.pdf> accessed 13 September 2025.

¹²⁶ Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008) <https://bitcoin.org/bitcoin.pdf> accessed 13 September 2025.

¹²⁷ Philippe Laurent, Thomas Chollet, Michael Burke and Tim Seers, ‘The Tokenization of Assets Is Disrupting the Financial Industry. Are You Ready?’ (2018) *Inside Magazine* issue 19.

¹²⁸ Chang, C, (n 49).

¹²⁹ Kaleido, ‘Understanding a Delivery vs Payment (DvP) Application on Blockchain’ (Kaleido, 15 May 2024) <https://www.kaleido.io/blockchain-blog/delivery-vs-payment-dvp-application-on-blockchain> accessed 13 September 2025.

¹³⁰ Hyun Song Shin, ‘Tokenisation for the Real World’ (Bank for International Settlements, 9 February 2024) <https://www.bis.org/speeches/sp240209.htm> accessed 13 September 2025.

¹³¹ Chang, C (n 49)

¹³² Id.

¹³³ Ralf Wandmacher and Nicolas Wegmann, ‘Tokenization and Securitization: A Comparison with Reference to Distributed Ledger Technology’ in *Facetten der Digitalisierung* (2020) 157–174.

In the existing model of the securitization, there is always a risk of clawback of asset during the bankruptcy of the originator.¹³⁴ However, with the help of tokenization the immutable records of ownership and the other related documents can be represented on the blockchain, reducing the recharacterization risk.¹³⁵ However, without the any kind of legal recognition the clawback threat still remains.¹³⁶

In the traditional securitization function, there is a major dependence on the intermediaries such as arrangers, servicers, trustees and custodians, etc.¹³⁷ However, in the tokenization structure, Smart contracts can perform the role of the intermediaries, with a shared ledger becoming a single source of the truth. This reduces the manual process and the cost associated with it.¹³⁸ In addition to this, the high dependence on the credit rating agencies can also be reduced, as there can be continuous disclosure about the asset, which can help the investors to know about the asset's health and viability.¹³⁹

Lastly, tokenization offers fractional ownership of the assets, through which the investor base is widened. Investors can invest in the high-value assets such as real estate, fine art or infrastructure projects that were available to large or wealthy individuals.¹⁴⁰ In addition to

¹³⁴ King & Spalding LLP, 'Phew!?! You've Been Paid or Repaid: Beware of Crypto Clawbacks' (December 2022)

https://www.kslaw.com/attachments/000/010/173/original/What_is_it_Phew_Youve_Been_Paid_or_Repaid_Beware_of_Crypto_Clawbacks_1.pdf accessed 13 September 2025.

¹³⁵ See., Alla Gil, 'Tokenization: Benefits and Risks' (Global Association of Risk Professionals, 24 January 2025)

<https://www.garp.org/risk-intelligence/technology/tokenization-benefits-risks-250124> accessed 13 September 2025.

¹³⁶ Debevoise & Plimpton LLP, 'Can Crypto Debtors Claw Back Pre-Bankruptcy Transfers?' (23 January 2023)

<https://www.debevoise.com/insights/publications/2023/01/can-crypto-debtors-claw-back-pre-bankruptcy> accessed 13 September 2025.

¹³⁷ See, D M Hassesi and D S Rohollah, 'Securing Value: Unveiling the Dynamics of Asset Securitization in Modern Finance' (2023) 14 *Economic and Statistical Research Journal* 1 <https://zapjournals.com/Journals/index.php/esrj/article/view/1634> accessed 13 September 2025.

¹³⁸ Timechain Labs, 'The Power of Smart Contracts: How Automation Actually Looks Like' (Timechain Labs, 28 October 2024)

<https://timechainlabs.io/blog/the-power-of-smart-contracts:-how-automation-actually-looks-like> accessed 13 September 2025.

¹³⁹ Hua Wang, Jinjing Liu and Jian Zhao, 'Blockchain Smart Contracts for Decentralized Matching of Counterparties and Automatic Settlement of Financial Derivatives' (2025) *Blockchain: Research & Applications*, art 100300

<https://doi.org/10.1016/j.bcra.2025.100300> accessed 13 September 2025.

¹⁴⁰ Ahmad Al Izhah Izadin and Rosylin Yusof, 'Democratizing Real Estate Investment: A Systematic Review of Tokenization in Real Estate' (SSRN, 1 September 2024) <http://dx.doi.org/10.2139/ssrn.5015941> accessed 13 September 2025.

the fractional ownership, tokenization supports continuous 24/7 secondary trading.¹⁴¹ Unlike traditional markets that operate within fixed trading hours, tokenized assets can be traded at any time through decentralized exchanges or peer-to-peer networks.¹⁴² This constant availability enhances liquidity by allowing investors to quickly buy or sell assets as market conditions change, without being constrained by settlement delays or limited access to buyers and sellers.¹⁴³

V. FROM THEORY INTO PRACTICALITY: CHALLENGES TO BE FACED WHILE OPERATIONALIZING THE TOKENIZATION FRAMEWORK

A. The Notion of Liquidity

With tokenization coming into place, a certain kind of buzz is created that it would magically enhance liquidity in the market; however, such a notion of enhancing liquidity is flawed. Fractional ownership and digital transferability may reduce transactional frictions, but they do not, by themselves, create economic liquidity. Liquidity arises from the sustained presence of buyers and sellers and, more critically, from market participants who provide continuous two-way pricing and absorb temporary imbalances in supply and demand.¹⁴⁴

In the absence of active market arrangements, tokenised assets are likely to trade in thin markets characterised by sporadic volumes and wide bid-ask spreads.¹⁴⁵ Consequently, while tokenization may enhance theoretical tradability, it does not substitute for the

¹⁴¹ Erik Ganz, 'Tokenization – From Illiquid to Liquid Real Estate Ownership' (EY Switzerland, 15 February 2022)

https://www.ey.com/en_ch/insights/real-estate-hospitality-construction/tokenization-from-illiquid-to-liquid-real-estate-ownership accessed 13 September 2025.

¹⁴² Ronit Ghose and Ryan Rugg, 'How Tokenized Payments Are Enabling Real-Time Liquidity' (Citi Institute, 30 April 2025)

<https://www.citigroup.com/global/insights/how-tokenized-payments-are-enabling-real-time-liquidity> accessed 13 September 2025.

¹⁴³ Baker McKenzie and Deutsche Bank, *Tokenization of Financial Markets: Mapping the Plausible Future through Scenario Analysis* (April 2025)

<https://www.bakermckenzie.com/-/media/files/insight/publications/2025/04/baker-mckenzie-x-deutsche-bank-whitepaper.pdf> accessed 13 September 2025.

¹⁴⁴ Rischan Mafrur, *Tokenize Everything, But Can You Sell It? RWA Liquidity Challenges and the Road Ahead* (arXiv:2508.11651v1, 2025) <https://arxiv.org/html/2508.11651v1> accessed 7 January 2026.

¹⁴⁵ Tokenization in Capital Markets: A Market Maker's Perspective (Flow Traders Substack, 3 July 2025) <https://flowtraders.substack.com/p/tokenization-in-capital-markets-a> accessed 7 January 2026.

institutional and economic conditions necessary for liquid markets.¹⁴⁶ Without structured incentives for liquidity provision and credible market infrastructure, tokenized assets risk exhibiting only the illusion of liquidity rather than its functional reality.

In addition to it, tokenization also introduces risks of liquidity and maturity mismatch between tokens and their underlying assets. Such mismatches arise where tokens exhibit higher perceived liquidity or shorter redemption horizons than the assets they represent.¹⁴⁷ While tokens may be traded continuously or redeemed on demand, the underlying asset, such as real estate, private credit, or reserve portfolios, can possess longer maturities and limited market liquidity.¹⁴⁸

This structural divergence creates vulnerability to redemption runs, particularly where token holders seek to exit during periods of market stress. Additionally, Fractionalization may further exacerbate these risks by creating an illusion of market depth.¹⁴⁹ Tokens representing fractional claims may appear to be liquid due to continuous trading or marketing practices, even though the underlying assets remain fundamentally illiquid.¹⁵⁰ In a situation of distress, redemption pressure can compel issuers to liquidate assets in thin markets, amplifying volatility and undermining confidence.¹⁵¹

B. Fractional Ownership

One of the most important features of Tokenization is the fractionalization of the ownership rights of an asset. However, a similar structure has been implemented in the Real Estate Investment Trusts (“REITs”). REITs provide fractional ownership of assets by allowing investors to purchase units of the trust that collectively own and operate income-generating real estate assets.¹⁵²

¹⁴⁶ Id.

¹⁴⁷ Financial Stability Board, *The Financial Stability Implications of Tokenisation* (22 October 2024) 14. (“**Financial Stability Board report**”)

¹⁴⁸ Id.

¹⁴⁹ Id.

¹⁵⁰ Id.

¹⁵¹ Id.

¹⁵² Grant Thornton Bharat LLP, *Realty Bytes: Fractional Ownership of Real Estate Assets through SM REITs* (September 2024) https://www.grantthornton.in/globalassets/1.-member-firms/india/assets/pdfs/realty-bytes/realty_bytes_september_2024.pdf accessed 13 September 2025

REITs institutionalize fractional ownership through a purely securities-backed framework. Investors have the option to acquire a unit of the share or a unit in a trust or corporate vehicle that owns and manages the asset.¹⁵³ These units are recognised securities traded on the recognized exchange, i.e., subject to continuous disclosure and governance norms.¹⁵⁴ Fractionalization in the REITs is not merely a division of the ownership interest, but it is a comprehensive allocation of the risk and returns that is mediated by professional management, fiduciary oversight, and regulatory supervision.¹⁵⁵

Although REITs provide the investors with fractional ownership, the structural nature of REITs necessitates that investors acquire an interest in the aggregate entity rather than its constituent components.¹⁵⁶ This lack of asset-level specificity prevents investors from exercising discretion regarding the inclusion, exclusion, or weighting of particular assets.¹⁵⁷ However, tokenization offers asset-level fractionalization, where each property can be traded, and an independent token can be created for the property.¹⁵⁸

In theory, it can be argued that the tokenization may offer investors the opportunity to invest in real estate assets with enhanced transparency when compared to REITs. However, in practicality, REITs have a significant comparative advantage. From a trading perspective, REITs are more flexible, as their units are listed on recognised stock exchanges, enabling investors to buy and sell them through well-established, regulated, and liquid market infrastructure.¹⁵⁹ In comparison to it, tokenization is dependent on the existence of a robust

¹⁵³ Id.

¹⁵⁴ **Securities and Exchange Board of India (SEBI)**, *Understanding REITs and INVITs* https://investor.sebi.gov.in/understanding_reit_invit.html accessed 7 January 2026.

¹⁵⁵ National Institute of Securities Markets (NISM), *Understanding REITs* <https://www.nism.ac.in/understanding-reits/> accessed 7 January 2026.

¹⁵⁶ Fundrise, *REITs 101: A Beginner's Guide to Real Estate Investment Trusts* <https://fundrise.com/education/reits-101-a-beginners-guide-to-real-estate-investment-trusts> accessed 7 January 2026.

¹⁵⁷ RSM US LLP, *Navigating the REIT Asset Tests* <https://rsmus.com/insights/industries/real-estate/navigating-the-reit-asset-tests.html> accessed 7 January 2026.

¹⁵⁸ Ang Liu and Cheng Chen, 'From Real Estate Financialization to Decentralization: A Comparative Review of REITs and Blockchain-Based Tokenization' (2025) *Geoforum* **159** 104193 <https://doi.org/10.1016/j.geoforum.2024.104193> accessed 7 January 2026.

¹⁵⁹ Shabnam Bolandhemat, *Decentralizing Real Estate Markets: Evaluating REITs and Blockchain Tokenization Approaches* (SSRN, 3 April 2025) <https://doi.org/10.2139/ssrn.5221698> accessed 7 January 2026.

secondary market for digital tokens.¹⁶⁰ As discussed earlier, India presently lacks a mature, liquid, and legally settled secondary trading market for tokenisation instruments. Owing to this structural deficiency, investors may face constrained exit options, heightened liquidity risk, and uncertainty in price discovery.¹⁶¹

In addition to this, concerns are further aggravated by regulatory ambiguity, as tokenized asset continues to operate within an evolving legal framework with limited clarity under Indian securities and financial market laws. REITs, by comparison, operate within a defined regulatory regime under the supervision of the Securities and Exchange Board of India (SEBI), which ensures standardised disclosures, investor protection mechanisms, and effective regulatory oversight.¹⁶²

Additionally, REITs offer the advantage of relatively stable and predictable income streams. Regulatory requirements typically mandate REITs to distribute a substantial portion of their rental and operating income as dividends, thereby ensuring regular and foreseeable cash flows to investors.¹⁶³ In contrast, tokenized structures presently lack uniform statutory obligations regarding income distribution, payout frequency, or minimum distribution thresholds. Dividend or yield generation in tokenized assets is largely contingent upon contractual arrangements embedded in smart contracts, the financial performance of individual assets, and the discretion of the platform managing the tokenized asset.¹⁶⁴

This absence of regulatory standardisation introduces variability and uncertainty in income streams, making dividend predictability comparatively weaker in tokenized real estate investments. Consequently, for investors, REITs continue to function as a more reliable

¹⁶⁰ **Primior**, *Tokenization vs Traditional Real Estate Investing* <https://primior.com/tokenization-vs-traditional-rei/> accessed 7 January 2026.

¹⁶¹ **NITI Aayog**, *Report on Deepening the Corporate Bond Market in India (December 2025)* https://www.niti.gov.in/sites/default/files/2025-12/Deepening_the_Corporate_Bond_Market_in_India.pdf accessed 7 January 2026. (hereinafter “**NITI Aayog report**”)

¹⁶² Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations 2014 (last amended 23 April 2025) SEBI https://www.sebi.gov.in/legal/regulations/apr-2025/securities-and-exchange-board-of-india-real-estate-investment-trusts-regulations-2014-last-amended-on-april-23-2025-_91709.html accessed 7 January 2026.

¹⁶³ **Mehta & Mehta Advisory LLP**, *REITs in India: Structure, Governance, Regulatory Evolution & Market Insights* <https://mehta-mehtaadvisory.com/reits-in-india-structure-governance-regulatory-evolution-market-insights/> accessed 7 January 2026.

¹⁶⁴ Efim Zhitomirskiy, Stefan Schmid and Martin Walther, ‘Tokenizing Assets with Dividend Payouts—A Legally Compliant and Flexible Design’ (2023) *Digital Finance* 1–3 <https://doi.org/10.1007/s42521-023-00094-w> accessed 7 January 2026.

substitute for fixed-income instruments and a stabilising component within diversified investment portfolios offering fractional ownership. Although REITs only deal with the real estate market, they are a part of structured finance. The underlying principle governing the REITs can be transferred to the other classes of illiquid assets through a structured framework. In this scenario, the notion of fractionalization through tokenization will have no substance without any regulatory guidelines. Without a legal architecture, fractional ownership remains a purely technological construct rather than a credible financial structure.

C. Secondary Market Trading

As discussed in the previous parts of the paper, the whole process of tokenization is based on the promise of enhanced liquidity. Through 24/7 trading, fractional ownership, and streamlined settlement processes, tokenization in theory reduces transaction frictions and widens access to previously illiquid asset classes. However, this notion of liquidity seems to be largely theoretical rather than structural. The central cause of this gap between theoretical promise and practical outcomes is the limited participation of investors in secondary markets.

This gap between theoretical liquidity and actual market outcomes is primarily due to the limited depth and participation of investors in the secondary markets.¹⁶⁵ In the Indian context, secondary trading remains shallow, with limited liquidity and price transparency.¹⁶⁶ Additionally, trading activity is primarily concentrated on platform-specific venues rather than open, competitive markets. This exposes investors to an imbalance arising out of regulatory intervention, operational disruptions, or platform-level distress.¹⁶⁷

One structural limitation with respect to tokenization is that most secondary trading of tokenized assets happens over-the-counter (“OTC”) rather than via organized

¹⁶⁵ NITI Aayog report (n 161)

¹⁶⁶ Id.

¹⁶⁷ **Tokenizer.Estate**, *Real Estate Tokenization Challenges in 2025: Navigating the Roadblocks* <https://blog.tokenizer.estate/real-estate-tokenization-challenges-in-2025-navigating-the-roadblocks/> accessed 7 January 2026.

marketplaces.¹⁶⁸ From an investor’s perspective, OTC trading lacks the transparency, efficiency in price-setting mechanisms, and liquidity that come from exchange-based marketplaces.¹⁶⁹ Price discovery is often bilateral and opaque in OTC transactions, which increases asymmetries in information and makes it hard for investors to estimate fair value or prevailing market conditions.¹⁷⁰ In this respect, reliance on OTC mechanisms undermines the claim that the tokenization of assets inherently brings superior liquidity.¹⁷¹ In such settings, liquidity can be episodic, highly related to relationship links, and quite sensitive to counterparty availability.

In the absence of a credible and active secondary market—whether exchange-based or otherwise—primary issuances cannot also be effective. Due to this, the investors may be reluctant to allocate capital to instruments where exit opportunities are uncertain, discretionary, or dependent upon negotiated OTC transfers. This results in a lack of liquidity, representing a situation where a variety of interlinked elements, such as a lack of regulatory clarity, a fragmented trading system, a lack of investor confidence, and an absence of common disclosure and trading practices, have converged. However, the persistent underdevelopment of secondary markets prevents the realization of these benefits in practice. Thus, tokenization often creates an illusion of liquidity without the market depth necessary to sustain active secondary trading.

D. Global Scalability and Cross-Border Transactions

The global adoption of tokenisation is contingent upon the development of a uniform global standard recognised in the global market.¹⁷² Currently, the progress of the tokenisation is hindered by the fragmented innovation and the limited collaboration between the industry participants. For the global scalability of tokenization, it needs a legal and uniform

¹⁶⁸ **Cointelegraph via TradingView**, *Retail Traders Lose When OTC Token Deals Win—Here’s Why* <https://www.tradingview.com/news/cointelegraph:868b32bfd094b:0-retail-traders-lose-when-otc-token-deals-win-here-s-why/> accessed 7 January 2026.

¹⁶⁹ **Yahoo Finance**, *Tokenized Stock Trading Has Huge Risks and Challenges* <https://finance.yahoo.com/news/tokenized-stock-trading-huge-risks-153200323.html> accessed 7 January 2026.

¹⁷⁰ **OneSafe**, *Tokenization, OTC Markets, Risks, Compliance & the Future* <https://www.onesafe.io/blog/tokenization-otc-markets-risks-compliance-future> accessed 7 January 2026.

¹⁷¹ *Id.*

¹⁷² *Asset Tokenization Is Going Mainstream in 2026* (Token City, 5 November 2025) <https://www.token-city.com/resources/asset-tokenization-is-going-mainstream-in-2026> accessed 7 January 2026.

framework to scale globally.¹⁷³ The widespread adoption of the can only materializes through the sustained and coordinated efforts among the investors, financial institutions, and regulators.¹⁷⁴

There is currently no International agreement or protocol that determines the legal nature of the tokenised asset; each country tries to regulate such assets differently.¹⁷⁵ For illustration, the United States treats the tokenized asset as securities, which might need to apply a decade-old established investment law, whereas India does not have any regulation in relation to tokenized assets.¹⁷⁶ This patchwork of regulation means that a tokenization process might be legal in one country, and it can be illegal in another country. This would force investors and the originator to restrict themselves to a single jurisdiction, destroying the global in the global scalability.

In addition to this, the interoperability present in the tokenization process complicates the whole process. Different blockchains are like different countries with different kinds of currency and different kinds of language. Blockchains cannot communicate easily or transfer assets seamlessly.¹⁷⁷ For illustration, if an asset is tokenized on Ethereum, it is locked into Ethereum's ecosystem. To transfer it to another blockchain like Solana, there is a need for a "bridge". It is an intermediary system that locks the original token and creates a wrapped copy on the other chain. This whole process defeats the promise of seamless global trading because it introduces third-party risk, additional fees, and technical complexity. Due to this interoperability, the regulatory and legal standardisation becomes difficult due to divergent technical protocols, governance models, and settlement rules, inhibiting seamless transfer and unified compliance.

¹⁷³ Dea Markova, *5 Key Digital Asset Policy Changes in 2025 and What to Expect in 2026* (Fireblocks, 17 December 2025) <https://www.fireblocks.com/blog/policy-changes-2025-outlook-2026> accessed 7 January 2026.

¹⁷⁴ Id.

¹⁷⁵ RWA.io Team, *Regulatory Challenges of Tokenizing Real-World Assets* (RWA.io, 24 February 2025) <https://www.rwa.io/post/regulatory-challenges-of-tokenizing-real-world-assets> accessed 7 January 2026.

¹⁷⁶ Hester M Peirce, *Enchanting, but Not Magical: A Statement on the Tokenization of Securities* (Statement, US Securities and Exchange Commission, Washington DC, 9 July 2025) <https://www.sec.gov/newsroom/speeches-statements/peirce-statement-tokenized-securities-070925> accessed 7 January 2026.

¹⁷⁷ See, Itai Agur, Germán Villegas-Bauer, Tommaso Mancini-Griffoli, Maria Soledad Martinez Peria, and Brandon Tan, *Tokenization and Financial Market Inefficiencies* (IMF, Note 2025/001, January 2025) 5.

In the absence of global standards, tokenisation markets may be exposed to regulatory arbitrage. In cross-border transactions, originators and intermediaries may structure tokenised offerings in jurisdictions with weaker or ambiguous regulatory regimes in order to avoid stricter securities, prudential, or other requirements. Such jurisdiction-shopping risks trigger a “race to the bottom”, undermining investor protection and market integrity.¹⁷⁸

From a financial stability perspective, the borderless and continuously tradable nature of tokenised assets, combined with automated settlement, may increase the global interconnectedness and the speed of shock transmission during periods of stress. In the Indian context, these risks are compounded by the Foreign Exchange Management Act, 1999 (“**FEMA**”),¹⁷⁹ as cross-border transactions referencing Indian assets may constitute regulated capital account transactions. However, there is a lack of clarity about the same; this lack of clarity on whether tokenised assets fall within existing FEMA categories creates legal uncertainty, potentially enabling regulatory circumvention while simultaneously exposing markets to sudden enforcement actions.¹⁸⁰ Without any coordinated cross-border supervision and alignment between financial regulation and capital control frameworks, tokenisation risks amplify systemic vulnerabilities rather than delivering stable and scalable financial innovation.

E. Bankruptcy Remoteness

As mentioned above, bankruptcy remoteness is one of the basic underlying principles of structured finance. However, under tokenization, the status of the token is not well-defined under Indian law. Tokens may represent direct ownership interests, contractual claims, or merely digital records evidencing economic exposure, without affecting a legally enforceable transfer of the underlying asset.¹⁸¹ Where the underlying asset is not clearly

¹⁷⁸ Financial Stability Board report (n 147)

¹⁷⁹ Foreign Exchange Management Act, 1999

¹⁸⁰ Finlaw Consultancy, *Legal Framework for Real Estate Tokenization in India* (Finlaw.in, 26 December 2025) <https://www.finlaw.in/blog/legal-framework-for-real-estate-tokenization-in-india> accessed 7 January 2026.

¹⁸¹ *Decoding 4 Common Tokenization Structures: A Guide for Financial Institutions* (InvestaX, 13 June 2024) <https://www.investax.io/blog/tokenization-structures> accessed 7 January 2026.

removed from the originator's balance sheet, the risk of clawback blooms, thereby undermining the assumption of asset isolation.¹⁸²

In cross-border tokenization structures, bankruptcy remoteness is further iffy as it relies on the recognition of the tokenized interests vis-à-vis various regimes of law. Though theoretically possible to attain bankruptcy remoteness by opting for a validly constituted SPV with an effective true sale, it is not entirely unchallenged. In the absence of explicit statutory recognition of tokenized interests, courts retain broad discretion to recharacterize token holders' rights as contractual or unsecured claims, particularly where economic substance diverges from legal form.¹⁸³

VI. RE-ARCHITECTING TOKENIZATION: TOWARDS A LEGALLY GROUNDED STRUCTURED FINANCE MODEL (SECURITIZATION 2.0)

From the above discussions that have been made, the answer to the question of whether tokenization can be seen as an alternative to securitization is a buzzword hype, or more than that, is that it is neither a buzzword hype nor it is a real finance revolution. Tokenization can be seen as an infrastructure evolution of the traditional securitization process. The claim that tokenization alone represents a financial evolution represents an overstated role of technology in capital formation. However, to dismiss it as a buzzword hype underestimates its capacity to modernise the structured finance infrastructure. To place it, Tokenization is neither a buzzword hype nor a revolution; it is an evolution. Tokenization functions as an enabling layer rather than an autonomous financing paradigm.

Upon this discussion, an analytical approach would not be to frame tokenization and securitization as competing models; rather, there should be an integration of the tokenization in the currently established and legally grounded structured finance framework. The author proposes a new mode of securitization where the technology involved in the tokenization is

¹⁸² Vaidehi Gulati, *Navigating Bankruptcy Remoteness: Mechanisms and Pitfalls* (Insolvency Law Academy, 27 May 2024) <https://insolvencylawacademy.com/navigating-bankruptcy-remoteness-mechanisms-and-pitfalls/> accessed 7 January 2026.

¹⁸³ Primior, *Smart Contracts in Tokenized Real Estate: Protecting Your Investment with Clawbacks* (Primior, 23 December 2025) <https://primior.com/smart-contracts-in-tokenized-real-estate-protecting-your-investment-with-clawbacks/> accessed 7 January 2026.

integrated into the current securitization model, giving rise to a securitization 2.0. Securitization 2.0 as a model (attached as Schedule I) would preserve the legal architecture of securitization while incorporating tokenization as an operational and settlement mechanism.¹⁸⁴ The aim would not be disruption, but recalibration, aligning technological innovation with established principles of financial law.

Under Securitization 2.0, SPV would act as the central legal anchor. Assets would be transferred to the SPV through a valid true sale, while tokenization operates downstream as a mechanism through which investor claims are represented and settled.¹⁸⁵ This distinction necessitates a shift away from the tokenization of assets towards the tokenization of securities.¹⁸⁶

Traditional securitization avoids the risk of recharacterization and clawback by ensuring that investors hold securities issued by the SPV rather than interests in the underlying receivables or assets.¹⁸⁷ A legally grounded Securitization 2.0 framework should replicate this logic. Tokens should represent securities such as asset-backed notes, pass-through certificates, or participation interests issued by the SPV and recognised as securities.¹⁸⁸ In such a structure, the blockchain functions as the register of ownership and transfer, analogous to a depository system, rather than as the source of ownership itself. This would preserve doctrinal clarity, aligning with securities regulation.

In the context of Securitization 2.0, smart contracts would play the role of tools of enforcement rather than a source of law. Moreover, optimizing payment waterfall processes, servicing, and compliance events would improve efficiency.¹⁸⁹ Therefore, offering memoranda, trust deeds, and servicing agreements remain the authoritative sources defining

¹⁸⁴ Julian Schmeing, George Stylianou, Selina Bezler, Hendrik Büchel and Philipp Kerber, *Asset tokenization: the path towards securities 2.0* (BankingHub, 23 August 2023) <https://www.bankinghub.eu/topics/asset-tokenization> accessed 7 January 2026

¹⁸⁵ RWA.io Team, *SPV for Tokenized Assets: Setup and Governance* (RWA.io, 27 October 2025) <https://www.rwa.io/post/spv-for-tokenized-assets-setup-and-governance> accessed 7 January 2026.

¹⁸⁶ See, Deepak Sinha, *How Tokenized Securities Are Transforming the Financial Industry* (TechAhead, 1 October 2025) <https://www.techaheadcorp.com/blog/how-tokenized-securities-transforming-finance/> accessed 7 January 2026.

¹⁸⁷ The Securitization Process (n 20)

¹⁸⁸ See, Chainlink, *Asset-Backed Securities (ABS) Onchain Explained* (Chainlink) <https://chain.link/article/asset-backed-securities-onchain> accessed 7 January 2026.

¹⁸⁹ See, Securitize, 'Responses to Crypto Task Force Questions related to Tokenization' (SEC, 7 May 2025) <https://www.sec.gov/files/ctf-written-input-securitize-050725.pdf> accessed 7 January 2026

rights and duties.¹⁹⁰ The logic of smart contracts may also be embedded in these agreements in the form of annexures containing specific hierarchical provisions to give precedence to contracts in case of disputes.¹⁹¹

The model also reengineers and integrates rather than eliminates other financial intermediaries like trustees, servicers, custodians, and rating agencies.¹⁹² These entities continue to have governance and monitoring roles in modified models that have improved visibility and watchability for increased transparency.¹⁹³ Trustees can monitor smart contracts, for instance, and rating agencies can transition to real-time monitoring systems for improved institutional accountability despite improved technological process mechanisms.¹⁹⁴

Liquidity under Securitization 2.0 would be viewed as a result of market design, not technological capability. While fractionalisation and automated settlement make transactions easier, for functional liquidity, there has to be continued engagement, valid price discovery, as well as commitment to capital by the market participants.¹⁹⁵ However, for structured finance tokens to have liquidity, they need to be placed within organized secondary markets with dedicated liquidity providers and a clear trading infrastructure.¹⁹⁶ Without this structure would breed only illusory liquidity.

Regulatory integration is inherent to the model. In India, recognition of tokenized securities under securities law, acceptance of DLT-based record-keeping within existing depository

¹⁹⁰ See, InnReg, 'What Is Tokenization In Fintech? A Guide to Tokenized Assets' (1 January 2026) <https://www.innreg.com/blog/tokenization-in-fintech-and-tokenized-assets> accessed 7 January 2026

¹⁹¹ Chainlinked (n 188)

¹⁹² N Cetorelli and L Traina, 'The Role of Banks in Asset Securitization' (Federal Reserve Bank of New York Economic Policy Review 18(2), 2012) <https://www.newyorkfed.org/medialibrary/media/research/epr/12v18n2/1207peri.pdf> accessed 7 January 2026 (“**The Role of Banks in Asset Securitization**”)

¹⁹³ G Franke and JP Krahnert, 'The Future of Securitization' (Nomura Foundation Working Paper, 2008) https://www.nomurafoundation.or.jp/en/wordpress/wp-content/uploads/2014/09/20081016_G_Franke-J-P_Krahnert.pdf accessed 7 January 2026

¹⁹⁴ The Role of Banks in Asset Securitization (n 192)

¹⁹⁵ Dr Thomas Nägele, *Secondary Market for Security Tokens — The need for a new regulatory approach at the European Union level* (Token Container Model, 23 July 2020) <https://tokencontainermodel.com/secondary-market-for-security-tokens-the-need-for-a-new-regulatory-approach-at-the-european-e922e4ca04> accessed 7 January 2026.

¹⁹⁶ J Kreppmeier and R Laschinger, 'Signaling in the Market for Security Tokens' (2023) 93 *Journal of Business Economics* 1515 <https://doi.org/10.1007/s11573-023-01175-3> accessed 7 January 2026.

frameworks, and clarity on the foreign exchange treatment.¹⁹⁷ Regulatory sandboxes could consider enabling controlled SPV-based token issuances while ensuring protection for the investors.¹⁹⁸ At the global level, alignment of jurisdiction is needed: tokenization should not circumvent regulatory arbitrage but comply with the legal nature of the assets, issuers, and investors.¹⁹⁹

VII. CONCLUSION

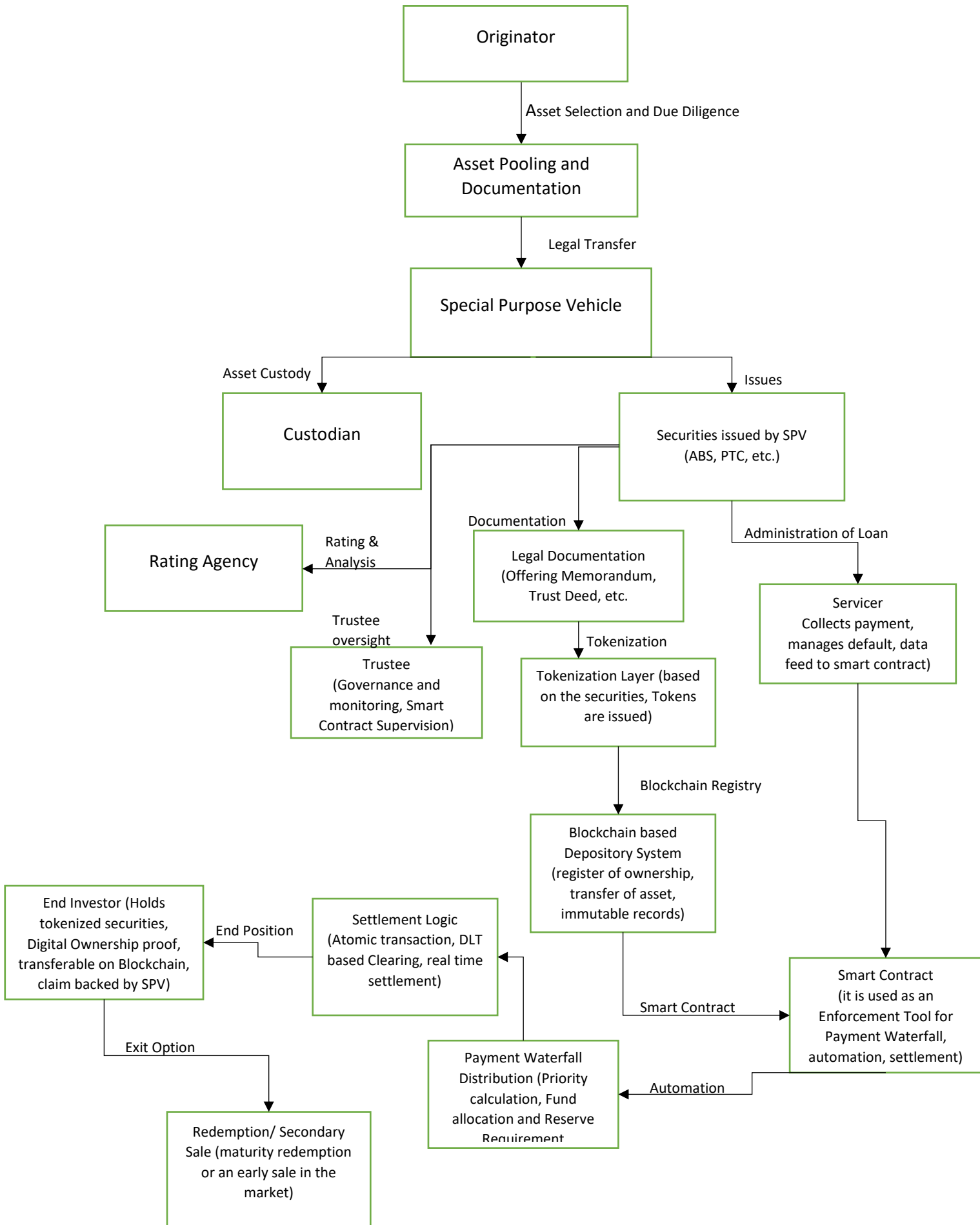
Tokenization needs to be considered a revolutionary approach, but it is not in itself a financial revolution or simply a buzzword. This paper argues that it has more to do with improving the operational side of securitization. However, it does not obtain the same qualities offered by traditional securitization structures. In this way, it seems that it works best when it is integrated within existing structures. The Securitization 2.0 mechanism balances technology and law, ensuring the continued use of the SPV as the core legal foundation, integrating tokenization to enhance efficiency. Tokens reflect the legal security issued by the SPV, while smart contracts handle processes such as payment waterfalls and compliance, without diminishing the power of contracts. The role of the intermediaries, as well as liquidity, will be maintained either through market structure or technology.

Securitization 2.0 resolves the central tension in the contemporary discourse around tokenization. Tokenization is neither an independent alternative to securitization nor a skin-deep technological fashion. Its financial relevance arises only when located within established legal structures, institutional governance, and regulatory oversight. The evolution of finance thus consists not in replacing securitization with tokenization, but in re-engineering securitization to work on digitally native infrastructure while remaining solidly anchored in law. Please see, **Schedule I, Digital Securitization Model 2.0, below**

¹⁹⁷ OECD, *Regulatory Approaches to the Tokenisation of Assets* (OECD Publishing, Paris, 27 March 2021) https://www.oecd.org/en/publications/regulatory-approaches-to-the-tokenisation-of-assets_aea35466-en.html doi:10.1787/aea35466-en accessed 7 January 2026.

¹⁹⁸ See, International Financial Services Centres Authority (IFSCA), *Regulatory Approach Towards Tokenization of Real-World Assets: Consultation Paper* (IFSCA, 26 February 2025) <https://www.ifsc.gov.in/consultation-papers> accessed 7 January 2026.

¹⁹⁹ See, Bank for International Settlements (BIS) and Committee on Payments and Market Infrastructures (CPMI), *Tokenisation in the context of money and other assets: concepts and implications for central banks* (CPMI Report No D225, October 2024) <https://www.bis.org/cpmi/publ/d225.pdf> accessed 7 January 2026.



CODE, CARTELS AND CULPABILITY: ALGORITHMIC-PRICING & ANTITRUST

- Anushka Singh*

ABSTRACT

Within the paradigm of Industrial Revolution 4.0, algorithmic pricing, the new competition law frontier is swiftly revolutionizing various markets spanning from ride-sharing apps like Uber and Lyft, online air travel and retail, electronic shelf labels, among others by allowing repricing on the fly.

This essay begins with analyzing algorithms as a digital equivalent of ‘smoke filled room conversations’, giving rise to another antitrust concern where with the use of deep learning methods, and interdependent prices, collusion can be achieved autonomously without a need for an overt communication. The findings highlight how AI powered pricing algorithms owing to their efficiency in analyzing vast amounts of data, dynamic pricing adjusting strategies, profitability and optimization of revenue streams are armed with an arsenal of data collected through user’s every click, every scroll and every lingered glance at a product. Enterprises source these algorithms from a common vendor (hub) creating likelihood of tacit price collusion between the clients (spokes) leading to digital cartelization. Beyond this, enterprises employ a superior pricing algorithm to undercut their rival’s prices and charge ‘supra-competitive prices’ even in the absence of collusion.

Guided by Euclid’s axiom that “the whole is greater than the part”, this essay elucidates that algorithmic pricing is not an isolated firm behavior but an emerging market phenomenon, one where interactive price-setting systems, shared data feeds, and common vendor tool cumulatively produce outcomes that can’t be understood by examining any single actor alone. It explores the paradoxical dilemma of these pricing algorithms since their capabilities transcend beyond observing, as they learn, adapt and offer meticulously designed ‘personalized prices’, tailored not just to what a consumer wants but how much they are willing to pay. Building upon the insights, the author suggests recommendations tailored to developing a market where the ‘causa finalis’ is consumer welfare.

Keywords: Algorithms, Anti-Trust, Artificial Intelligence, Collusion, AI-powered Pricing, Cartelization.

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I. THE BEGINNING

“AI is a hare, while Antitrust is a tortoise”

Imagine yourself at the airport lounge. Having just checked in for a long-awaited family trip for the holidays. Boarding passes are printed; the kids are fed and suddenly an announcement flashes across the departure boards. The flight is cancelled due to operational disruption. You hop online to rebook. The cheapest fares have vanished, one-way economy seats are now listed at three or four times the usual price, and much to your shock, all rival carrier’s pricing algorithms have reacted the same way, pushing up the fares as seats become scarce.

The same culminated into reality in India during December, 2025 Indigo disruption.¹ What began as an operational issue soon cascaded into a textbook instance of algorithmic parallelism. The same class of AI driven pricing algorithms that airlines and online travel agencies used to set fares in real time, reacted to the supply shock by repricing almost instantly. Because these systems rely on live inputs, many carrier’s algorithms produced near-identical price spikes within minutes,² not because airlines consciously agreed to raise fares (a comforting myth), but because automated pricing models exposed to real-time market signals converged on collusive outcomes, pursuing profit maximization by playing on the variables of demand and supply without the need for human intervention in pricing.

Gearing up to these challenges, the Competition Commission of India (“CCI”) has recently produced a Market Study on ‘Artificial Intelligence and Competition’ shaping strategies aimed at tackling the implications of AI and potential antitrust concerns.³ The study stresses on the need to cull out the answers for the new forms of collusion prompted by the use of AI-powered algorithms and ways in which such novel strategies can lead to anti-competitive outcomes. Another pressing concern which CCI addresses is how AI-driven personalized pricing may lead to biasness and violate the transparency requirements influencing consumer welfare and choices.⁴ Therefore, a bigger question now is how can the contours of competition

¹ Economic Times, ‘IndiGo set to operate 1,950+ flights today; says ops stable since December 9’ (Economic Times, 11 December 2025).

² Rodney D. Ryder and Nikhil Naren, *Artificial Intelligence and Law- Challenges Demystified* (Law and Justice Publishing Co. 2022).

³ KR Srivats, ‘CCI launches market study on ‘Artificial Intelligence and Competition’ to understand India’s evolving landscape’ Hindu BusinessLine (Delhi, 22 April 2024). See also, Competition Commission of India, Press Release No 68 of 2025: CCI Releases Market Study Report on Artificial Intelligence and Competition (6 October 2025).

⁴ Artificial intelligence and competition law in India: A legal response (EELET Journal article, 2025). See also, Artificial Intelligence and the Competition Act, 2002: CCI’s Market Study and the Architecture of Digital Competition (MonDAQ, October 2025).

law around the world be enhanced to increase its scope to cover the rapid change in markets driven by technological innovations.

II. EXPLICIT COLLUSION: THE DIGITAL MUTINY

In this digital age, AI-powered pricing algorithms, often termed as an equivalent of ‘smoke filled room conversations’⁵ provide an implementation platform for human collusion. The first category of collusion i.e. ‘*Messenger*’ concerns humans as masters who plan the cartel, and algorithms as messengers to help carry it out.⁶ It is an anti-competitive conduct involving overt agreements between competitors to suppress competition for optimal price maximization.⁷ Messenger price-fixing agreements are considered illegal per se, rendering any altruistic motives claimed by the defendant irrelevant when the conduct itself is inherently unlawful. In the infamous *Amazon Poster Cartel Case*,⁸ pricing algorithms were employed as a tool to facilitate collusion and collect data to identify the lowest market price.⁹

III. TACIT COLLUSION: THE INVISIBLE COVENANT

Contrary to an explicit collusion, tacit collusion can be achieved autonomously without a need for an overt communication.¹⁰ This can be done by using deep learning methods to set interdependent prices.¹¹ There are mainly three scenarios which can lead to tacit collusion without any direct agreement between the entities.¹² The first, “*Hub and Spoke*” agreements, which involves downstream firms sourcing a third-party common algorithm.¹³ The second, “*Predictable Agent*”, where enterprises unilaterally adopt algorithms aimed at facilitating collusion by design,¹⁴ and the last “*Digital Eye*” which transcends this further and

⁵ ‘Pricing Algorithms- CCI’s First Major Encounter with Assessing New-Age Collusions’ (AZB & Partners, 15 March 2021).

⁶ Ariel Ezrachi & Maurice E. Stucke, ‘Artificial Intelligence & Collusion: When Computers Inhibit Competition’ [2017] U III L Rev 1775.

⁷ Pedro Gonzaga, Antonio Capobianco, and Anita Nuyeo, ‘Algorithms and Collusion- Background Note by the Secretariat’ (OECD, 17 May 2017).

⁸ United States v. Topkins, 3:15-cr-0021, (N.D. Cal.).

⁹ Salil K Mehra, ‘US v. Topkins: Can Price Fixing Be Based on Algorithms?’ (2016) 7 Journal of European Competition Law & Practice 470.

¹⁰ Francisco Beneke and Mark-Oliver Mackenrodt, ‘Remedies for Algorithmic Tacit Collusion’ (2021) 9 Journal of Antitrust Enforcement 152.

¹¹ Emilio Calvano and Giacomo Calzolari, ‘Artificial Intelligence, Algorithmic Pricing and Collusion’ (Oxford Business Law Blog, 12 February 2019).

¹² AI Deng, ‘What Do We Know About Algorithmic Tacit Collusion’, 33 (2018) Antitrust 88.

¹³ Ayushi Singh and Jai Kumara Bohara, ‘Cartels in Algorithmic Age: India’s Legal Framework for Hub-and-Spoke Collusion’ (2025) Indian Journal of Law and Legal Research (IJLLR).

¹⁴ Ryder and Naren (n 2) 132.

raises the prospect that self-learning algorithms entrusted with maximizing profits might eventually settle on collusive outcomes on their own without ever having been specifically programmed to do so,¹⁵ thereby, achieving a god-like view of the marketplace.¹⁶

In tacit collusion, algorithms match competitors' pricing strategies in real-time.¹⁷ Coordination in surge and decrease in fares in response to rivals without resorting to any overt communication leads to absence of price wars and maximization of profits of enterprises thereby deteriorating consumer welfare.¹⁸ An instance of the same is when Amazon came under fire from the US FTC for manipulating online prices in the country by using an algorithm code-named '*Project Nessie*'¹⁹ to test how much it could raise its prices in a way that competitors could follow, creating higher prices for consumers.²⁰

Meanwhile, in Indian jurisprudence, the CCI within the realm of aviation sector initiated an investigation against major domestic airlines involving allegations of a price cartel.²¹ The airlines were found using third-party softwares to pursue dynamic pricing and changing prices offered to consumers on a real time basis. A pivotal aspect under investigation was whether the use of such software facilitates price collusion.²² The ruling came in favor of the companies alleged in cartel as the Commission concluded that the final judgement on price was executed by the revenue management teams of the respective airlines and the software was merely a 'supporting arm'.²³

IV. HUB & SPOKE- THE BACKEND AGREEMENTS

A distinct avenue through which tacit collusion may manifest itself is through '*hub and spoke*' cartels.²⁴ These cartels are typically coordinated through indirect exchanges via a vertically related supplier as opposed to direct exchanges between the horizontal competitors.²⁵

¹⁵ Ariel Ezrachi and Maurice E. Stucke, 'Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy' (Harvard University Press 2016).

¹⁶ Maurice E. Stucke, Ariel Ezrachi, 'How Pricing Bots Could Form Cartels and Make Things More Expensive' (Harvard Business Review, October 27 2016).

¹⁷ Eleanor Tyler, 'ANALYSIS: As Pricing Bots Flex New Muscle, Antitrust Watches AI' (Bloomberg Law, 6 November 2023).

¹⁸ Christopher R. Knittel and Jason J. Lepore, 'Tacit Collusion in the Presence of Cyclical Demand and Endogenous Capacity Levels' (2010) 28(2) International Journal of Industrial Organization 131.

¹⁹ Julia Shapero, 'Amazon made over \$1 B using secret algorithm called Project Nessie, FTC says' (The Hill, 11 March 2023).

²⁰ Dana Mattioli, 'Amazon Used Secret 'Project Nessie' Algorithm to Raise Prices' (WSJ, 3 October 2023).

²¹ In Re: Alleged Cartelization in the Airlines Industry, (03/2015) CCI Order 22.02.2021.

²² SM Duggar, Guide to Competition Act, 2002 (8th edn, LexisNexis 2022).

²³ Gaurav Noronha, 'CCI Finds No Proof of Cartelization Among 5 Airlines, Ends Ticket Price Fixing Probe' Economic Times (Delhi, 23 February 2021).

²⁴ 'Hub-and-Spoke Cartels: The next "big thing"?' (Shardul Amarchand Mangaldas, 3 April 2023).

²⁵ 'Roundtable on Hub-and-Spoke Arrangements- Background Note' (OECD, 17 October 2019).

It is almost like inviting your friends over for a barbecue and finding out that they've turned your backyard into a secret meeting ground for price-fixing schemes.

In such cartels, though there persists an explicit agreement between the 'hub' and the 'spokes', there may be scenarios where parallelism may arise between the pricing strategies of the 'spokes' by the virtue of them using a similar software.²⁶ Some notable third-party providers that provide AI-powered pricing algorithms include Competera, Wise Athena, among others.²⁷ Hub and spoke arrangements are not easily covered under the definition of cartels under Section 3²⁸ of the Competition Act, 2002 ("**the Act**") as it is difficult to prove coordination amongst the spokes owing to their lack of direct communication or horizontal nexus. In *Samir Agarwal* (Cab Aggregator case),²⁹ the CCI rejected allegations of hub-and-spoke behavior on the grounds that there was an absence of agreement and intention between drivers to act in a collusive manner. However, the Competition (Amendment) Act 2023,³⁰ which was passed by the Parliament earlier in April 2023, sought to cover under Section 3(3)³¹ such vertical arrangements.³² The Amendment brings within its ambit enterprises not engaged in identical or similar trade, therefore regulating vertical arrangements of hub-and-spoke. Such enterprises now shall be presumed to be part of the agreement if they 'participate' or 'intend to participate' in furtherance of such agreement.³³

Beyond the jurisdiction of India, Article 101 of the Treaty on the Functioning of the European Union³⁴ ("**TFEU**") considers hub-and-spoke arrangements as an explicit form of collusion.³⁵ The Anti-Monopoly Law in China³⁶ prohibits undertakings from using data, algorithms or capital advantages to engage in anti-competitive monopolistic practices and abuse of dominance.³⁷ Further, the Federal Trade Commission covers such 'tacit' arrangements under Section 1 of the Sherman Act,³⁸ which prohibits competitors from delegating key aspects of

²⁶ 'Algorithms and Collusion: Competition Policy in the Digital Age' (OECD, 14 September 2017).

²⁷ 'Algorithmic Pricing in Horizontal Merger Review: An Initial Assessment' (Charles River Associates, 5 April 2022).

²⁸ The Competition Act, 2002, s 3.

²⁹ In Re; Samir Agrawal (37/2018), CCI Order 06.11.2018.

³⁰ The Competition (Amendment) Act, No. 9 of 2023 (India).

³¹ The Competition Act, 2002, s 3(3).

³² Anil Kumar, 'Removing Legal Ambiguity on 'Hub-and-Spoke' Provisions Empowers CCI' Business Standard (Delhi, 17 July 2023).

³³ Shruti Manchanda, 'India: Analysis of the Competition (Amendment) Act, 2023' (Mondaq, 1 June 2023).

³⁴ Consolidated Version of The Treaty on the Functioning of the European Union (2012) OJ C 326/47, art. 101.

³⁵ Pieter Van Cleynenbreugel, 'Article 101 TFEU and the EU Courts: Adapting Legal Form to the Realities of Modernization' (2014) 51(5) Common Market LR 1381.

³⁶ Anti-Monopoly Law of the People's Republic of China, 2007.

³⁷ Anti-Monopoly (Amendment) Law 2022, arts 9 and 22(7).

³⁸ The Sherman Antitrust Act, 1980. *See also* 'Antitrust Law Basics- Section 1 of the Sherman Act' (Thomson Reuters, 2 May 2023).

pricing decision-making to a common entity even if the competitors never communicated with each other.

In the infamous *Caesars case*³⁹ against the Casino-Hotels in Atlantic City regarding the use of software called ‘*Rainmaker*’, the plaintiffs alleged that by using a third-party pricing system, the hotel operators engaged in a *per se* illegal price-fixing conspiracy.⁴⁰ The Department of Justice (“DOJ”) filed a statement arguing that even in the absence of direct communications between the defendants, they were engaged as a group to achieve a ‘common goal’⁴¹, noting that “it makes no difference that the confidential pricing information was shared through an algorithm rather than through a guy named Bob”.⁴² However, the court concluded that the plaintiffs failed to establish a plausible price-fixing conspiracy among the Casino-Hotels and dismissed the case.⁴³

V. NON-COLLUSIVE PRICING: THE BLACKBOX OF INSTANT REPRICING

In 1970, long before the advent of algorithmic pricing, a small town offered a deceptively similar illustration of non-collusive parallel conduct. The instance demonstrates a town where there were three gas stations, all posting the same price for a gallon of gas.⁴⁴ Each morning, the owner of the first gas station would climb a ladder and increase the price by five cents entirely unilaterally and without so much as a nod to his competitors.⁴⁵ Yet, the remaining stations followed the lead of the first station’s owner, without engaging in any overt communication or explicit agreement.

This analogue era vignette captures the foundational insight of contemporary digital competition law which has merely exchanged the ladder with lines of code.⁴⁶ Algorithms rely on a multitude of data points, including competitors’ prices, supply and demand conditions,

³⁹ *Gibson v. Cendyn Group LLC*, No. 2:23-CV-00140-MMD-DJA.

⁴⁰ ‘Justice Department and Federal Trade Commission File Statement of Interest in Hotel Room Algorithmic Price Fixing Case’ (U.S. DOJ, 28 March 2024).

⁴¹ David C. Kully, ‘DOJ “Triples Down” on View that Use of Pricing Algorithms Can Support Price-Fixing Claims’ (Holland and Knight, 24 April, 2024).

⁴² *In Re RealPage, Inc., Rental Software Antitrust Litig.*, No. 3:23 M-D- 3071 (M.D. Tenn. Nov. 14, 2023) See Also *Duffy v. Yardi Systems Inc et al* No. 2:23-cv-01391 (W.D. Wa. March 1, 2024).

⁴³ Sara Benson et al, ‘Gibson Decision Hands Atlantic City Casino Hotels Dismissal’ (Holland & Knight, 12 October 2024).

⁴⁴ Conversable Economist, ‘Algorithmic Pricing and Competition: The Small-Town Gas Station Example’ (Conversable Economist Blog, May 2017).

⁴⁵ Maureen K. Ohlhausen, ‘Should We Fear the Things That Go Beep in the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing’ (FTC, 23 May 2017).

⁴⁶ Nicolas Petit, ‘Artificial Intelligence and the Limits of Antitrust’ (2019) 32 *Harvard Journal of Law & Technology* 1.

consumer demographics, days of the week, time and other personal characteristics of individual purchasers.⁴⁷ Companies like Repricer.com, Antuit and 5Analytics allow sellers to beat competitors with super-fast repricing.⁴⁸ The advantage of such algorithms is that they react more swiftly to changing market conditions, surpassing the abilities of human agents.⁴⁹ However, this mode of non-collusive conduct or rimless wheel conspiracy falls out of the traditional boundaries of antitrust and does not trigger a regulatory response.⁵⁰

VI. THE PARADIGM OF PERSONALIZED PRICING: THE PRICE OF YOUR DIGITAL SOUL

Consumer data is the new oil of digital era which finances a company's revenue.⁵¹ In traditional brick-and-mortar retailing, it is exceedingly difficult to ascertain which consumer might be willing to pay more and which one might be willing to pay less.⁵² However, contemporary digital retail ecosystems, in the guise of standard terms of usage, which nobody reads but "agrees to",⁵³ enable companies to collect large forms of data including consumers' digital footprints to create a data pool, accessing most private aspects of consumers' lives that are unknown even to the consumers themselves.⁵⁴

Digital retailers like Amazon often exploit this data through algorithmic assessments to vary prices based on factors such as geographic location, consumer's browsing history, device characteristics, and their likelihood of comparison shopping.⁵⁵ In one such instance, Uber was discovered monitoring battery life of its users to indicate that a user with low smartphone battery is more likely to accept a surge price.⁵⁶ Some companies have also been found charging

⁴⁷ Joseph E. Harrington, 'Developing Competition Law for Collusion by Autonomous Artificial Agents' 14 (2018) J. Competition L. & Econ. 331.

⁴⁸ 'What is Repricing Software and Why Do Amazon Sellers Need It?' (Repricer Blog, 7 April 2022).

⁴⁹ Jennifer Dublino, 'What is Dynamic Pricing, and How does it Affect E-Commerce?' (Business.com, 6 November 2023).

⁵⁰ 'Competitive Implications of Pricing Algorithms under the United States Antitrust Laws' (CPI, 28 February 2024).

⁵¹ Agnes Budzyn, 'Data is the oil of the digital world. What if tech giants had to buy it from us?' (WEF, 30 April 2019).

⁵² Jean-Charles Rochet and Jean Tirole, 'Platform Competition in Two-Sided Markets' (2003) 1 Journal of the European Economic Association 990, 1010.

⁵³ Caroline Cakebread, 'You're not alone, no one reads terms of service agreements' (Business Insider, 15 November 2024).

⁵⁴ James Carmichael, 'Google knows you better than you know yourself' (The Atlantic, 19 August 2014).

⁵⁵ Jennifer Stark and Nicholas Diakopoulos, 'Uber seems to offer better service in areas with more white people. That raises some tough questions' (The Washington Post, 10 March 2016).

⁵⁶ 'Uber Is Allegedly Charging Cab Users More If They Have Low Phone Battery?' (Times Now, 14 April 2023).

higher prices from Mac users based on the inference that somebody using an expensive device may be willing to pay more than other consumers.⁵⁷

Algorithms are specifically programmed to maximize the supplier's profits by resorting to anti-competitive conduct through exploiting known consumer biases, be it their lack of patience, their cell phone power levels, or prior search history as a means of reaching to a consumer's maximum willingness to pay.⁵⁸ Consider the experience of Dan, as whimsically quoted by Arwa Mahdawi in 'The Guardian'. Dan noticed a curious pattern on his Uber app. When he switched from his personal to corporate credit card his Uber fare dropped. "*It might have something to do with my kid vomiting in some cabs*", he hypothesizes. Perhaps it's because some algorithm inferred that '*Dad-Dan*' isn't as chic a ride as '*Corporate-Dan*'.⁵⁹

This digital personalization enhances the ability of digital retailers to engage in a more precise and targeted form of price discrimination.⁶⁰ Rather than offering a single price to all, it is now technically feasible to offer the same product, at precisely the same time, but at different prices to different consumers.⁶¹ Companies have emerged with the explicit purpose of analyzing a consumer's willingness to pay, selling this information to retailers who then use it for price discrimination.⁶² For instance, Freshplum, a start-up company, developed algorithms that could predict which consumers are willing to pay higher prices and which ones will buy only if offered a discount and sold this targeted discount information to e-commerce vendors.⁶³ Facebook, on similar lines, in 2010, launched "instant personalization" feature handing out user data to third-party websites allowing them to personalize their sites using this data.⁶⁴

The current competition framework generally considers personalized pricing by suppliers who are not in dominance as non-violative of Competition Law until arranged collusively among competitors. However, explicit collusion is unlikely to occur since competitors would not want to share highly valuable confidential information of their least price-sensitive consumers.⁶⁵ As

⁵⁷ Christo Wilson, 'If you use Mac or an Android, E-Commerce Sites May be Charging You More' (The Washington Post, 3 November 2014).

⁵⁸ Amelia Fletcher, 'Exploitation of Consumer Decision-Making and How to Address It: Lessons from Past Demand Side Interventions' (2017) 8 Journal of European Competition Law & Practice.

⁵⁹ Arwa Mahdawi, 'Is your friend getting a cheaper Uber Fare than you are' (The Guardian, 13 April 2018).

⁶⁰ Wu Z, Yang Y, Zhao J and Wu Y, 'The Impact of Algorithmic Price Discrimination on Consumers' Perceived Betrayal' (2022).

⁶¹ Townley C, Morrison E and Yeung K, 'Big Data and Personalized Price Discrimination in EU Competition Law' (2017) 36 Yearbook of European Law 683.

⁶² Oren Bar-Gill, 'Algorithmic Price Discrimination: When Demand Is a Function of Both Preferences and (Mis)Perceptions' (2018) SSRN.

⁶³ Adam Tanner, 'Different Customers, Different Prices, Thanks to Big Data' (Forbes, 13 April 2014).

⁶⁴ Gill (n 50).

⁶⁵ Miranda Cole, 'The CMA'S Paper on Pricing Algorithms, Collusion and Personalized Pricing' (National Law

for tacit coordination, the widespread use of personalized pricing makes it less likely to achieve since pricing is non-uniform and lack of price transparency makes it difficult for competitors to observe and detect any deviations from the coordinated price, making collusion unstable.⁶⁶ Personalized pricing is typically considered as pro-competitive and enhances consumer welfare.⁶⁷ However, there are concerns that certain advanced pricing algorithms like those using reinforcement learning, known for their ability to learn sophisticated pricing, can soften competition and enable supra-competitive prices to be maintained.⁶⁸ Firms might employ ‘*obfuscation strategies*’ encrypting prices into complex codes to make comparison by third parties more difficult, leading to higher search costs and reducing consumer welfare.⁶⁹

VII. POLICY RECOMMENDATIONS: A WAY FORWARD

Antitrust Law is a product of time.⁷⁰ It was forged in an analog age which now creaks under the weight of self-optimizing markets. Algorithms no longer just execute human plans but reinvent market outcomes in ways no one could imagine earlier.⁷¹ It is challenging to craft an antitrust intervention when rivals employ parallel pricing conduct to reach a collusive price leading to consumers paying a hefty price before the regulators can even blink.

Policy must therefore stop treating code as a neutral instrument and start treating it as evidence, conduit and a potential defendant in future litigation. To bridge this gap between fast-evolving algorithms and slow-moving regulation, the author puts forward the following targeted policy innovations.

Review, 5 November 2018).

⁶⁶ Id.

⁶⁷ Qiuyu Lu, Noriaki Matsushima and Shiva Shekhar, ‘Welfare Implications of Personalized Pricing in Competitive Platform Markets: The Role of Network Effects’ (2025) *International Journal of Industrial Organization*.

⁶⁸ ‘Artificial Intelligence, Algorithmic Pricing and Collusion’ (2020) 110 *The American Economic Review* 3267.

⁶⁹ Glenn Ellison and Alexander Wolitzky, ‘A search Cost Model of Obfuscation’ (2012) 43 *The RAND Journal of Economics* 417.

⁷⁰ Richard Whish and David Bailey, *Competition Law* (10th edn., OUP 2021).

⁷¹ Ariel Ezrachi and Maurice E Stucke, *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy* (Harvard University Press 2016).

A. Technical Leniency Protocol (“TLP”)

Traditional leniency programs were typically designed to pierce human conspiracies. The first insider to come forward supplies the “smoking gun” to the regulator and secures immunity or reduced sanction in return for full cooperation.⁷² However, in the wake of digitalization and algorithmic collusion, the model is a blunt force when facing machine mediated coordination. Modern pricing systems can converge on supra-competitive outcomes without any explicit human involvement, leaving little to no room for conventional documentary proof, since the evidence no longer resides in traditional disclosure notions such as e-mails, meeting notes, or insider testimonies but most often resides in code, time-stamped logs and reproducible model artefacts.⁷³

In such cases, traditional leniency programs are not well placed to take proper account of algorithmic collusion due to lack of human agency.⁷⁴ The Technical Leniency Protocol, on the other hand, keeps the best of conventional leniency schemes including incentives to come forward and cooperate, and amends the adapting procedure and standard of proof to machine centered evidence.⁷⁵

Under a workable TLP, an applicant secures a confidential marker and simultaneously triggers a preservation scheme that protects perishable digital artifacts, snapshots of relevant model codes, immutable logs, hashed A/B test records, and vendor API traces to prevent this crucial evidence from being overwritten by model updates or log rotations. The applicant must then provide reproducible artefacts, *for instance*, a forensically packaged model container with a representative dataset slice or a complete log bundle that enables regulatory agencies to reproduce the contested pricing behaviour in a sandbox. If the model replays a similar supra-competitive convergence in a controlled environment, the evidentiary gap between “convergence” and “coordination” diminishes. To process such disclosures, authorities must pair intake by establishing a technical triage unit capable of rapid authentication, sandbox reproduction and targeted counterfactual testing. In instances, where such technical evidence materially advances the case, conditional immunity or reduced sanction may follow.

⁷² European Competition Network (ECN), Model Leniency Programme (2012).

⁷³ European Commission, Directorate-General for Competition, Competition Policy for the Digital Era (2019).

⁷⁴ Maurice E Stucke and Allen P Grunes, Big Data and Competition Policy (OUP 2016).

⁷⁵ Corneliu Hödlmayr, ‘Investigation of Cases (I): Leniency Policy’ in Luis Ortiz Blanco (ed), EU Competition Procedure (4th edn, Oxford University Press 2022) 337–38.

B. Algorithmic Personalisation and Data Protection Standard (“APDP”)

Consumer’s private information is what protects them against giving up their consumer surplus to a monopoly.⁷⁶ To address concerns at the procedural level arising from lack of transparency around personalized pricing,⁷⁷ a provision of *mandatory disclosure* by suppliers to consumers can be imposed, revealing that their personal information is being used for price offerings.⁷⁸

Developing an APDP framework for algorithmic markets may act as a concise, implementable regulatory package designed to make personalised pricing transparent, auditable, proportionate, and compatible with the DPDP’s consent-first model which requires that consent notices to prominently and unambiguously state the specific purposes of processing and categories of data collected to prevent behavioural profiling of consumers.⁷⁹

Under a workable APDP, every personalised offer must be accompanied by a concise price-personalisation notice. The notice should identify, in plain language, the categories of personal data used, the precise pricing purpose, the pricing model utilised and immediate opt-out mechanisms to ensure that the consent obtained is meaningful rather than merely pro forma.

This must be further complemented by Algorithmic Impact Assessments (“AIAs”) similar to Data Protection Impact Assessments (“DPIAs”)⁸⁰ describing model’s inputs, intended segmentation, potential distributional effects on consumer groups, and mitigation measures undertaken to tackle against discriminatory or exclusionary outcomes. Such pre-deployment assessments are necessary to identify systemic risks that ordinary consent notice alone cannot reveal.

Bolstering such mandates can halt the anti-competitive concerns of personalized pricing altogether by offering the consumers ability to ‘opt-in’ or ‘opt-out’ with a conscious knowledge of the consequences of that option. This empowers consumers to make informed decisions and neutralizes the effects of consumer misperception which retailers often exploit by correlating the degree of misperception with the preference-based willingness to pay, leading to the consumers overpaying.

⁷⁶ S Nageeb Ali, Greg Lewis and Shoshana Vasserman, ‘Voluntary Disclosure and Personalized Pricing’ (2019) NBER Working Paper No 25838.

⁷⁷ Information Commissioner’s Office, Explaining Decisions Made with AI (ICO 2020).

⁷⁸ Organisation for Economic Co-operation and Development, Personalised Pricing in the Digital Era (OECD 2018).

⁷⁹ Digital Personal Data Protection Act 2023, s 6(1).

⁸⁰ David Wright and Paul De Hert (eds), Privacy Impact Assessment (Springer 2012).

VIII. CONCLUSION

“AI is a tool. The choice about how it gets deployed is ours”

- Oreon Etzioni

This essay has been premised on the potential of anti-competitive conduct or consumer harm that may arise out of the use of AI-powered pricing algorithms. Competitive harm that once required smoke-filled room collusions can now emerge from lines of code and shared data feeds. To prevent such harm and foster consumer welfare, more power needs to be vested in the consumers by increasing transparency thresholds to equip consumers with the knowledge of how they are being priced so that they can make their decisions in the online marketplace with as much discretion as they do in a physical marketplace.

The author believes that the future litigation concerning the interplay of AI and antitrust will reveal more of how the practices of tacit collusion, supra-competitive pricing and personalized pricing are scrutinized under the radar of antitrust laws to curb any potential consumer harm. Only by pairing technical capabilities with legal imagination can regulators protect consumer welfare and ensure markets continue to remain competitive in the algorithmic age.

THE D-LINKED DILEMMA WITH DVT: TACKLING KILLER ACQUISITIONS THROUGH DATA THRESHOLD

- Pratyank Chakraborty and Gurasis

Singh Grover*

ABSTRACT

The Competition Law Review Committee Report 2019 highlighted that, unlike international jurisdictions, the Indian antitrust watchdog could not assess transactions that did not meet a specified merger control threshold, even if they posed a clear risk to competition. While the Competition Law Review Committee Report 2019 discussed data as the core of such transactions, the eventual recommendation shifted focus to prioritising the transaction's value through the Deal Value Threshold. This shift raises concerns about Killer Acquisitions, where Big Tech companies acquire nascent entities with strategic data assets. These concerns, however, were not addressed in the 2023 amendments to the Competition Act, 2002. Given that a target's data is often its crown jewel, mergers in digital market require an added layer of protection. Such transactions are often asset-light but data-heavy, and their low monetary value allows them to escape current thresholds. This paper argues that Killer Acquisitions, particularly those involving unique data are increasing and may never reach the regulatory radar. To resolve this, the paper proposes a novel suggestion of incorporating a data valuation framework into merger review processes. The novelty of this research lies also in proposing specific methodologies, namely, the Business Reporting Method and the With-and-Without Method, for valuing data within mergers and acquisitions. These approaches provide a structured means to assess whether a transaction merits antitrust scrutiny, even if its deal value appears low. Drawing from international examples, particularly from the European Union, the paper identifies similar regulatory gaps abroad and offers a practical blueprint for India. It calls for the introduction of a data-specific threshold to complement the deal value

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threshold, ensuring that antitrust regulation in digital markets is both forward-looking and robust.

Keywords: Merger Control, M&A, Deal Value Threshold, Killer Acquisition, Digital Market, Digital Competition, Big Tech, Committee on Digital Competition Law.

INTRODUCTION

Termed as new oil, data¹ is ubiquitous and present in every aspect of life. Business, which is driven by data, has increased exponentially.² Big Data has been proven to be a big game changer and, at the same time, has also provided us with legitimate antitrust concerns.³ To begin with, possession of data creates network effects, where market participants derive economic benefits from a large user base and the associated data.⁴ This, in turn, raises entry barriers,⁵ as new entrants must compete with established players who have already leveraged network effects to gain a competitive advantage- resulting in a ‘winner-takes-all’ market dynamic creating artificial barriers, making it challenging for new entrants to coexist in the same market.⁶

The reliance on data and Big Data has also developed this concept in the business world, labelled as a ‘data-driven merger.’⁷ In recent years, there has been a surge in high-profile mergers in high-technology markets. Notable examples include Microsoft’s acquisition of

¹ Charles Arthur, ‘Tech Giants May Be Huge, but Nothing Matches Big Data’ *The Guardian* (London, 23 August 2013) <<https://www.theguardian.com/technology/2013/aug/23/tech-giants-data>> accessed 25 September 2025.

² Randy Bean, ‘Has Progress on Data, Analytics, and AI Stalled at Your Company?’ (*Harvard Business Review*, 30 January 2023) <<https://hbr.org/2023/01/has-progress-on-data-analytics-and-ai-stalled-at-your%20company>> accessed 25 September 2025.

³ John M. Yun, ‘The Role of Big Data in Antitrust’ in Joshua D. Wright and Douglas H. Ginsburg (eds), *The Global Antitrust Institute Report on the Digital Economy* (The Global Antitrust Institute, 2020).

⁴ Konstantin Voropaev, ‘Network Effects as a Ground for Anti-Competitive Conduct in Russia’ (*Competition Law Blog*, 8 February 2021) <<https://legalblogs.wolterskluwer.com/competition-blog/network-effects-as-a-ground-for-anti-competitive-conduct-in-russia/#:~:text=Simultaneously%2C%20there%20are%20apparent%20difficulties,of%20other%20users%20already%20connected>> accessed 25 September 2025.

⁵ Kira Radinsky, ‘Data Monopolists Like Google Are Threatening the Economy’ (*Harvard Business Review*, 2 March 2015) <<https://hbr.org/2015/03/data-monopolists-like-google-are-threatening-the-economy>> accessed 25 September 2025.

⁶ Maurice E. Stucke and Allen P. Grunes, *Big Data and Competition Policy* (OUP 2016); See also Lina M. Khan ‘The Separation of Platforms and Commerce’ (2019) 119(4) *Columbia Law Review* <<https://columbialawreview.org/content/the-separation-of-platforms-and-commerce/>> accessed 25 September 2025.

⁷ Anca D. Chirita, ‘Data-Driven Mergers Under EU Competition Law’ in John Linarelli and Orkun N. Akseli (eds.), *The Future of Commercial Law: Ways Forward for Harmonisation* Oxford, Hart Publishing, 2019) <<https://doi.org/10.5040/9781509914722.ch-007>> accessed 25 September 2025.

Skype, an internet-based communications services provider,⁸ and Facebook's acquisition of WhatsApp, a messaging app provider.⁹ Other examples include TomTom acquiring Tele Atlas, a digital map database producer,¹⁰ and Microsoft acquiring LinkedIn, a sales intelligence solution provider.¹¹

These companies heavily rely on data, which makes them highly asset-light.¹² One of the most notable examples that is given in such a perspective is the valuation of WhatsApp by Facebook. At the time of Facebook's acquisition of WhatsApp, the latter had 55 employees and virtually negligible assets but still grabbed an offer of USD 19 Billion- otherwise unexplainable by conventional valuation standards.¹³ The Merger Control Regime in India previously had the turnover and/or asset value of the target enterprise of any combination as the basis for ascertaining any combination as notifiable – the Competition Commission of India (“CCI”) could not investigate combinations which involves asset and turnover value below the set threshold however having competition implications in the Indian market.¹⁴

To tackle this issue, the Competition Law Review Committee (“CLRC”) recommended a novel method of ‘Deal Value Threshold’ (“DVT”).¹⁵ With the Competition (Amendment) Act, 2023 (“Amendment Act 2023”) to the Competition Act, 2002 (“the 2002 Act”) and the Competition Commission of India (Combinations) Regulations, 2024 (“Combination Regulations 2024”)- DVT has been crystallised in the Indian legal regime and has been subsequently implemented. It needs to be noted that the DVT was also lauded as the solution for the digital markets and technology sector by the Committee on Digital Competition Law (“CDCL”), but it refrained

⁸ David J. Bryce, ‘Microsoft’s Skype Deal: How to Make it Work’ (*Harvard Business Review*, 13 May 2011) <<https://hbr.org/2011/05/microsofts-skype-deal-how>> accessed 25 September 2025.

⁹ ‘Facebook to Acquire WhatsApp’ (*Securities Exchange Commission*, 19 February 2014) <https://www.sec.gov/Archives/edgar/data/1326801/000132680114000010/exhibit991_pressrelease219.htm> accessed 25 September 2025.

¹⁰ *TomTom/Tele Atlas* [2007] Case No COMP/M.4854 (European Commission).

¹¹ ‘Mergers: Commission approves acquisition of LinkedIn by Microsoft, subject to conditions’ (*European Commission*, 6 December 2016) <https://europa.eu/rapid/press-release_IP-16-4284_en.htm> accessed 25 September 2025.

¹² MCA, *Report of Competition Law Review Committee* (2019) <<https://www.ies.gov.in/pdfs/Report-Competition-CLRC.pdf>> accessed 25 September 2025 (“CLRC Report”) para 5.3.

¹³ Aswath Damodaran, ‘450 million users is the magic number of WhatsApp valuation’ (*Economic Times*, 7 March 2014) <<https://people.stern.nyu.edu/wgreene/entertainmentandmedia/WhatsApp-valuation.pdf>> accessed 25 September 2025.

¹⁴ Parina Muchhala and others, ‘Deal Breaker or Deal Maker?: Deconstructing the “Deal Value Threshold” Under The Competition Act, 2002’ (*Nishith Desai Associate*, 19 November 2024) <https://nishithdesai.com/fileadmin/user_upload/Html/Hotline/Deal_Talk_Sep1924-M.html> accessed 25 September 2025.

¹⁵ CLRC Report, para 5.14.

from deliberating any specific Merger Control Regime for technology and digital space.¹⁶ It is understandable that the CLRC recommended the DVT within the broader merger notification regime,¹⁷ given its focus on antitrust regulation across various markets. However, considering its specific mandate on digital markets, the CDCL was expected to engage in a more detailed and nuanced deliberation.¹⁸

In the instant research, the researchers examine the limitations of the DVT in safeguarding digital markets from potential Appreciable Adverse Effects on Competition (“AAEC”), particularly in the context of Killer Acquisitions by Big Tech companies targeting nascent enterprises. As discussed in later sections, such acquisitions pose a significant challenge to competition in digital markets globally, including India. To address this concern, the researchers propose a reform to the Merger Control Regime that incorporates a data-specific threshold for notifiable combinations.

Part I of this research adopts a partially descriptive and partially inferential research approach to analyse DVT and its shortcomings in capturing Killer Acquisitions within the digital market. This is followed by an examination of a specific case study, which substantiates our argument for introducing a data threshold. Part II provides a comparative analysis of the European Union (“EU”) framework, highlighting a similar regulatory gap and reinforcing the need for reform. Part III explores the data valuation process, proposing a structured framework to quantify and assess data to establish an effective data threshold before presenting a roadmap of suggested implementation. Finally, Part IV consolidates these discussions by concluding with broader insights into the necessity of reforming merger control mechanisms in digital markets. Hence, the principal claim as put forth by the researchers is that:

“The recommendations put forth by CLRC, as endorsed by CDCL, while headed in the right direction, present a keyhole view of an otherwise multiverse of digital markets. The juggernaut of amendments to curb antitrust practices impedes its effectiveness by missing out on crucial aspects which

¹⁶ MCA, *Report of the Committee on Digital Competition Law* (2024) <<https://www.mca.gov.in/bin/dms/getdocument?mds=gzGtvSkE3zIVhAuBe2pbow%253D%253D&type=open>> accessed 25 September 2025 (“CDCL Report”) para 3.34.

¹⁷ Avaantika Kakkar and Kirthi Srinivas, ‘2023 Amendments to Indian Competition Law: Implications for M&A (Part 1)’ (*Competition Law Blog*, 18 April 2023) <<https://competitionlawblog.kluwercompetitionlaw.com/2023/04/18/2023-amendments-to-indian-competition-law-implications-for-ma-part-1/>> accessed 25 September 2025.

¹⁸ Tushar Chakrabarty, ‘Committee Report Summary Digital Competition Law’ (*PRS Legislative Research*, 20 March 2024) <<https://prsindia.org/policy/report-summaries/digital-competition-law>> accessed 25 September 2025.

can potentially affect competition but may not reflect on the deal's value. The potential of data cannot be ignored in a Merger and Acquisition (“M&A”) deal, as data has the potential to make or break a deal in this growing digital economy. The valuation of data should be measured by taking into account the latent ability of data, and the same should be taken into consideration in the current Merger Control Regime in India along with defining a data-specific threshold in digital markets.”

I. DEAL VALUE THRESHOLD AND DRAWBACKS

As discussed previously, DVT has been introduced in India through the Amendment Act 2023 and further operationalised through the Combination Regulations 2024. This section first examines the structural and operational features of the DVT as currently implemented. It then explores the concept and characteristics of Killer Acquisitions within the digital market, with a focus on nascent-stage technology enterprises. This examination provides the empirical and conceptual basis for evaluating the adequacy of the DVT in addressing such acquisitions.

A. Detailing DVT

Through the Amendment Act, 2023, two new clauses have been introduced to Section 5 of the 2002 Act, mandating notification to the CCI for Mergers, Acquisitions, and Amalgamations, meeting the following thresholds: (i) transaction value exceeding INR 2,000 crores (approximately USD 242 million) and (ii) the target enterprise having *Substantial Business Operations* in India.¹⁹ The transaction value encompasses all forms of valuable consideration, including direct or indirect, immediate or deferred, and cash or non-cash payments.²⁰ This includes consideration for covenants, interconnected transactions, call options, Intellectual Property licensing, technological assistance, and other similar arrangements.²¹ To calculate transaction value, acquisitions between parties are aggregated within two years preceding the trigger event. For open offers, the transaction value assumes a full subscription.²² Notably,

¹⁹ Amendment Act 2023, s 6.

²⁰ ‘Salient Features of the Competition (Amendment) Act, 2023’ in ‘Fair Play: the Quarterly Newsletter of Competition Commission of India’ (Vol 44, 2023) <https://www.cci.gov.in/images/publications_fairplay/en/volume-44-january-march-20231683021509.pdf> accessed 25 September 2025.

²¹ Combination Regulations 2024, r 4.

²² Shardul Amarchand Mangaldas, ‘India's Merger Control Regime Gets A Major Overhaul’ (*Lexology*, 10 Sep 2024) <<https://www.lexology.com/library/detail.aspx?g=bd06e925-4bbb-4918-8fbb-012b515f3726>> accessed 25 September 2025.

where the precise transaction value cannot be ascertained with reasonable certainty, the revised regulations deem the transaction to exceed the INR 20 billion threshold.²³

If the transaction value cannot be ascertained with reasonable certainty, it shall be deemed to exceed the Value Test.²⁴ The ‘*best estimate*’ shall be based on the board’s or approving authority’s estimate. In the absence of such an estimate, the ‘*maximum payable amount*’ shall be considered the best estimate.²⁵ Drawing inspiration from Germany and Austria,²⁶ the efficacy of transaction value or deal value thresholds as a notifiable regime remains unsubstantiated by empirical evidence, as seen through a written contribution from Germany to the Organisation for Economic Cooperation and Development (“**OECD**”) in May 2020, highlights two significant insights. Firstly, the introduction of Deal Value Thresholds yielded a negligible increase in notifications. Moreover, as of 2020, the German Federal Cartel Office had yet to encounter a critical case notified solely based on the transaction value threshold.²⁷ A similar trend is observed in Austria, where none of the transactions notified under the Transaction Value Thresholds were found to be anti-competitive.²⁸ These limitations are particularly visible in the context of killer acquisitions, a phenomenon where large incumbents in the market strategically acquire innovative, nascent enterprises to eliminate future competition. To better understand DVT failure in such cases, it is important to first unpack the mechanics of killer acquisitions.

B. Killer Acquisitions

Killer Acquisitions refer to the strategic acquisition of innovative targets by large existing market players, followed by a plausible termination of the target’s innovative projects, thereby eliminating potential future competition.²⁹ Empirical evidence suggests that the five largest digital platforms discontinue approximately 60% of their acquired products.³⁰ Furthermore, it

²³ Combination Regulations 2024 r 4(1) Exp. G.

²⁴ Combination Regulations 2024 r 4 Exp. G.

²⁵ Combination Regulations 2024 r 4 Exp. H.

²⁶ CLRC Report, para 5.7.

²⁷ ‘Start-ups, Killer Acquisitions and Merger Control’ (OECD, 2020)

<https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/05/start-ups-killer-acquisitions-and-merger-control_201583e4/dac52a99-en.pdf> accessed 25 September 2025.

²⁸ Christoph Wanek, Florian Reiter-Werzin and Marie Dreher-Lorjé, ‘In brief: the key features of merger control legislation in Austria’ (*Lexology*, 22 July 2023) <<https://www.lexology.com/library/detail.aspx?g=d41ddfe9-6eb6-4cc8-8d15-caa3c599f289>> accessed 25 September 2025.

²⁹ Colleen Cunningham, Florian Ederer and Song Ma, ‘Killer Acquisitions’ (2021) 129 (3) *Journal of Political Economy*.

³⁰ Axel Gautier and Joe Lamesch, ‘Mergers in the digital economy’ (2021) 54 *Information Economics and Policy* <<https://www.sciencedirect.com/science/article/pii/S0167624520301347>> accessed 25 September 2025.

has been observed that half of the apps acquired by Big Tech companies from the Google Play Store are subsequently discontinued.³¹ Similarly, the UK Government's Digital Competition Expert Panel, chaired by Prof. Furman, has observed that the top five Big Tech companies made approximately 400 acquisitions over the last decade.³² A report commissioned by the UK Competition and Markets Authority further reveals that three of the Big Tech companies collectively made 299 acquisitions between 2008 and 2018.³³

While these figures demonstrate the pervasiveness of Killer Acquisitions in mature jurisdictions, the Indian market shows comparable warning signs. Examining the Indian context is critical to determining whether existing domestic mechanisms are fit to address such acquisitions in the digital economy. In this regard, the CRLC report points out that the introduction of the DVT aimed to subject certain transactions to scrutiny by the competition watchdog, which would otherwise escape review due to non-fulfilment of the assets turnover requirement of the target companies, specifically in the digital market.³⁴

C. Killer Acquisitions and DVT

The discussion at this juncture will present an acute case of a drawback of the DVT in taking Killer Acquisitions into consideration. The valuation of such targets may not trigger the threshold, rendering the DVT ineffective in scrutinising these deals. A notable illustration of this scenario is Flipkart's acquisition of Jabong, an e-fashion platform, which was purchased for a relatively modest USD 70 million, characterised as a discount deal.³⁵ Following the acquisition, Flipkart solidified its position as India's largest e-commerce brand, boasting a market share of 38.3%. Notably, Flipkart subsequently killed Jabong, redirecting its users to Myntra, Flipkart's dedicated fashion e-commerce platform.³⁶ Notably, this transaction, although completed prior to the introduction of the DVT, would still fall significantly below

³¹ Pauline Affeldt and Reinhold Kesler, 'Competitors' Reactions to Big Tech Acquisitions: Evidence from Mobile Apps' (2022) DIW Berlin Discussion Paper No. 1987.

³² 'Unlocking Digital Competition: Report of the Digital Competition Expert Panel (United Kingdom Government, March 2019) <<https://www.gov.uk/government/publications/unlocking-digital-competition-report-of-the-digital-competition-expert-panel>> accessed 25 September 2025.

³³ Elena Argentesi and others 'Ex-post Assessment of Merger Control Decisions in Digital Markets' (Learlab, November 2020) <<https://www.learlab.com/track-record/ex-post-assessment-of-merger-control-decisions-in-digital-markets/>> accessed 25 September 2025.

³⁴ CLRC Report, para 5.3.

³⁵ Shrutika Verma, 'Flipkart's Myntra Acquires Jabong in \$70 million 'discount' deal' (Live Mint, 26 July 2016) <<https://www.livemint.com/Companies/iicvIYFijqp9VRAX0ON46I/Flipkarts-Myntra-acquires-Jabong.html>> accessed 25 September 2025.

³⁶ Katie Arcieri, 'Flipkart is No. 1 in India but faces formidable foe in Amazon, say experts' (S&P Global, 10 October 2019) <<https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/flipkart-is-no-1-in-india-but-faces-formidable-foe-in-amazon-say-experts-54083920>> accessed 25 September 2025.

the proposed threshold limit of Rs. 2000 crores, not obligating any notification, even though impacting the market dynamics.³⁷

Conversely, setting the threshold too low may lead to unnecessary over-notification of transactions, causing an undue burden. In both cases, there shall be both false positives and false negatives. An argument of no threshold can be absolute,³⁸ which may sound good in literature, but that will let severe market consolidation in deals that may pass through the sieve of the threshold. Moreover, the *Chicago School of Antitrust Law* and Frank H. Easterbrook present a compelling argument regarding false negatives. According to this perspective, even if market consolidation occurs due to false negatives, it may attract new entrants drawn to the profits generated by the monopolistic entity, thus terming the market's self-correcting nature.³⁹

While it is equally important to recognise that consumers ultimately bear the cost of false positives in merger control, the risks posed by unchecked killer acquisitions in the digital economy demand closer scrutiny. The limitations of a *plain-vanilla* DVT are particularly evident in asset-light, data-rich enterprises, where the strategic value lies in data possession rather than tangible assets. This underscores the need for a calibrated, sector-specific threshold that explicitly accounts for data as a competitive asset.

While the theoretical understanding of killer acquisitions is essential, its real-world implications are best illustrated through case studies. One such example that exemplifies both the failure of traditional thresholds and the consequences of data-driven consolidation is the Google-Fitbit acquisition.

D. Case for data-specific threshold in digital market

In 2019, the tech giant Google acquired the wireless-enabled wearable technology enterprise Fitbit- having the health and wellness data of 28 million users.⁴⁰ The reason for discussing this case in particular is primarily because it has taken place in the digital market and the acquisition

³⁷ Utkarsh Sharma and Dhruvi Agarwal, 'Illuminating The Nascent Potential Competitor Acquisition Theory Of Harm: Threat To Start-Ups' (2013) 9(1) Indian Competition Law Review <

³⁸ Milind Khemka, 'Will Deal Value Thresholds Kill the Threat of Killer Acquisitions?' (IRCCL, 26 July 2023) <<https://www.irccl.in/post/will-deal-value-thresholds-kill-the-threat-of-killer-acquisitions>> accessed 25 September 2025.

³⁹ David S. Evans and A. Jorge Padilla, 'Designing Antitrust Rules for Assessing Unilateral Practices: A Neo-Chicago Approach' (2005) 72(5) University of Chicago Law Review; see also Frank H. Easterbrook, *The Limits of Antitrust*, 63 Tex L Rev 1, 21 (1984).

⁴⁰ Kari Paul, 'Tossed my Fitbit in the trash': users fear for privacy after Google buys company' (The Guardian, 6 November 2019) <<https://www.theguardian.com/technology/2019/nov/05/fitbit-google-acquisition-health-data>> accessed 25 September 2025.

is made by one of the Big Tech companies. Another reason for this discussion is that the allegation of Killer Acquisition was alleged at the time of this acquisition.⁴¹ Even presently, with the acquirer entering a market similar to the target, the target’s current situation is seemingly in a disadvantageous position.⁴² Moreover, the nature of this combination is such that it will allow us to discuss two major AAECs that may be there in the digital market (i.e. targeted advertisement⁴³ and ecosystem approach⁴⁴) as shown in furtherance.

To position this in the context of our discussion, the researchers propose the following hypothetical scenarios to frame our argument,

Scenario	Description	Relevance / Implications
First Hypothetical Scenario	The acquisition falls below the applicable threshold, with the target enterprise being in its nascent stage. In this transaction, the target company explicitly states that it has not shared user data with the acquirer.	Even without data sharing, the acquisition could still have competitive implications, but these may go undetected as the transaction does not trigger notification thresholds.
Second Hypothetical Scenario	The acquirer gains access to the target’s data post-acquisition. ⁴⁵	Particularly relevant in light of allegations against Google and Google Ads involving targeted advertising based on accessed data. The transfer of data could enhance market power and facilitate exclusionary practices. ⁴⁶

Taking both hypothetical scenarios, an AAEC can go unnoticed by a competition watchdog, as this does not breach any thresholds unless any *suo moto* enquiry is undertaken. The aspect of *suo moto* enquiry is uncertain; thus, the researchers will keep that out of any consideration of this research.

⁴¹ Mario Strelbel and Fabian Koch, ‘European Commission - In-depth investigation into the proposed acquisition of Fitbit by Google’ (*Lexology*, 24 August 2020) <<https://www.lexology.com/library/detail.aspx?g=97b200c2-989c-48e4-a42f-3c8c3eb33793>> accessed 25 September 2025.

⁴² Alex Perry, ‘Is Google Fitbit in trouble? Website shutdown revitalizes concern about the brand's future’ (Mashable, 25 September 2024) <<https://mashable.com/article/google-fitbit-website-shutdown#:~:text=Google%20bought%20Fitbit%20for%20%242.1,precedence%20over%20actual%20Fitbit%20models>> accessed 25 September 2025.

⁴³ Sanxi Li, Hailin Sun and Jun Yu, ‘Competitive targeted online advertising’ (2023) 87 *International Journal of Industrial Organization*.

⁴⁴ Michael G Jacobides and Ioannis Lianos, ‘Ecosystems and competition law in theory and practice’ (2021) 30(5) *Industrial and Corporate Change*.

⁴⁵ David Phelan, ‘Google Buys Fitbit For \$2.1 Billion: Here’s What It Means’ (*Forbes*, 1 November 2019) <<https://www.forbes.com/sites/davidphelan/2019/11/01/google-buys-fitbit-for-21-billion-heres-what-it-means/>> accessed 25 September 2025.

⁴⁶ Shirin Ghaffary and Rani Molla, ‘Google says it won’t use your Fitbit data to target you with ads. But what else will do it?’ (*Vox*, 2 November 2019) <<https://www.vox.com/recode/2019/11/1/20943583/google-fitbit-acquisition-privacy-antitrust>> accessed 25 September 2025.

Even if the Second Hypothetical Scenario is dropped, an AAEC may still go unnoticed by a competition watchdog. A factor contributing to this kind of Combination is the ecosystem approach, wherein platform entities like Google, Apple, Microsoft, etc. leverage their existing platforms to acquire complementary services, thereby enhancing network effects.⁴⁷ The ecosystem approach warrants more attention as this may lead to not just a network effect in the market but also to the large incumbent who acts as a ‘*Gatekeeper*’ acquiring the complimentary market participant – the *Gatekeeper* may make it erroneous for the new entrant in the complimentary market.⁴⁸ However, in a scenario where a combination of this nature has to be notified to the competition watchdog- the watchdog may be able to appreciate these effects on the market competition and may be able to flag effects if there are any.⁴⁹ Regrettably, our first hypothetical scenario illustrates that acquiring a nascent-stage enterprise would likely evade both the deal value and asset turnover threshold of any reasonable quantum. Thus, the current Indian merger control framework, with its emphasis on deal value thresholds, may prove inadequate in addressing data-driven acquisitions that do not meet conventional monetary or asset benchmarks. The preceding discussion sets the stage for the central proposal of this paper. To understand how other jurisdictions have approached similar regulatory challenges, the following section examines developments within the EU.

II. THE EU APPROACH TO DATA TRANSFERS AND VALUATION

As global M&A volumes reach about USD 6 Trillion,⁵⁰ concerns regarding the overvaluation of deals resurface more often than not. Research highlights the fact that the UK is governed by a single data protection law, *i.e.* General Data Protection Regulation, 2016. In variation, the

⁴⁷ Mohan Subramaniam, ‘Digital ecosystems and their implications for competitive strategy’ (2020) 9 *Journal of Organization Design* <<https://link.springer.com/article/10.1186/s41469-020-00073-0>> accessed 25 September 2025 ; see also Anush Ganesh, ‘Predatory pricing in platform markets: a modified test for firms within the scope of Article 3 of the DMA and super-dominant platform firms under Article 102 TFEU’ (2024) 21 *European Competition Journal* <<https://doi.org/10.1080/17441056.2024.2428032>> accessed 25 September 2025.

⁴⁸ Jasper van den Boom, ‘Incumbent or Challenger? Assessing Ecosystem Competition in the DMA’ (2024) 20(4) *Journal of Competition Law & Economics*.

⁴⁹ The Google-Fitbit combination was notified in the European Union, but the European Commission's review did not delve into the ecosystem approach, a contentious issue among antitrust practitioners; see Jay Modrall, ‘Google/Fitbit – The EU Commission Misses a Step’ (*Competition Law Blog*, 17 June 2021) <<https://competitionlawblog.kluwercompetitionlaw.com/2021/06/17/google-fitbit-the-eu-commission-misses-a-step/>> accessed 25 September 2025.

⁵⁰ Fabio E.G. Röhrer, Lebogang Mateane and Christian R. Proaño, ‘The Perverse Valuation Effect on Mergers and Acquisitions in Europe’ (2025) 142 *Economic Modelling*.

United States (“US”) does not have a single data protection law,⁵¹ even though it remains a big player in the M&A market. In contrast, the US operates under a patchwork of federal and state laws, with regulatory intensity ranging from highly regulated to virtually unregulated domains.⁵²

The EU, another major player in the M&A landscape⁵³, has been selected for analysis in this research because due diligence and post-closing adjustments play a central role in its framework. In contrast, the US jurisdiction, with its fragmented legal regime comprising numerous federal and state laws would not have yielded comparable insights. Furthermore, EU digital assets remain the second largest in the world, accounting for almost 18% of the global transaction volume.⁵⁴

While dealing with competition concerns and the M&A market in the EU, the fact that comes under the limelight is that the Digital Markets Act and the Digital Services Act were adopted in 2022.⁵⁵ The objectives of these are to mention certain behavioural obligations to ensure a level playing field for digital companies and enhance the data protection for users consuming data. Despite these developments, the EU’s framework contains a significant regulatory gap, as evidenced by the Facebook-WhatsApp merger which will be briefly revisited again.

While comparing the mentioned legislations with the Indian scenario, it is highlighted that in an attempt to formulate an ex-ante regulatory toolkit, the Draft Digital Competition Bill 2024 (“DCB”) was proposed by the CDCL.⁵⁶ It aimed at dealing with Systemically Significant Digital Enterprises (“SSDEs”) their obligations, and the enforcement mechanisms among other aspects.⁵⁷ While the EU’s DMA and DSA impose prescriptive obligations on designated gatekeepers, such as fair treatment of business users, prohibitions on self-preferencing, and open app ecosystems, the draft DCB mirrors these features in the Indian context but with its

⁵¹ Scott Loughlin, ‘The value of data assets in a US M&A deal: three key questions to ask’ (*Financier Worldwide*, March 2014) <<https://www.financierworldwide.com/the-value-of-data-assets-in-a-us-ma-deal-three-key-questions-to-ask>> accessed 25 September 2025.

⁵² Id.

⁵³ Fraser Tennant, ‘US and Europe M&A hits 10-year high’ (*Financier Worldwide*, July 2017) <<https://www.financierworldwide.com/us-and-europe-ma-hits-10-year-high>> accessed 25 September 2025.

⁵⁴ William E. Turner II et al., ‘Blockchain & Cryptocurrency Laws and Regulations 2025’ (*Global Legal Insight*, 25 Oct 2024) <[https://www.globallegalinsights.com/practice-areas/blockchain-cryptocurrency-laws-and-regulations/digital-asset-mergers-and-acquisitions/#:~:text=The%20EU%20digital%20assets%20market,the%20United%20States%20\(US\)](https://www.globallegalinsights.com/practice-areas/blockchain-cryptocurrency-laws-and-regulations/digital-asset-mergers-and-acquisitions/#:~:text=The%20EU%20digital%20assets%20market,the%20United%20States%20(US)>)> accessed 25 September 2025.

⁵⁵ Martin Bechtold and others, ‘Data as an asset part two: Digital markets in M&A - friend or foe?’ (*Lexology*, 1 December 2022) <<https://www.lexology.com/library/detail.aspx?g=ec3f6ba9-685a-443e-8dcd-6b94130973b1>> accessed 25 September 2025.

⁵⁶ CDCL Report.

⁵⁷ Anush Ganesh, Mohit Yadav and Gaurav Pathak, ‘The Indian draft digital competition bill and report: a critical perspective’ (2024) 9 *Indian Law Review*.

own institutional contours: for instance, empowering the CCI exclusively with regulatory and adjudicative authority,⁵⁸ unlike the EU model, where DG-COMP and DG-CONNECT share regulatory powers.⁵⁹

While corporate data assets still lack a holistic definition, newer regulations like the Markets in Crypto-Assets Regulation and the Artificial Intelligence Act, 2023 offer legal certainty for certain intangible assets held by businesses and financial institutions.⁶⁰ However, the noteworthy fact is that the valuation of data in the EU still remains ambiguous, underscoring the broader challenge of defining “data as an asset,” even in a developed economy. This lack of clarity raises concerns about entities gaining disproportionate market power, further emphasising the relevance of this research.

In the European Commission’s decision in the Facebook-WhatsApp merger, privacy concerns were deemed outside the scope of competition law and instead assigned to data protection authorities, reflecting a clear division of regulatory competence.

“Any privacy-related concerns flowing from the increased concentration of data within the control of Facebook as a result of the Transaction do not fall within the scope of the EU competition law rules but within the scope of the EU data protection rules.”⁶¹

While it was recognised that the Facebook-WhatsApp deal could cause ‘*lasting damage to competition*’, the deal was given regulatory approvals only after analysing the restrictions put on access to the combined data of the two entities and analysing the risk to new entrants.⁶² Hence, the impact of data in competition law has been duly recognised in this case, as well as the deal where Microsoft acquired Skype.⁶³

⁵⁸ Id.

⁵⁹ Michael Dietrich, Nelson Jung and Ashwin van Rooijen, ‘How to comply with current digital regulation in Europe’ (*Global Competition Law Review*, 2 October 2024) <<https://globalcompetitionreview.com/guide/digital-markets-guide/fourth-edition/article/how-comply-current-digital-regulation-in-europe>> accessed 25 September 2025.

⁶⁰ Maria Lillà Montagnani, Marie-Claire Najjar and Antonio Davola, ‘The EU Regulatory approach(es) to AI liability, and its Application to the financial services market’ (2024) 53 *Computer Law & Security Review*; See also Tina van der Linden and Tina Shirazi, ‘Markets in crypto-assets regulation: Does it provide legal certainty and increase adoption of crypto-assets?’ (2023) 9 *Financial Innovation*.

⁶¹ *Facebook/WhatsApp* [2014] COMP/M.7217 (European Commission) para 164; For the criticism that both the EU Commission and the US Federal Trade Commission have underestimated the ‘true’ value of data, see, Ariel Ezrachi, *EU Competition: An Analytical Guide to the Leading Cases* (Oxford, Hart Publishing, Bloomsbury, 5th ed, 2016), p. 454; However, the approach of the competition watchdogs has shifted globally since this transaction see *Facebook* [2024] B6-22/16 (Bundeskartellamt); see also *Facebook Inc v. Competition Commission Of India* [2022] SCC Online Del 3146.

⁶² *Facebook/WhatsApp* [2014] COMP/M.7217 (European Commission).

⁶³ *Microsoft/Skype* [2011] COMP/M.6281 (European Commission).

Even landmark cases like Google Shopping⁶⁴ show that without structural reform or market redesign, abuse of data-driven dominance remains resilient.⁶⁵

The need thus arises for institutional collaboration to bridge the gap between privacy law and competition enforcement. Without this coordination, efforts to curb excessive data concentration through merger control or antitrust measures risk being fragmented and ineffective.⁶⁶

Shifting the discussion to another facet of the EU's regulatory framework, for the competition concerns, the regulatory authorities have proceeded cautiously with the EU competition policy.⁶⁷ EU regulators have attempted to balance growing digital dominance with legacy antitrust principles.⁶⁸ However, apart from the positives in the data and competition sector of the EU, there remains a blind eye towards Big Tech companies acquiring smaller, data-heavy firms. This shortcoming is observed both in India and in the developed jurisdiction of the EU.

While the EU offers valuable lessons in data privacy legislation, the potential competitive risks posed by data consolidation by Big Tech through *Killer Acquisitions* remain largely unaddressed in both India and the EU. This highlights the need for collective action to prevent market dominance from being misused.

III. VALUATION OF DATA FOR CREATION OF DATA-SPECIFIC THRESHOLD

The core issue in proposing a data threshold under the Merger Control Regime is how to accurately quantify and evaluate an enterprise's data for threshold determination. This question is positioned on the presumption that data may not be evaluated in a conventional way.⁶⁹ Nevertheless, evaluating or quantifying such assets as data or information is complex in itself.⁷⁰ Thus, if a threshold is to be implemented, then that has to be done along with specific guidelines

⁶⁴ *Google and Alphabet v. Commission* (Case C-48/22 P) (European Court of Justice).

⁶⁵ The Commission's prolonged enforcement and lack of structural change allowed Google to maintain its dominant position, underscoring how piecemeal interventions fail to neutralise entrenched power when not complemented by market reorganisation or structural remedies, See also Anush Ganesh (n 47).

⁶⁶ *Id.*

⁶⁷ Anca D. Chirita (n 7).

⁶⁸ Václav Šmejkal, 'Competition law and the social market economy goal of the EU' (2015) 1(1) *International Comparative Jurisprudence*.

⁶⁹ Mike Fleckenstein, Ali Obaidi, and Nektaria Tryfona, 'A Review of Data Valuation Approaches and Building and Scoring a Data Valuation Model' (2023) 5(1) *Harvard Data Science Review*

<<https://hdr.mitpress.mit.edu/pub/1qxrknig/release/1>> accessed 25 September 2025.

⁷⁰ Tony O'Brien, "'Accounting' for Data Quality in Enterprise Systems" (2015) 64 *Procedia Computer Science*.

for data valuation. Otherwise, there can be a plausible scenario of undervaluation of data to evade such threshold, the threat of which is not rare in anti-trust jurisprudence.⁷¹

In this instant section, the initial sub-sections will deal with the process through which any data assets can be identified and subsequent data value creation. The further sub-sections shall discuss specific frameworks which have been gathered from our investigation of literature and other secondary sources. As the researchers propose a specific framework for valuing an enterprise's data to support the creation of a data threshold, the final sub-section seeks to substantiate this framework by outlining the corresponding suggestions and future implications advanced through this research.

A. Identifying Data Assets

While data can efficiently generate gains for organisations⁷², its increased use compels us to put it into an economic framework that allows for measurement and analysis. Data is theorised as an intangible asset⁷³ even though its potential may not be fully realised.⁷⁴

Many enterprises fail to recognise data assets and the underlying factors impacting their value.⁷⁵ Hence, the first step in this widespread 'data-driven' framework is to identify the data assets and determine the scope of its economic contribution.⁷⁶ The second step is to use the appropriate method and sources available to calculate the value of *data capital*. The final step would be to enhance the value of data.⁷⁷

⁷¹ Nandish Vyas and Geet Sawhney, 'CCI'S Guidance on Calculation of Turnover' (*CPI's Asia Column*, January 2019) <<https://www.competitionpolicyinternational.com/wp-content/uploads/2019/01/Asia-Column-January-2019-Full.pdf>> accessed 25 September 2025.

⁷² Andrei Hagiu and Julian Wright, 'When Data Creates Competitive Advantage' (*Harvard Business Review*, February 2020) <<https://hbr.org/2020/01/when-data-creates-competitive-advantage>> accessed 25 September 2025.

⁷³ Feng Xiong and others, 'Recognition and Evaluation of Data as Intangible Assets' (2022) 12(2) Sage Open <<https://journals.sagepub.com/doi/full/10.1177/21582440221094600>> accessed 25 September 2025.

⁷⁴ Deloitte "Understanding the value of your data assets" (*Deloitte*) <<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Finance/Valuation-Data-Digital.pdf>> accessed 25 September 2025.

⁷⁵ Alasdair Anderson, 'Companies Aren't 'Owning' Their Data' (*Technative*) <<https://technative.io/companies-arent-owning-their-data/>> accessed 25 September 2025.

⁷⁶ David Willans and Owen Cox, 'Understanding Data As An Asset | What Kind Of Asset Is Data?' (*Anmut*, February 2024) <<https://www.anmut.co.uk/to-manage-data-as-an-asset-you-need-to-know-what-kind-of-asset-data-is/>> accessed 25 September 2025.

⁷⁷ Deloitte (n 74).

The value blueprint that this research puts forward takes inspiration from the OECD working paper on Measuring data as an asset⁷⁸ while providing a fresh perspective on how this valuation might be used in calculating the Deal Value under the Combination Regulations 2024.

B. Data Value Creation

Data value creation is the step which needs to be streamlined before the valuing of data. The preliminary step involves identifying data in forms such as raw records, databases, and other forms of data intelligence.⁷⁹ Data stores and databases primarily constitute a company's intangible capital.⁸⁰ However, the most valuable asset, data intelligence, is derived from investments in modern digital business practices and engineering-driven systems that transform raw data into actionable value.⁸¹ Thus, value creation generates data which can be measured and is capable of generating value.⁸² Data valuation depends on certain attributes that aid its assessment, such as data quality, targetability, source, audience coverage, market demand, and, most importantly, the uniqueness of the data.

Furthermore, some datasets lack clear classification for context-dependent data, which may command different pricing in specific transactions, such as sensitive data transfers. As a result, such data might be valued differently by various data valuers and regulators, posing additional challenges.⁸³ Hence, this gives rise to the need to measure data on specific frameworks, which is elaborated in the next sub-subsection.

C. Methodologies Of Data Measurement And Data Valuation

The next step is to determine the appropriate method for data measurement. This can be based on three approaches⁸⁴: *a.* Estimation based on individual firm valuations; *b.* Estimation based

⁷⁸ Carol Corrado, Jonathan Haskel and Massimiliano Iommi, 'Measuring data as an asset: Framework, methods and preliminary estimates' (2022) OECD Economics Department Working Papers No. 1731 <<https://dx.doi.org/10.1787/b840fb01-en>> accessed 25 September 2025.

⁷⁹ Carol Corrado, Jonathan Haskel and Cecilia Jona-Lasinio, 'Artificial intelligence and productivity: an intangible assets approach' (2021) 37(3) Oxford University Press and Oxford Review of Economic Policy Limited.

⁸⁰ Carol Corrado and others, 'Data, Intangible Capital, and Productivity' (NBER/CRIW Conference on Technology, Productivity, and Economic Growth, March 2022) <<https://www.nber.org/system/files/chapters/c14737/c14737.pdf>> accessed 25 September 2025.

⁸¹ Carol Corrado and others, 'The value of data in digital-based business models: Measurement and economic policy implications' (2022) OECD Economics Department Working Papers, No. 1723 <<https://doi.org/10.1787/d960a10c-en>> accessed 25 September 2025

⁸² Deloitte (n 74)

⁸³ David Nguyen and Marta Paczos, 'Measuring the economic value of data and cross-border data flows: A business perspective' (2020) OECD Digital Economy Papers, No. 297 <<https://doi.org/10.1787/6345995e-en>> accessed 25 September 2025

⁸⁴ Carol Corrado (n 78).

on individual consumer valuations; *c.* Estimation based on sector economic costs. For an M&A transaction, the approach to be utilised, as suggested by the researchers, should be one that covers all the digitised information of the company and thus, valuation based on individual firm valuations would yield the most accurate results. For such estimates, the first type of valuation concerns the ‘*Business Reporting Method*’, which uses the following traditional valuation methods⁸⁵-

1. Discounted Cash Flow (Intrinsic Value): This measures the incremental cash flow that data is expected to generate in the future.
2. Market Approach (Relative Value): This measures the value of a given data using comparison with another data whose value is observable in the active market.
3. Cost approach: This measures the value of data asset as the cost of replicating the data or its utility.

i. The reach for the rising Sun: Understanding Walmart’s acquisition of a controlling stake in Flipkart

To understand this scenario in the Indian context, the discussion will focus on the acquisition of a controlling stake, amounting to almost 77% of Flipkart by Walmart. This deal, which took place in 2018, was by far the largest transaction in the history of the online retail space globally.⁸⁶ The regulatory watchdog, CCI, via an order dated August 8, 2018, analysed this proposed acquisition amounting to a whopping USD 16 billion.⁸⁷ CCI, while analysing the potential symbiotic benefits received by both parties, *viz.* Walmart (a subsidiary of Walmart Inc.) and Flipkart (principally an investment holding company incorporated in Singapore) considered the fact that Walmart sought to enter the third-largest market in the world after the US and China.⁸⁸ Pursuant to Section 6(1) of the 2002 Act, CCI was required to examine any AAEC that the proposed combination might cause. However, surprisingly, without delving deeply into the potential accumulation of data resulting from the merger, CCI approved the deal, thereby creating a mirage, one it eventually had to investigate, as explained below.

⁸⁵ Carol Corrado (n 80).

⁸⁶ Sandeep Pachpande, Asha Pachpande and J A Kulkarni, ‘The ‘Walkart’ of India: A Case Study on Walmart-Flipkart Merger’ (2022) 1 Indian Business Case Studies <<https://doi.org/10.1093/oso/9780192869371.003.0017>> accessed 25 September 2025.

⁸⁷ Wal-Mart International Holdings, In re, 2018 SCC OnLine CCI 103.

⁸⁸ *Id.*

The CCI in its order stated that the proposed combination and the issues surrounding common customers of Flipkart was unlikely to alter any competition dynamics that existed back then.⁸⁹ Furthermore, interestingly, while it was asserted that CCI deliberated on the representations by stakeholders for and against the proposed combination but held that “..the instrument of Regulation of Combinations cannot address these and different policy and legal instruments maybe taken recourse to”⁹⁰

As fate had it, the legal recourse was taken. In a report, merely after 2 years of the proposed combination, on August 9, 2020, CCI brought out local antitrust violations by Walmart-controlled Flipkart.⁹¹ CCI prepared a 1,696-page report that highlighted various anti-competitive practices indulged in by Flipkart. The relevance of this case to our argument is simple: while Walmart benefited from the extensive customer database of Flipkart, it benefited from a world-class supply chain infrastructure of the likes of Walmart.⁹² (ibid ox)

At this point, it becomes pertinent to understand the interplay of data assets of Flipkart in this deal. It needs to be appreciated that Flipkart had a loss in valuation before the deal materialised which was to the tune of 75%. (ibid ox) In other words, for a 77% stake in Flipkart, Walmart paid around USD 16 Billion which was a 75% increase from its previous valuation. The stock market respond critically to this move, since the stock price of Walmart fell almost 4.2% in a matter of few hours after its deal was announced around May 9, 2018.⁹³ The saga continues further, since, as per the 2019 annual report of Walmart, USD 13 billion was included in the deal price as a premium, presumably for Flipkart’s goodwill, or its standing in the Indian retail e-commerce space. Now, even if it is argued that the data set of Flipkart, which encompasses consumer behaviour, preference among other parameters, the annual report further stated that Walmart’s management assessment took note of the *intangible assets and goodwill*. This means that intangible assets and goodwill was separately accounted for and did play a role, arguably

⁸⁹ CCI pointed out “... In other words, the issues about common customers of Flipkart are not directly or indirectly related to the Proposed Combination and thus, the same is not likely to alter the competition dynamics as it exists today.” See id at para 14.

⁹⁰ Id, para 15.

⁹¹ *Delhi Vyapar Mahasangh v. Flipkart Internet Private Limited* [2020] SCC OnLine CCI 3.

⁹² Sandeep Pachpande (n 86).

⁹³ Matthew Boyle and Saritha Rai, ‘Walmart Falls After \$16 Billion Flipkart Deal’ (*Bloomberg*, 9 May, 2018) <<https://www.bloomberg.com/news/articles/2018-05-09/walmart-to-buy-77-percent-of-india-s-flipkart-for-16-billion>> accessed 25 July 2025.

a major role considering the declining financial performance of Flipkart, in the whopping deal value, which is suggested by experts as very highly valued.⁹⁴

The Business Reporting Method can be forth as a useful way to determine the value role of data valuation in such a deal. It is noteworthy that immense cash flow will occur in the online marketplace after this deal, especially since Walmart has increased its stake in Flipkart to over 80%.⁹⁵ Therefore, the contrast between target asset value and acquisition consideration in Indian digital M&A illustrates the regulatory blind spot. Flipkart's net assets and annual revenues in 2018 were far below the USD 16 billion paid by Walmart, a premium overwhelmingly driven by platform data, user base, and ecosystem value.⁹⁶

Applying the Business Reporting Method to this deal would have forced the disclosure and quantification of these data assets: the number of active users, the depth of transaction records, and algorithmic assets.

This brings us to the second valuation method, the revenue-based approach, which was suggested by Nguyen and Paczos⁹⁷ and aims to measure the value of data based on *'the revenue shares driven by data monetisation across different types of firms.'* This valuation approach distinguished two main categories of business models: data-enhanced and data-enabled.

This approach relies on assumptions about business models across various sectors and analyses them to estimate data value at an industry level. However, obtaining accurate results would require continuous efforts from national statistical institutes, including unbiased, ad-hoc economic surveys conducted nationwide. Hence, the core limitation stems from the complexity and variability of business models, and different sectors, such as retail, healthcare, tech, and financial services, monetise data in divergent ways, ranging from direct sales to the use of data as an embedded lever for efficiency, innovation, or customer targeting.⁹⁸ This is only possible

⁹⁴ Beena Saraswathy, 'The Flipkart-Walmart Deal in India: A Look into Competition and Other Related Issues' (2019) 64(1) *The Antitrust Bulletin* <<https://doi.org/10.1177/0003603X18823619>> accessed 25 July 2025.

⁹⁵ Sandeep Pachpande (n 86); see also 'India's Flipkart to get \$600 mln from Walmart under new fundraise' (*Reuters*, 21 December 2023) <<https://www.reuters.com/business/retail-consumer/indias-flipkart-get-600-mln-walmart-under-new-fundraise-2023-12-21/>> accessed 25 July 2025.

⁹⁶ Beena Saraswathy (n 94).

⁹⁷ Data monetisation refers to the ways in which businesses turn their collected data into income; whether by selling or licensing data, offering new data-based products, or using insights from data to boost sales of existing goods or services. In Nguyen & Paczos's framework, this encompasses both direct revenue through explicit data sales and indirect revenue gained by enhancing business performance using data analytics; see David Nguyen (n 83).

⁹⁸ Kirtida Naik and Abhijit Joshi, 'Role of Big Data in various sectors' (2017 International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud), Palladam, India) <<https://doi.org/10.1109/I-SMAC.2017.8058321>> accessed 25 July 2025.

if national statistical institutes, such as the National Statistical Institute of India, along with CCI, conduct frequent, unbiased economic surveys designed to capture not just traditional financials but also granular detail on data-related activities, monetisation practices, and indirect value creation.⁹⁹

Thus, in practical terms, the revenue-based valuation method appears elegant in theory but is deeply constrained by the lack of infrastructure and coordinated data collection in India.

The third approach is the depreciation-based approach, where Coyle and Li¹⁰⁰ suggest a demand-size method that captures the difference between stocks of organisational capital based on before-entry and after-entry depreciation rates.¹⁰¹ This gap shows the loss a firm faces when it fails to use data to keep up with changes caused by the introduction of an online platform. The impact of the entry of one entity on existing firms can thus be measured using this approach.

Additionally, other valuation approaches, such as the Multi-Period Excess Earnings Method¹⁰² and the With-and-Without Method¹⁰³ for data valuation, largely converge with the methodologies previously discussed.

To take an example, the With and Without Method can be understood in brief with the Walmart-Flipkart deal. The 10 Crore registered user base of Flipkart would surely be an asset for Walmart.¹⁰⁴ Access to consumer data will naturally allow retailers to personalise their offerings, such as tailoring purchase recommendations, setting prices based on a consumer's willingness

⁹⁹ David Nguyen (n 83).

¹⁰⁰ Diane Coyle and Wendy Li, 'The Data Economy: Market Size and Global Trade' (36th IARIW Virtual General Conference, August 2021) <https://iariw.org/wp-content/uploads/2021/08/coyle_li_paper.pdf> accessed 25 September 2025.

¹⁰¹ This method treats data-derived knowledge or "organizational capital" as an asset that loses value faster when disrupted by new data-driven entrants. By comparing the before-entry and after-entry depreciation rates of this capital, one can estimate how much incumbents lose (and thus would pay) due to not leveraging data; See id.

¹⁰² Antonella Puca and Mark L. Zyla, 'The Intangible Valuation Renaissance: Five Methods' (*CFA Institute*, 11 January 2019) <<https://blogs.cfainstitute.org/investor/2019/01/11/a-renaissance-in-intangible-valuation-five-methods/>> accessed 25 September 2025.

¹⁰³ The Multi-Period Excess Earnings Method estimates a data asset's value by isolating its future cash flows after accounting for supporting assets, while the With-and-Without Method assesses the asset's worth by comparing the firm's projected value with and without its use; see Revelate, 'An Introduction to Data Valuation and Its Importance' (*Revelate*, 18 May 2023) <<https://revelate.co/blog/data-valuation/#:~:text=The%20With%20and%20Without%20Method,can%20be%20removed%20or%20replaced>> accessed 25 September 2025.

¹⁰⁴ Beena Saraswathy (n 94).

to pay, and more, highlighting the strong impact of a two-way data channel between Walmart and Flipkart.¹⁰⁵ This analysis, regrettably, was not taken up by CCI.¹⁰⁶

ii. *Tata neu: A neu reckoning with the old data-driven strategy!*

A further direct response to the Walmart–Flipkart deal was seen in 2021, when Tata Digital acquired BigBasket in a bid to enter the consumer retail space.¹⁰⁷ Seen by some as a highly valued acquisition,¹⁰⁸ BigBasket was acquired by Tata Sons (the holding company of Tata Digital) via a CCI order dated April 28, 2021¹⁰⁹ to boost its digital presence at a time when both Img¹¹⁰ and Curefit¹¹¹ were also acquired by the same company to give direct competition to Reliance Retail and Flipkart.¹¹² The three acquisitions, along with other digital services, were integrated in April 2022 as Tata Digital geared up to consolidate its digital offerings through the launch of Tata Neu.¹¹³ Tata Neu is not simply a digital platform aggregating various Tata brands in one place; rather, it functions as an integrated ecosystem that delivers a data-driven experience to consumers across multiple touchpoints. In simpler terms, it is an integrated powerhouse of data.

The current discussion focuses on the fact that while the revenue of BigBasket at time of acquisition was around USD 600 Million,¹¹⁴ Tata Digital acquired a 64.3% stake for double the consideration, at around USD 1.3 Billion, thus valuing the e-grocery startup at close to \$1.85 billion.¹¹⁵ While the premium paid in this case was not as much as in the previously stated

¹⁰⁵ Org. for Econ. Cooperation & Dev., Implications of E-Commerce for Competition Policy, DAF/COMP(2018)3 (2018); see also Smita Francis, Evolution of Technology in the Digital Arena: Theories, Firm Level Strategies and State Policies, CWS/WP/200/47, Centre for WTO Studies, Indian Institute of Foreign Trade (2018).

¹⁰⁶ Beena Saraswathy (n 94).

¹⁰⁷ ‘India’s Tata buys majority stake in online grocer BigBasket’ (*Reuters*, 28 May 2021) <<https://www.reuters.com/world/india/indias-tata-buys-majority-stake-online-grocer-big-basket-2021-05-28/>> accessed 25 July 2025.

¹⁰⁸ Arpita Srivastava and V. Sharma (2024). Strategic Alliances in E-Commerce: Lessons from the Big Basket-Tata Digital Merger. In: Garg, L., Kesswani, N., Brigui, I., Dewangan, B.K., Shukla, R.N., Sisodia, D.S. (eds) AI Technologies for Information Systems and Management Science. ISMS 2023. Lecture Notes in Networks and Systems, vol 1071. Springer, Cham. <https://doi.org/10.1007/978-3-031-66410-6_43> accessed 25 July 2025.

¹⁰⁹ Tata Digital Limited, CCI, Combination Reg. No. C-2021/03/822 (28 April 2021).

¹¹⁰ ‘104th Annual Report 2021-2022’ (*Tata Sons Private Limited*) <<https://www.tata.com/content/dam/tata/pdf/fy22/Tata-Sons-Annual-Report-FY22.pdf>> accessed 25 September 2025.

¹¹¹ *Id.*

¹¹² ‘Tata Digital Elephant can dance’ (*JM Financial*, 3 June 2022) <https://jmflresearch.com/JMnew/JMCRM/analystreports/pdf/%5BJMFL%5D%20Internet_Sector%20Update_Tata_Digital_03June2022.pdf> accessed 25 September 2025.

¹¹³ ‘Press Release India logs into Tata’s super-app, Tata Neu’ (*Tata*, April 07, 2022) <<https://www.tata.com/newsroom/business/tata-neu>> accessed 25 September 2025.

¹¹⁴ Sudam Majhi, ‘Valuation Gaps and Strategic Premiums in Indian Tech M&As (2020–2024)’ (2025) 13(1) *Artha* <<https://www.iimcal.ac.in/FinLab/email-template14/pdf/Sudam-Majhi.pdf>> accessed 25 September 2025.

¹¹⁵ *Id.*

Flipkart-Walmart deal, it can be appreciated that this was a strategic move to make good of BigBasket's already existing customer base, a pre-built supply chain, and last-mile delivery infrastructure, all essential for e-commerce growth.¹¹⁶

BigBasket's journey pre and post the merger share a similar pattern wherein, a huge customer database based on a learning first mechanism was set up in 2019 when BigBasket earned the status of a 'unicorn' business.¹¹⁷ The COVID-19 pandemic took a huge toll on BigBasket with around 80% of its employees leaving within the first two days of the lockdown in India in March 2020.¹¹⁸ To add worries, data assets were leaked and personal information of customers in form of data which amounted to over USD 20 million was breached in November 2020 which led to losses for the e-grocery startup showcasing its reliance on the data assets.¹¹⁹

Tata Digital then came up as a helping hand and acquired a majority stake in BigBasket to launch the Tata Neu app. This move significantly strengthened Tata's digital presence across multiple verticals which it lacked to an extent before acquiring BigBasket.¹²⁰ BigBasket, at the time, was already clocking approximately 3,00,000 orders per day.¹²¹

Thus, an application of the With-and-Without Method is quite apparent in this case. If BigBasket's value had been set solely by tangible assets, physical inventory, delivery infrastructure, or short-term cash flows, its standalone pricing would have been significantly lower. However, in practice a 2x premium was paid by Tata Digital as seen above. This premium is directly attributable to BigBasket's extensive digital data assets, its customer purchase histories, behavioral analytics, and advanced supply chain insights. The "without data" scenario reflects a valuation constrained by traditional retail metrics; the "with data" scenario, which Tata adopted, recognized the strategic value of integrating BigBasket's data ecosystem into Tata's digital platform, enabling targeted marketing, personalization, and cross-portfolio synergies.¹²²

To conclude this section, the researchers put forth a corollary: An apparent argument might advocate for bypassing such a complex labyrinth of calculations and instead relying on the

¹¹⁶ Id.

¹¹⁷ Arpita Srivastava (n 108).

¹¹⁸ Id.

¹¹⁹ Id.

¹²⁰ Tata (n 110).

¹²¹ Arpita Srivastava (n 108).

¹²² S. Cem Bahadir, Sundar G. Bharadwaj, and Rajendra K. Srivastava, 'Financial Value of Brands in Mergers and Acquisitions: Is Value in the Eye of the Beholder?' (2008) 72(6) *Journal of Marketing* <<https://doi.org/10.1509/jmkg.72.6.049>> accessed 25 September 2025.

actual consideration paid or received during such data transfers. However, this presents only a keyhole view of the broader reality. This *market price* valuation method poses greater challenges than its seemingly straightforward calculations suggest. In India, determining a well-defined market space for many types of data and the lack of updated information sources make this approach futile. This is because, India lacks well-defined ‘relevant markets’ for data types, making it challenging to identify true substitutes or comparable products.¹²³ The CCI encountered difficulties in delineating precise online and offline market boundaries for digital goods.¹²⁴

D. Substantiating the Proposed Framework

As a consequence of the increasing digital space; deals where platforms are valued primarily for their user and transactional data, rather than their immediate earnings, may escape effective scrutiny under current merger controls as explained from the Zomato-Blinkit deal below. The proposition suggests the necessity for both data-specific thresholds and clearer revenue-attribution regimes within Indian competition policy, aligning with the approach proposed by Nguyen and Paczos for the current digital economy.

It is suggested that a *merger* between the traditional approach, viz., Business Reporting Method and the Depreciation-Based or the With-and-Without Method, can be used to value the data of each amalgamating entity. This helps identify and evaluate their data assets before eventual consolidation. This suggestion takes note of the fact that high fluctuations in terms of the development of technology in the market or the market demand itself can drive data valuation. The suggested method would be analysed from the Indian example of Zomato acquiring Blinkit. Zomato (now Eternal) completed the acquisition of Blinkit in 2022.¹²⁵ The deal value which was for around USD 568 Million had around USD 428 Million paid for identifiable net tangible, intangible assets and recognition of goodwill as per Independent Auditor’s Report for Financial Year 2021-22.¹²⁶

¹²³ Simran Dhir, Akshat Kulshrestha and Anuja Agrawal, ‘Digital Markets Must be Defined Well for Competition Regulation’ (*S&R Associates*, 19 May 2022) <<https://www.snrlaw.in/digital-markets-must-be-defined-well-for-competition-regulation/>> accessed 25 September 2025.

¹²⁴ Id.

¹²⁵ ‘Annual Report 2022-2023’ (*Zomato Private Limited*) <https://b.zmtcdn.com/investor-relations/Zomato_Annual_Report_2022-23.pdf> accessed 25 September 2025.

¹²⁶ Id.

Interestingly, this deal for expansion of quick commerce business was put out for Blinkit which, in 2022, clocked revenue to the tune of USD 310 Million with losses around USD 63 Million.¹²⁷ A premium was paid by Zomato to arguably for the operational and supply chain success of Blinkit which included Gross Order Value (“GOV”) of around USD 46 Million; stronghold of around 4000 third party supervised Stock Keeping Units (“SKUs”); scaled-up business; relationships with third party brands and sellers; warehouse & dark store network among other points and particularly the ‘intangible assets’ which would’ve costed a lot more if Zomato built it in house. All these claims were made to a public disclosure to the shareholders of Zomato on June 24, 2022 by the Chief Executive Officer, Deepinder Goel and Chief Financial Officer, Akshant Goyal.¹²⁸ While Blinkit’s expansion (which is now expected to scale to 100%+ GOV growth in Financial Year 2026) got fueled from the technical platform architecture of Zomato.¹²⁹

Hence, in order to understand how Business Reporting Method and the Depreciation-Based or the With-and-Without Method benefitted Zomato in its successful acquisition of Blinkit, the proprietary technology of Blinkit is to be understood. In specific of the Business Reporting Method, the three subheads can be understood as under:

1. The Intrinsic Value method values Blinkit by projecting the future cash flows expected from its data-driven operations, such as faster deliveries, lower stock-outs, and improved store throughput, then discounting them to present value.¹³⁰ Blinkit’s proprietary tech, which assimilates customer purchasing data to optimize inventory and store locations, is expected to translate into higher repeat orders, reduced operational costs, and market share gains.¹³¹
2. The Relative Value method uses an approach to adjudge the value of Blinkit’s data compared to its rivals in the quick commerce business. Analytics support the fact that in terms of operating

¹²⁷ Nirmal Sanghi, Krishna Balodi and Vivek Gupta, ‘The emergence of the Indian hyperlocal grocery delivery industry: Dunzo v/s Blinkit’ (2023) 14 Journal of Information Technology Teaching Cases.

¹²⁸ ‘Proposed Acquisition of Blinkit’, (*Zomato Private Limited*) (Sep. 1, 2025, 7:05 PM), <https://b.zmtcdn.com/data/file_assets/1d52976d6c1f4ad9e1a937ceac4d93501680001820.pdf> accessed 25 September 2025.

¹²⁹ Dinesh Prabhu, ‘Network effects under strain: Zomato’s platform model and the tech-driven quest for profitability’ (2025) Journal of Information Technology Teaching Cases.

¹³⁰ Id.

¹³¹ Id.

revenues, Blinkit is a more prominent player than the immediate competitors such as Dunzo¹³² and Instamart.¹³³

3. The cost approach for Blinkit estimates what it would take for a competitor to recreate its entire data and technology infrastructure from scratch. Since Blinkit’s core value lies in years of accumulated purchase patterns, optimized logistics, and proprietary technology, the cost and complexity of duplicating these assets is immense, justifying a high valuation which is strengthened by its deep understanding of product-supply chains.¹³⁴ This includes critical processes such as warehousing, movement of goods from warehouses to dark stores, inventory monitoring across multiple locations, and the efficient picking and packing of orders. Further bolstering its operational strength is Blinkit’s proprietary tech stack, purpose-built for seamless supply chain management. In addition, its extensive experience in merchandising and established relationships with numerous brands and third-party suppliers significantly reduces time to market and enhances supply-side efficiency.¹³⁵

	zomato	blinkit	
 Sourcing		✓	Blinkit's relationships with third party brands and other sellers
 Dark store network		✓	Blinkit's existing large network of dark stores (~3k sqft. each) and warehouses
 Last-mile delivery	✓		Zomato's hyperlocal network of 316,000 delivery partners across 1,000+ towns and cities ¹⁾
 Low CAC ²⁾	✓		Zomato's large and engaged base of ~15.7 million ¹⁾ average monthly transacting customers
 Repeat behavior	✓	✓	Integrated membership program will encourage repeat behaviour across both platforms
 Robust tech stack		✓	Blinkit's tech stack for end-to-end first-mile to last-mile operations

Notes:
 1) Data as of Q4FY22
 2) CAC = customer acquisition cost

Fig 1: Success factors concerning quick commerce¹³⁶

¹³² Nirmal Sangi (n 127).

¹³³ John Bissell, 'Blinkit, Zepto, Swiggy: A brief history of quick commerce, its rise, impact, and possible future in India', (*Indian Express*, 27 July 2025) <[https:// indianexpress. com/article/ expl ained/explained-economics/history-of-quick-commerce-future-in-india-10152934/](https://indianexpress.com/article/explained/explained-economics/history-of-quick-commerce-future-in-india-10152934/)> accessed 25 September 2025.

¹³⁴ Dinesh Prabhu (n 129).

¹³⁵ Id.

¹³⁶ Zomato (n 128).

For the With-and-Without approach, the proposition that needs to be considered is that while Zomato acknowledged the growth of quick commerce platforms¹³⁷, without the leveraged supply chain and operational efficiency of Blinkit, it would have faced significant difficulties in getting things going initially. That's when Blinkit's rapid grocery delivery arm demonstrated its potential by leveraging the same microservices pattern with real-time inventory management¹³⁸

However, even after this near-perfect symphony between Zomato and Blinkit, CCI's approval was not taken in this case, whereby the de-minimums exemption was made use of¹³⁹, highlighting the fact that significant data-centric and operational consolidations can escape competition review when they do not cross traditional asset or turnover thresholds. Hence, this research contends that the examples of Walmart-Flipkart, Tata-BigBasket, and Zomato-Blinkit should not be labelled as simply "overvalued" transactions. Rather, they illustrate a paradigm where Indian acquirers and investors recognized the transformative potential of data assets and integrated digital capabilities.

The *Business Reporting Method* would provide a structured way to assess data in combination while individually highlighting the market-based value and expected returns and partially capturing the synergistic impact of the deal. To enhance this evaluation, the depreciation-based method or the With-and-Without method can be used to assess the impact of data consolidation. By comparing scenarios where incoming data is included, versus those without it, these methods help quantify the true value of data. This approach is particularly relevant for disruptive businesses, as seen in the case of Airbnb, which transformed the market by leveraging data in unprecedented ways.¹⁴⁰ It is noteworthy that the revenue method is not feasible in the case of India due to limited resources within the current administration.¹⁴¹

¹³⁷ Zomato (n 125).

¹³⁸ 'Annual Report 2024-2025' (*Eternal Limited*) <https://b.zmtcdn.com/investor-relations/Eternal_Annual_Report_2024-25.pdf> accessed 25 September 2025.

¹³⁹ Sidharth Chauhan and Dhruv Mehta, 'Deal Value Threshold and M&A: A Competition Law Analysis' 69 (2024) *Antitrust Bulletin*.

¹⁴⁰ Coyle and Li employed their model to assess the impact of Airbnb's entry on existing hospitality firms. Their findings revealed a substantial data market in the global hospitality sector, valued at USD 43 billion in 2018, with a remarkable average annual growth rate of 35% - effectively doubling in size every three years; See Diane Coyle (n 100) .

¹⁴¹ This approach relies on assumptions about business models across various sectors and analyses them to estimate data value at an industry level. However, obtaining accurate results would require continuous efforts from national statistical institutes, including unbiased, ad-hoc economic surveys conducted nationwide. Hence, until CCI and the National Statistical Institute jointly collaborate to conduct periodic surveys, such an evaluative method would only look good in theory. See David Nguyen (n 83).

So far, it is clear that valuation lies in the eye of the beholder, whose vision assesses the potential of data. A study on brand value in the merger control regime further supports this contention.¹⁴² This study concluded that both acquirer and target characteristics are important in determining the value attributed to the target firm's brand value. Market capability, diversity, and accessibility are critical factors in shaping the valuation of a company during M&A Transactions. These attributes positively influence the perceived strategic value and competitive positioning of the target firm. Moreover, target companies possessing a broad and diverse brand portfolio tend to command higher valuations, as acquirers recognize the enhanced brand equity and market reach such diversity confers.¹⁴³

There are different ways to enhance the valuation of an M&A transaction, which brings us to the final step: enhancing the value of data assets. Highlighting key forecasts and valuation inputs can help in enhancing the value of data assets. Another way to boost the data assets is through consolidation of data and forecasting alternative or parallel business models that may effectuate after integration of the data assets of the amalgamating entities; thereby positively impacting scalability. This demonstrates that assessing deal value in Killer Acquisitions requires deeper inquiry beyond surface-level financial metrics.

To understand the enhancement of value of data assets in the Indian context, the acquisition of Dineout by Swiggy in May 2022 can also be considered to understand the metrics. While the deal value was in absentia from the Annual Report of Swiggy for Financial year 2022-23,¹⁴⁴ news articles suggest the deal value to be around USD 120 Million.¹⁴⁵ Rather than simply broadening Swiggy's service portfolio, the deal allowed for the unifying of Swiggy's online delivery datasets with Dineout's reservoir of 50,000 plus consumer dining preferences, reservation histories, and restaurant partner analytics.¹⁴⁶ This data consolidation enabled Swiggy to extend the reach of its digital platform beyond food delivery, offering personalized dining and reservation experiences while empowering restaurant partners through greater

¹⁴² S. Cem Bahadir, Sundar G. Bharadwaj, and Rajendra K. Srivastava, 'Financial Value of Brands in Mergers and Acquisitions: Is Value in the Eye of the Beholder?' (2008) 72(6) *Journal of Marketing* <<https://doi.org/10.1509/jmkg.72.6.049>> accessed 25 September 2025.

¹⁴³ Id.

¹⁴⁴ 'Annual Report 2022-2023' (*Swiggy Private Limited*) <<https://www.swiggy.com/corporate/wp-content/uploads/2024/10/Annual-Report-2022-2023.pdf>> accessed 25 September 2025.

¹⁴⁵ 'Swiggy buys Dineout from Times Internet in \$120 million all-stock deal' (*Economic Times*, 13 May 2022) <<https://economictimes.indiatimes.com/tech/startups/swiggy-acquires-restaurant-booking-platform-dineout/articleshow/91539111.cms?from=mdr>> accessed 25 September 2025.

¹⁴⁶ Brian Ammann, 'Swiggy announces acquisition of Dineout' (*Swiggy Diaries*, 13 May 2022) <<https://blog.swiggy.com/news/swiggy-announces-acquisition-of-dineout/>> accessed 25 September 2025.

visibility and targeted customer engagement.¹⁴⁷ Following the acquisition, Swiggy could cross-leverage Dineout’s technology and restaurant partnerships to create ecosystem for both dine-in and delivery markets, reinforce user loyalty through its “Swiggy One” membership, and unlock new revenue streams via targeted promotions and unified digital campaigns.¹⁴⁸

As argued repetitively- a *plain vanilla* DVT needs to be reformed with an added layer of data threshold as valued by leveraging a conjoint approach of the *Business Reporting Method* and *With-and-Without Method*. Keeping the discussion of this section in mind, we will proceed to our penultimate section of this research, which includes suggestions.

E. Implementation roadmap and future considerations

The CLRC Report explicitly suggested that many acquisitions derive their value from data rather than tangible assets; entities may be valuable not only for the revenue they generate but also for their user base or innovation.¹⁴⁹ Although, aligning with our argument, the recommendation that followed from CRLC Report fell short, by solely focusing on transaction size, thereby overlooking the potential for competition abuse arising from *Killer Acquisitions* of the nascent stage in the digital market. Regrettably, CDCL was also unable to capture a similar threat to digital competition.¹⁵⁰

The researchers are of the opinion that this research offers practical suggestions for data thresholds in digital markets. The proposed valuation framework has been applied to analyse Airbnb’s impact on existing hospitality firms and decipher TikTok’s algorithm to attract new users.¹⁵¹ Having a robust framework where data thresholds are leveraged, something even established markets like the EU currently lack, would enable the CCI to proactively flag over- or under-valued data. This, in turn, would allow timely intervention in transactions that may harm the natural competition in the market. The Commissioner for Competition suggested that

¹⁴⁷ Id.

¹⁴⁸ ‘Initiating Coverage Swiggy’, (*HDFC Securities*, 13 November 2024) <[https:// www.hdfcsec.com/hsl.docs//Swiggy%20-%20IC%20-%20HSIE-202411131836302964167.pdf](https://www.hdfcsec.com/hsl.docs//Swiggy%20-%20IC%20-%20HSIE-202411131836302964167.pdf)> accessed 25 September 2025.

¹⁴⁹ CLRC Report, para 5.3.

¹⁵⁰ See CDCL report at para 3.34; Similarly, while the DVT under the Competition Act, 2023 aims to address killer acquisitions, the CDCL deliberately chose to exclude mergers and acquisitions from the scope of ex-ante obligations in the Draft Digital Competition Bill, 2024. This leaves a regulatory gap. Nascent digital acquisitions, especially of innovation-rich startups, can still escape timely scrutiny, undermining CDCL’s proposed preventive framework.

¹⁵¹ Diane Coyle (n 100).

*“controlling a large amount of data shouldn’t become a way to shut rivals out of the market.”*¹⁵²

However, this statement was made in the EU context, extrapolating it to India raises the obvious question: What constitutes a large amount of data?

This presents an opportunity to explore the specifics of the proposed reform in greater detail. While a framework for outlining the quantification of data within an enterprise has been put forth, the researchers did not suggest a precise threshold for its implementation. The lack of access to market research data and expertise in economic and technological analysis has been a limitation of this research. Without such expertise, it is arduous to suggest a precise threshold. Given these constraints, it remains up to the antitrust watchdog to examine the feasibility of defining a precise data threshold using the valuation methods proposed in this research. Hopefully, this paper serves as a useful foundation for further academic inquiry and policy discussions in this evolving area of competition law. However, before delving into such further developments, the immediate priority for digital antitrust regulation is to clearly delineate the scope of applicability within the legal and policy framework. This has been discussed in the subsequent paragraph.

One aspect that is deliberately not touched upon in this research and kept outside the purview is the definition of data and treatment of the different kinds of data under India’s Competition Law Regime, or any global competition law regime. Without a clear legal definition of what constitutes “data” under antitrust laws, advocating for a sophisticated data threshold in the merger notification regime may prove ineffective. Thus, another suggestion emerging from this research is that the legislature should define the scope of “data” under antitrust regulations. This is since merely specifying a threshold like the DVT may not suffice when the larger objective is to regulate India’s digital economy, where data-heavy M&A transactions are likely to become increasingly common.

CONCLUSION

Interestingly, while data is everywhere, the data on ‘*data*’ is not. Data of an enterprise might be subsumed in other intangible assets which are not explicitly identified, let alone quantified, for the purpose of an M&A transaction. Hence, amalgamating entities might find a way to bypass the threshold by concealing the true value drivers within layers of data. While a separate

¹⁵² ‘Data shouldn’t be used to shut out rivals, Vestager says’ (*MLex*, 7 November 2017) <[https:// www.mlex.com/mlex/articles/2203284/data-shouldn-t-be-used-to-shut-out-rivals-vestager-says](https://www.mlex.com/mlex/articles/2203284/data-shouldn-t-be-used-to-shut-out-rivals-vestager-says)> accessed 25 September 2025.

data threshold may add to regulatory burden, it offers a critical safeguard against the harms of Killer Acquisitions. This additional layer of scrutiny may become the necessary evil, which is the need of the hour.

Digital disruptions have a detrimental impact on the realm of Competition Law and Policy,¹⁵³ and the consolidation of large data might unleash a Chimera with far-reaching effects on the economy at multiple levels.¹⁵⁴ The traditional methods of evaluating data are futile in the current digital age since competition increasingly revolves around user engagements and network traffic rather than direct monetary transactions.¹⁵⁵ Hence, what may superficially appear to be zero-price products actually generate significant value through user engagement and cookie-based tracking. In many cases, these intangible data assets may even exceed the value of the realised or tangible assets.¹⁵⁶ Thus, there is a need to consider M&A transactions through a separate lens that gives importance to the value of data operating behind the scenes. Unless India proactively implements a data-driven merger control mechanism, the digital market will continue to evolve beyond the reach of its antitrust regulators. The researchers thus conclude that data is the missing link to achieve the aspired objective of India's D-linked Deal Value Threshold.

¹⁵³ Nick McHugh and Dietrich Marquardt, 'Digital disruption of competition law: Rethinking market definition' (*Norton Rose Fulbright*, February 2022) <[https:// www.Nortonrosefulbright.com/en/knowledge/publications/0bf4d27a/digital-disruption-of-competition-law-rethinking-market-definition](https://www.Nortonrosefulbright.com/en/knowledge/publications/0bf4d27a/digital-disruption-of-competition-law-rethinking-market-definition)> accessed 25 September 2025.

¹⁵⁴ Yan Carrière-Swallow and Vikram Haksar, 'The Economics of Data' (*IMF Blog*, 23 September 2019) <<https://www.imf.org/en/Blogs/Articles/2019/09/23/the-economics-of-data>> accessed 25 September 2025.

¹⁵⁵ Burton Ong and Ding Jun Toh, 'Digital Dominance and Social Media Platforms: Are Competition Authorities Up to the Task?' (2023) 54 *International Review of Intellectual Property and Competition Law*.

¹⁵⁶ Emmanuel Bagna and others, 'Intangible assets and firm performance: The relative effects of recognized and unrecognized assets' (2024), 10(3) *Journal Of Open Innovation: Technology, Market, And Complexity* <<https://doi.org/10.1016/j.joitmc.2024.100356>> accessed 25 September 2025.

CROSS-MARKET MANIPULATION IN INDIA FROM THE LENS OF JANE STREET'S INTERIM ORDER

- Manya Gupta*

ABSTRACT

*Financial markets today operate in an intricate ecosystem of interconnected instruments and cross-border flows of capital. Within this framework, the risk of market abuse has evolved beyond traditional notions of price rigging or insider dealing, giving rise to increasingly sophisticated forms of manipulation that exploit market linkages themselves. Cross-market manipulation epitomises this evolution, as traders strategically deploy uneconomic or loss-making trades in one segment to influence prices in another, creating distortions that undermine investor confidence and the integrity of the market. It is among the most complex and insidious forms of securities fraud, characterised by trades in one market, often uneconomic, loss-making, or otherwise irrational, designed to distort the price of a correlated instrument in another market where the manipulator holds a disproportionately profitable position. This paper offers a comparative analysis of the legal frameworks governing such conduct in the U.S. and India, focusing particularly on the Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations, 2003 (“**PFUTP Regulations**”). Drawing upon leading U.S. enforcement actions and Indian precedents such as *SEBI v. Rakhi Trading*, this paper demonstrates a similar reliance on factors like trading pattern, circumstantial evidence and economic rationality analysis, yet highlights sharp doctrinal divergences. The paper further examines this from the lens of SEBI’s recent interim order against Jane Street Group, a landmark incident alleging cross-market manipulation of the BANK NIFTY index and derivatives markets, as a case study illustrating the convergence of these factors through its “pump-and-dump” strategy. By synthesising U.S. and Indian enforcement philosophies, this study underscores the need for a proactive,*

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deterrence-oriented regulatory enforcement to safeguard market integrity in an increasingly algorithmic and globally interconnected securities market.

Keywords: Cross-market manipulation, SEBI, Jane Street, PFUTP Regulations, artificial price formation, inducement, Intra-day Index Manipulation.

I. INTRODUCTION

Modern securities markets operate as highly integrated ecosystems where price movements in one segment, such as the cash market, ripple across derivatives markets through arbitrage linkages, hedging strategies, and portfolio adjustments.¹ This intricate inter-market connectivity enhances liquidity and facilitates price discovery, but it also exposes markets to sophisticated forms of abuse. Among these is cross-market manipulation, a trading strategy in which a participant executes uneconomic or aggressive transactions in one market called the “operant instrument” with the objective to distort prices and derive gains from a corresponding position in another market called the “profit instrument.”² While such schemes often resemble legitimate arbitrage in form, they fundamentally undermine the integrity of market pricing by substituting natural market forces with artificial distortions. It’s difficult to trace these practices since the cause-and-effect relation appears more attenuated, as the trades occur on entirely different markets.³

The Securities and Exchange Board of India’s (“SEBI”) interim order of 3rd July 2025 against Jane Street Group and its affiliates (“Jane Street” or “JS Group”) illustrates the growing regulatory challenges posed by such practices.⁴ In its order, SEBI alleged that Jane Street engaged in manipulative transactions in BANKNIFTY constituents and index derivatives, thereby breaching Regulations 3(a)-(d), 4(1), 4(2)(a), and 4(2)(e) of the SEBI (Prohibition of

¹ Aroonim Bhuyan, ‘How F&O activity impacts the market’ *The Economic Times* (India, 14 February 2005) https://economictimes.indiatimes.com/how-fo-activity-impacts-the-market/articleshow/1019820.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst accessed 6 September 2025.

² Tony Sio, ‘Regulatory Roundup: The Mechanics of Cross-Market Manipulation and Lessons from a Real-World Case’ (*Nasdaq*, 10 October 2024) <<https://www.nasdaq.com/articles/regulatory-roundup-september-2024>> accessed 6 September 2025.

³ Joseph Zabel, ‘Rethinking Open- and Cross-Market Manipulation Enforcement’ (2020) 15 VLBR 417, 436 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3682103> accessed 6 September 2025.

⁴ Securities and Exchange Board of India, ‘Interim Order in the Matter of Index Manipulation by Jane Street Group’ (2025) <https://www.sebi.gov.in/enforcement/orders/jul-2025/interim-order-in-the-matter-of-index-manipulation-by-jane-street-group_95040.html> 6 September 2025.

Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations, 2003 (“**PFUTP Regulations**”). According to SEBI, these trades created artificial price movements in the cash and futures markets, enabling the firm to reap disproportionate profits from its dominant position in the options market.

The immediate fallout of this enforcement action was striking because India’s options market, being the largest in the world owing to heightened retail participation and the rise of high-frequency trading in index and stock options currently, experienced a dramatic contraction. Weekly turnover plummeted to ₹45,884 crore⁵, representing a staggering 78% decline compared to July 2024.⁶ This sharp reduction in liquidity underscores the chilling effect that regulatory interventions can have on institutional market makers and proprietary trading firms such as Jane Street, raising concerns about the long-term vibrancy of India’s fast-growing derivatives ecosystem.⁷

The Jane Street case also brings to the fore a central challenge faced by regulators globally: distinguishing manipulative conduct from legitimate market activity in a trading environment dominated by complex, algorithm-driven strategies. Both the United States and India have responded to this challenge by developing doctrinal tools that rely on circumstantial evidence, trading patterns, and economic rationality analysis to infer manipulative intent. This paper situates SEBI’s approach in Jane Street within that comparative context, demonstrating its coherence with U.S. jurisprudence while highlighting its robust foundation in the Indian Supreme Court’s expansive interpretation of the PFUTP Regulations.

II. INTRODUCTION TO JURISPRUDENTIAL REASONING

Cross-market manipulation cases occupy a unique position at the intersection of law and market microstructure. These cases often involve sophisticated trading strategies that exploit arbitrage

⁵ Ruchit Purohit, ‘Jane Street crackdown by SEBI impacts India’s options market volumes’ *CNBC TV 18* (India, 11 July 2025) <<https://www.cnbtv18.com/market/jane-street-sebi-crackdown-india-options-market-volume-turnover-derivatives-impact-nse-bse-19635476.htm>> 6 September 2025.

⁶ Anand James, ‘Market watchlist: F&O volumes plunge on SEBI’s Jane Street ban; RIL, Adani Enterprises, JSW Steel & 6 stocks in spotlight’ (*Financial Express*, 14 July 2025) <<https://www.financialexpress.com/market/market-watchlist-f-o-volumes-plunge-on-sebis-jane-street-ban-ril-adani-enterprises-jsw-steel-6-stocks-in-spotlight-3912803/>> accessed 6 September 2025.

⁷ **Andy Mukherjee**, ‘Jane Street Shows Dangers of Treating Finance as ‘Shampoo Sachet’ (*Business Standard*, 8 July 2025) https://www.business-standard.com/markets/news/jane-street-shows-dangers-of-treating-finance-as-shampoo-sachet-125070800385_1.html accessed 6 September 2025.

linkages between the cash and derivatives markets. Because both legitimate arbitrage and market manipulation may appear identical in form, such as featuring simultaneous trades, opposite positions, and rapid reversals, regulators face an evidentiary challenge in distinguishing lawful conduct from manipulation.⁸ Both U.S. and Indian jurisprudence have addressed this challenge by emphasizing circumstantial reasoning, economic analysis, and inference of intent from trading patterns rather than relying on direct evidence of collusion or fraudulent intent.

In the U.S., manipulation jurisprudence rests on a fraud-based framework that requires scienter (intent to deceive or manipulate), while India's regulatory framework adopts a flexible, investor-protection-oriented approach, focusing on artificiality, inducement, and a civil standard of proof. Both regimes, however, share key analytical tools, including identifying uneconomic trading in one market instrument (the "operant instrument"), establishing causality between the operant and profit instruments, and examining timing patterns around critical windows such as market opening, closing, or expiry.

The Jane Street case provides an ideal lens through which these principles can be examined in practice. SEBI has alleged that Jane Street, a global proprietary trading firm, engaged in manipulative activity across the cash and derivatives segments of the Indian market, generating artificial price movements in BANKNIFTY constituent stocks to profit from dominant short-volatility positions in index options. Jane Street has defended its actions as "basic index arbitrage," arguing that it merely exploited natural discrepancies between the price of BANKNIFTY index options and the implied value of its constituent stocks. The question, therefore, is whether Jane Street's trades constitute legitimate arbitrage or a manipulative scheme under the SEBI PFUTP Regulations.

III. U.S. STANCE ON CROSS-MARKET MANIPULATION

In the United States, cross-market manipulation is governed primarily by Section 9(a)(2) of the Securities Exchange Act of 1934, which prohibits trades designed to create a false appearance of market activity, and Rule 10b-5, which broadly forbids deceptive schemes.⁹ Both the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) enforce these provisions, often borrowing reasoning from other regulatory contexts,

⁸ *Zabel* (n 4).

⁹ Securities Exchange Act of 1934, 15 U.S.C. s 9(a)(2), s 42.

such as energy market manipulation cases under the Federal Energy Regulatory Commission (FERC). Although scienter is a formal requirement, courts recognize that intent can rarely be established through direct evidence. Instead, they allow it to be inferred from circumstantial factors, such as trading patterns, market structure, and economic logic.¹⁰

In *SEC v. Lek Securities Corp.*,¹¹ the traders executed simultaneous transactions in the cash and options markets, systematically incurring losses in one instrument to secure gains in another. The court's reasoning rested on several interconnected factors that, taken together, demonstrated manipulative intent. The trades exhibited a clear two-instrument architecture, with activity in both the stock and options markets designed to interact with one another. These trades were simultaneous and carried no overnight exposure, as all positions were opened and closed within a single trading day, signalling a focus on short-term price movements rather than genuine investment. The stock trades in the operant instrument were demonstrably uneconomic and loss-making when considered in isolation, but they made sense only when viewed alongside the substantial profits generated in the options market.¹² Further, the trades showed remarkable scale and concentration, identifying multiple transactions responsible for 95% of the relevant options volume.¹³ This scale amplified the likelihood of price influence and revealed that the trades were not incidental. The SEC also established causation, showing that the stock transactions were timed and structured to move option prices in a manner favourable to the trader's existing positions, since it profited enough (\$28 million) through its options trading.¹⁴ Finally, the defendants failed to provide a credible hedging rationale; their arguments of "price discovery" and hedging were dismissed as pretextual.¹⁵ The SEC's methodology relied heavily on granular trade-level data and econometric evidence, intraday reversals, and temporal overlap, ultimately linking profitability in one instrument to deliberate losses in another.¹⁶

Similarly, in *In the Matter of Davis Ramsey*,¹⁷ the CFTC uncovered a cross-market manipulation scheme involving binary contracts on Nadex, whose settlement values depended

¹⁰ *Zabel* (n 4).

¹¹ *SEC v. Lek Sec. Corp.*, No. 17-CV-1789, 276 F. Supp. 3d 49 (SDNY 2017).

¹² *Id* at 2.

¹³ *SEC v. Lek Sec. Corp.*, 370 F. Supp. 3d 384, 397 (SDNY 2019).

¹⁴ *Id* at 2–3.

¹⁵ *Id* at 2.

¹⁶ *Zabel* (n 4).

¹⁷ CFTC, *In the Matter of: Davis Ramsey*, CFTC Docket No.: 18-49, September 27, 2018.

on futures prices on the CME.¹⁸ Ramsey took positions in binary contracts and then strategically traded the underlying futures contracts immediately before expiration, deliberately influencing settlement values to make his binaries expire in-the-money.¹⁹ The CFTC emphasized the timing and precision of Ramsey’s trades, noting that his futures orders were carefully placed during the narrow settlement window to impact the reference price. Unlike the broader, large-scale manipulation in *Lek Securities*, Ramsey’s conduct relied on small but highly targeted orders rather than massive volume, revealing that market influence could be achieved through order placement strategy rather than sheer size.²⁰ The case highlighted how intent was inferred from the deliberate design of the trades: Ramsey’s pre-existing exposure in binary contracts and his last-minute trading in related futures demonstrated a calculated plan to move prices artificially.²¹ This decision illustrates the regulator’s willingness to treat even low-volume, narrowly focused manipulations as serious violations, emphasizing that timing, settlement price targeting, and the structure of positions can independently establish culpability without requiring extensive volume or obvious losses in one instrument. The *Ramsey* case illustrates cross-market manipulation where trades in CME futures (operant instrument) were used to influence the settlement of Nadex binary contracts (profit instrument). This setup mirrors schemes in the cash–derivatives nexus, where spot market trades distort derivative prices or vice versa. The key factor is the explicit pricing linkage between markets, enabling manipulation across them. It demonstrates that cross-market strategies exploit inter-market dependencies regardless of the instrument type.

Lastly, FERC²² precedents reinforce this reasoning, holding that opportunistic behaviour around sensitive market windows, such as settlement periods, can itself serve as circumstantial proof of intent. Collectively, U.S. law has developed a coherent standard that focuses on economic irrationality, causality between market instruments, temporal clustering of trades, and scienter, which may be inferred rather than directly demonstrated.²³ Particularly significant is FERC’s focus on “indifference to profitability,” where traders accept persistent losses in one market to advantage another position, revealing that the trades were not for profit but for strategic price influence.²⁴ Studies these enforcement tools, identifying “uneconomic trading”

¹⁸ Id at 2.

¹⁹ Id.

²⁰ Id.

²¹ Id at 4.

²² Prohibition of Energy Market Manipulation, 71 Fed. Reg. 4244 (26 January 2006).

²³ *Etracom LLC*, 155 FERC ¶ 61,284, at 40 (2016); *Barclays Bank PLC*, 144 FERC ¶ 61,041, at 5–6, 21–22 (2013).

²⁴ *Zabel* (n 4).

as a hallmark of manipulation, where participants buy high or sell low to engineer price dynamics, often exploiting strike-price scenarios.²⁵ These insights validate the reliance on profitability and rationality tests, showing that methodologies first honed in energy manipulation cases now form the foundation for detecting cross-market manipulation in derivatives markets.

IV. INDIA'S INTERPRETATION OF CROSS-MARKET MANIPULATION

The PFUTP Regulations are drafted to be preventive rather than merely punitive. Regulation 3 prohibits fraudulent or deceptive practices, Regulation 4(1) forbids manipulative or unfair trade practices²⁶, Regulation 4(2)(a) criminalises trades that create a false or misleading appearance of trading²⁷, and Regulation 4(2)(e) directly addresses price manipulation.²⁸ The Supreme Court of India has repeatedly clarified that *mens rea* is not a prerequisite under PFUTP Regulations.²⁹ Instead, the focus is on whether the conduct subverts ethical standards, price discovery, and investor confidence.

In *Ketan Parekh v. SEBI*³⁰, the Court articulated that synchronized or circular trading is not per se illegal but becomes fraudulent when deployed to manipulate prices, volumes, or market perception. The Court held that intent could be inferred circumstantially, recognising the inherent challenges in gathering direct evidence in complex financial markets. It emphasised that “a trade practice is broadly unfair if the conduct undermines the ethical standards and good faith dealings between parties engaged in business transactions,”³¹ thereby lowering the evidentiary burden and strengthening SEBI’s ability to intervene swiftly. Similarly, in *Kishore R. Ajmera v. SEBI*³², the Court underscored that circumstantial evidence, such as reversal trades with large price variations absent corresponding market movements, was sufficient to prove manipulation. The Court reaffirmed that SEBI proceedings operate on a “preponderance of

²⁵ Douglas Cumming, Shan Ji, Carlo Sala, ‘Option Market Manipulation’ (*S&P Global Intelligence*, 13 December 2024) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5022346> 6 September 2025.

²⁶ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices Relating to Securities Market) Regulations, 2003, S.O. 816 (E), reg 4(1).

²⁷ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices Relating to Securities Market) Regulations, 2003, S.O. 816 (E), reg 4(2)(a).

²⁸ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices Relating to Securities Market) Regulations, 2003, S.O. 816 (E), reg 4(2)(e).

²⁹ *SEBI v. Kanaiyalal Baldevbhai Patel*, (2017) 15 SCC 1.

³⁰ *Ketan Parekh v. SEBI*, [2006] SAT 221.

³¹ *Id.*

³² *SEBI v. Kishore R. Ajmera*, (2016) 6 SCC 368.

probabilities” standard, recognising the asymmetry between sophisticated market participants and regulators.³³

The court in *SEBI v Rakhi Trading*³⁴ decision further clarified the regulatory stance in derivatives markets, observing that synchronized or reversal trades in futures and options (F&O) markets could distort price discovery mechanisms.³⁵ While the SAT noted that derivatives differ from cash markets because they do not involve physical delivery³⁶, it nevertheless held that repeated and uneconomic trades designed to influence settlement values, which involved constant loss-making,³⁷ constituted manipulation irrespective of the market they operate in.

Taken together, these rulings build a jurisprudence where SEBI is empowered to rely on patterns of artificiality, circumstantial evidence, and market concentration metrics to infer intent and take preventive action. This reflects a deliberate policy choice to protect India’s rapidly expanding, retail-driven securities market, which is particularly vulnerable to sophisticated manipulative schemes. Comparing the two jurisdictions reveals convergence in analytical reasoning but divergence in philosophy. Both systems, the US and India, rely heavily on economic analysis, timing, and market impact studies, acknowledging that circumstantial inference is essential in detecting sophisticated manipulation. Yet U.S. law maintains a stricter evidentiary threshold through the scienter requirement, whereas India’s approach is preventive and interventionist, giving regulators flexibility to prioritize market integrity.

V. APPLICATION OF JURISPRUDENTIAL INTERPRETATION OF CROSS-MARKET MANIPULATION ON JANE STREET CASE

A comparative application of U.S. and Indian indicia of manipulation to SEBI’s allegations against Jane Street reveals a strong prima facie case of cross-market manipulation. At the heart of SEBI’s findings is a two-instrument structure: an “operant” instrument consisting of aggressive purchases of BANK NIFTY constituent stocks and index futures early in the trading day, and a “profit” instrument comprising disproportionately large bearish positions in index options, long puts and short calls, designed to profit from subsequent price reversals under its

³³ Id.

³⁴ *SEBI v. Rakhi Trading (P) Ltd.*, (2018) 13 SCC 753.

³⁵ Id at 26.

³⁶ Id.

³⁷ Id.

Intra-day Index Manipulation strategy.³⁸ This structure closely aligns with the manipulative schemes analysed in *Lek Securities*, where targeted trades in one market were executed with precision to influence the settlement prices of related derivatives, and in *Ketan Parekh*, where circular trading in equities was used to create artificial prices to benefit linked positions. Both jurisdictions recognise that an artificial price condition created in one market to generate profits in another strongly supports an inference of manipulation.

SEBI's analysis of Jane Street's uneconomic trading behaviour further strengthens its case as it notes that the operant cash and futures trades were consistently loss-making in isolation³⁹ and that the firm's derivatives exposure was over seven times larger than its cash/futures exposure, suggesting that the primary purpose of the cash trades was not profit but to move the index.⁴⁰ Indian courts have repeatedly treated such uneconomic behaviour as a hallmark of manipulation; in *Rakhi Trading*, SAT concluded that loss-making, repetitive derivative trades with no change in beneficial ownership were non-genuine and designed to distort price discovery.⁴¹ Similarly, *Ajmera* reaffirmed that circumstantial evidence, such as uneconomic reversals, suffices to infer fraudulent intent under SEBI PFUTP Regulations.⁴² U.S. regulators adopt a similar view in parallel: in *Lek Securities* and *Ramsey*, economic irrationality in the manipulative instrument through executing trades at a loss to influence prices elsewhere was used to prove scienter. Jane Street's pattern of executing trades without regard for profitability echoes this standard, suggesting that its trades served as a price lever rather than legitimate hedging or arbitrage. For SEBI, arbitrage trading would mean buying the same stock or its derivative equivalent in a market where it is cheaper and selling it where it is expensive. But what SEBI is arguing with granular data is that Jane Street didn't merely take opposite positions in the cash and options markets; it rather forced the prices of stocks to move in a direction favourable to its positions in the options market and ensure they turned profitable.⁴³

The temporal concentration of Jane Street's activity, particularly the "Extended Marking the Close" strategy, provides further indicia of manipulation. SEBI's order alleges that Jane Street

³⁸ *Mukherjee* (n 8).

³⁹ Lee Ying Lee, 'When does arbitrage become market manipulation? India crackdown brings issue into focus' (*CNBC*, 18 July 2025) <<https://www.cnbc.com/2025/07/18/jane-street-sebi-arbitrage-become-market-manipulation-mens-re-derivative-india-markets.html>> accessed 6 September 2025.

⁴⁰ Khushboo Tiwari, 'Jane Street calls Sebi order 'fundamentally mistaken' over allegations' (*Business Standard*, 9 July 2025) <https://www.business-standard.com/markets/news/jane-street-sebi-order-fundamentally-mistaken-july-2025-125070801283_1.html> accessed 6 September 2025.

⁴¹ *SEBI v. Rakhi Trading (P) Ltd.*, (2018) 13 SCC 753.

⁴² *SEBI v. Kishore R. Ajmera*, (2016) 6 SCC 368.

⁴³ *Tiwari* (n 41).

placed large sell orders in the final 30–60 minutes of trading to depress the BANK NIFTY closing price, a tactic with outsized influence on derivative settlements.⁴⁴ By exerting heavy downward pressure through last-minute sell orders, it succeeded in driving down the closing price of the index, even in the absence of legitimate market forces justifying such movement.⁴⁵ Courts in both jurisdictions consider concentrated settlement-window activity as highly probative of intent. In *Rakhi Trading*, SAT highlighted that repeated, timed trades in derivatives can undermine market forces and deprive investors of fair participation.⁴⁶

Jane Street’s market dominance further supports SEBI’s allegations. With a 15–25% share of the total traded value during the relevant periods, which amount to three to four times that of the next-largest trader, Jane Street’s ability to influence prices was significant.⁴⁷ Both Indian and U.S. jurisprudence treat concentration metrics as critical. In *Ketan Parekh*, the Court inferred manipulative intent from the scale and timing of trades, while U.S. regulators often rely on market share analyses to establish that a participant had the capacity to cause price movements, as seen in *Lek Securities*. SEBI’s findings that cash-market movements engineered by Jane Street directly correlated with changes in options premiums further substantiate the causality relation to prove the impact of position in the case market on the derivatives segment. The synchronous price movements, where call premiums fell and put premiums rose during index declines⁴⁸, mirror the analytical methods used in U.S. enforcement, which often employ event studies and statistical modelling to demonstrate abnormal returns linked to suspect trades. The alleged inducement of investor behaviour is particularly significant under Indian law, which presumes inducement once manipulation is established.⁴⁹ SEBI argued that Jane Street’s early-session bullish trades created a misleading sense of market sentiment, encouraging retail participants to take options positions, only for the firm to reverse its trades and profit from their losses. This mirrors SAT’s reasoning in *Rakhi Trading*, where manipulative conduct was

⁴⁴ Lath Vekatesh, ‘Why Jane Street’s ‘Basic Arbitrage’ Defence Doesn’t Wash’ (*Money Control*, 24 July 2025) <<https://www.moneycontrol.com/news/business/markets/why-jane-streets-basic-arbitrage-defence-doesnt-wash-13272848.html>> accessed 6 September 2025.

⁴⁵ Securities and Exchange Board of India, ‘Interim Order in the Matter of Index Manipulation by Jane Street Group’ (2025) <https://www.sebi.gov.in/enforcement/orders/jul-2025/interim-order-in-the-matter-of-index-manipulation-by-jane-street-group_95040.html> accessed 6 September 2025.

⁴⁶ *SEBI v. Rakhi Trading (P) Ltd.*, (2018) 13 SCC 753.

⁴⁷ *Vekatesh* (n 45).

⁴⁸ Securities and Exchange Board of India, ‘Interim Order in the Matter of Index Manipulation by Jane Street Group’ (2025), <https://www.sebi.gov.in/enforcement/orders/jul-2025/interim-order-in-the-matter-of-index-manipulation-by-jane-street-group_95040.html> accessed 6 September 2025.

⁴⁹ *SEBI v. Rakhi Trading (P) Ltd.*, (2018) 13 SCC 753.

deemed to deprive other market players of meaningful participation by distorting natural price formation.⁵⁰

Jane Street's principal defence, that it was engaging in legitimate index arbitrage, is unpersuasive when viewed through comparative jurisprudence. Both Indian and U.S. law accept arbitrage as lawful, but when the arbitrageur manufactures the very price divergence it exploits, the strategy becomes manipulative.⁵¹ This principle was clearly articulated in *Ketan Parekh*, where the Court noted that trades executed with the "object of creating artificial prices with a view to induce others" are inherently fraudulent. U.S. regulators take a similar stance, rejecting arbitrage defences when manipulative conduct is concealed within complex strategies, as illustrated in *Ramsey*. SEBI's findings of repeated expiry-day concentration, massive derivatives exposure, and deliberate evasion of FPI restrictions through local brokers further undermine Jane Street's claim of legitimate arbitrage.⁵²

Taken together, the evidence SEBI has presented satisfies the PFUTP standard of fraud and unfair trade practice, which requires proof of artificiality and inducement on a balance of probabilities rather than direct evidence of intent.⁵³ Indian courts have explicitly lowered the burden of proof, allowing circumstantial evidence to suffice in cases of market manipulation. Under U.S. standards, while the evidentiary threshold is higher, Jane Street's pattern of uneconomic trading, market dominance, temporal concentration, and cross-market causality would strongly support a finding of scienter. Thus, the case exemplifies how Indian law's preventive orientation enables swift enforcement in a high-frequency trading environment, while simultaneously demonstrating that the same conduct would meet U.S. manipulation criteria under a more rigorous evidentiary framework.

VI. CONCLUSION

The Jane Street episode offers a compelling illustration of the evolving challenges faced by securities regulators in an increasingly interconnected and algorithmically driven market. Cross-market manipulation, by its very design, exploits the structural linkages between cash,

⁵⁰ *id.*

⁵¹ *Ketan Parekh v. SEBI*, [2006] SAT 221.

⁵² Securities and Exchange Board of India, 'Interim Order in the Matter of Index Manipulation by Jane Street Group' (2025) <https://www.sebi.gov.in/enforcement/orders/jul-2025/interim-order-in-the-matter-of-index-manipulation-by-jane-street-group_95040.html> accessed 6 September 2025.

⁵³ Securities and Exchange Board of India (Prohibition of Fraudulent and Unfair Trade Practices Relating to Securities Market) Regulations, 2003, S.O. 816 (E), reg 4(1).

futures, and options segments, eroding price discovery and undermining investor confidence. Both U.S. and Indian jurisprudence have, over time, articulated sophisticated tests to distinguish legitimate arbitrage and hedging strategies from manipulative conduct.

SEBI's interim order against Jane Street demonstrates a strategic alignment with jurisprudential principles, effectively blending U.S. based data-driven evidence gathering with India's emphasis on pre-emptive regulatory action. The order's focus on uneconomic trading patterns, expiry-day price concentration, and market share dominance reflects an understanding that manipulation in today's markets often takes subtle, systemic forms, amplified by high-frequency trading and global proprietary strategies. To translate this analytical framework into a durable enforcement strategy, SEBI should adopt a multipronged approach, similar to a profitability analysis, which will help demonstrate the economic irrationality of the operant instrument, reinforcing the inference of manipulative intent.

Jane Street case underscores the need for structural reforms to pre-empt future manipulation on a broader regulatory level. SEBI should codify its indicia of cross-market manipulation in formal guidance, offering clarity to market participants and harmonising enforcement expectations with global norms. Enhanced algorithmic audit requirements, automated exposure-ratio surveillance, and standardised event-study toolkits would allow regulators to act with both precision and speed. Given the increasing globalisation of algorithmic trading, SEBI should strengthen international cooperation with peer regulators to ensure access to data and coordinated enforcement against cross-border trading firms.

Ultimately, India's preventive, effects-based approach to market manipulation, when reinforced by rigorous evidentiary practices drawn from U.S. enforcement, offers a model for regulating complex and highly liquid derivatives markets. The Jane Street investigation has already demonstrated SEBI's willingness to assert its regulatory authority in the face of sophisticated trading strategies, as evidenced by the chilling effect on derivatives turnover following its interim order. By consolidating doctrinal clarity, technological capability, and cross-border cooperation, SEBI can set a global benchmark for protecting market integrity while preserving India's status as one of the world's largest and most dynamic derivatives markets. The case thus represents not merely an isolated enforcement action but a pivotal moment in the evolution of securities regulation, marking India's transition into a jurisdiction capable of addressing high-frequency, cross-market manipulation with sophistication and resolve.

OVERLOOKED VEHICLES: RECOVERING REGULATORY PROTECTION FOR ANGEL FUNDS UNDER REVISED ANGEL FRAMEWORK

- Piyush Singla*

ABSTRACT

The paper critically examines the status of angel investors under the revised Angel Framework in the Indian Alternative Investment Regulations (AIF), 2012, with a focus on their vulnerability to the claims and safeguards provided by the regulations. The central concern addressed by this paper is that the new regulations, while intensifying institutional compliance and participation thresholds, fail to recalibrate the regulatory safeguards of Angel Funds. It is done by examining the foundational analyses of Angel Investors through the lens of the legislative framework, specifically the 2012 Regime and its subsequent amendments.

Besides showing the regulatory hurdles, the paper also provides a critical analysis of the judicial and regulatory reasoning, which at times has given preference to formal classifications over economic realities. The preceding section to the solutions provides a list of factors, such as accreditation requirements, mandatory lock-in, and the institutionalisation of angel funds without deal-level protections, which, in total, increase the information gap, decrease liquidity, and the investor's power, thus scaring the investor off from early-stage capital markets.

The proposals and exploration of the problems form the most significant part of this paper. Each recommendation is developed within the existing regulatory architecture and is evaluated by balancing regulatory feasibility with substantive fairness, highlighting both its strengths and inherent limitations. The paper proposes to reconceptualise accreditation as recognition of exposure rather than invulnerability, restores proportional alignment between risk-bearing and decision-making authority, and reimagines lock-in obligations as conditional commitments tied to the integrity of disclosed investment premises. This is followed by a section of foreign jurisdictions highlighting a comparative

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analysis to demonstrate that early-stage risk can be accommodated without rendering investors invisible to protection. The paper concludes by arguing that recalibrating the AIF regime to recognise exposure-based vulnerability, rather than presumed sophistication, is essential to preserving the integrity and sustainability of angel investing in India.

Keywords: Angel Investors, Accredited Investors, Alternative Investment Funds, Early-Stage Risk, Investor Protection.

I. INTRODUCTION

India is at the cusp of a revolution of its legal systems, as though the relics of a bygone era are going through a cleansing with the introduction of new legislation founded on new ideals and objectives. As legacy frameworks are progressively recalibrated through new legislation founded on revised ideals of efficiency, formalisation, and systemic oversight. In order to tackle the increasing demand for regulated financial intermediaries and to reduce the lack of transparency in private capital mobilisation, the lawmakers and the regulators have brought in a range of reforms over the past few years. These reforms are meant to formalise the economic spaces that were previously informal. The Digital Personal Data Protection Act, 2023,¹ For instance, was enacted to recognise data as an economic resource that requires structured governance. Equally, the Insolvency and Bankruptcy Code, 2016² Was introduced first to preserve enterprise value and then to discipline credit relationships. Similarly, a regulatory impulse has been working in support of India's early-stage capital access across the board. In response to evolving modes of capital formation and the increasing prominence of private pooled investment vehicles, the Alternative Investment Funds (“AIF”) framework was introduced to regulate forms of capital that did not comfortably fit within the traditional public-private dichotomy.³

The AIF Regulations have significantly altered the ecosystem of early-stage financing by bringing “*Angel Investing*.”⁴ Within an institutional regulatory structure. The regulations have revolutionised the landscape for “*Angel Investors*.”⁵ While this formalisation has

¹ The Digital Personal Data Protection Act, 2023 (22 of 2023).

² The Insolvency and Bankruptcy Code, 2016 (31 of 2016).

³ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012.

⁴ “Angel Investment: Meaning, Working and Types” (*GeeksForGeeks*, 23 July 2025) <[https:// www. Geeks forgeeks.org/finance/angel-investment-meaning-working-and-types/](https://www.geeksforgeeks.org/finance/angel-investment-meaning-working-and-types/)>accessed 5 December 2025).

⁵ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, s 19A (2).

enhanced visibility and governance at the fund level, it has also redefined the position of angel investors participating through “*Angel Funds*”.⁶ The new framework reduces the angel funds and leads to more venture capital funds. This paper seeks to shed light on the manner in which angel investors, despite being central to early-stage enterprise formation, are exposed to structural vulnerabilities under the AIF regime, particularly following recent amendments that restrict participation and recalibrate regulatory protection.

Thereafter, the paper examines the regulatory and procedural framework governing Angel Funds under the AIF Regulations, including their emergence, categorisation, and the compliance architecture applicable to them. This discussion situates angel investing within the broader logic of the AIF regime and explains how institutional discipline has been prioritised over deal-level safeguards. The paper then attempts to critically analyse the consequences of this regulatory design by identifying the key structural challenges faced by angel investors, including accreditation requirements, mandatory lock-in obligations, and the absence of substantive governance and valuation protections. In doing so, the paper highlights the legal and economic assumptions underlying the AIF framework and evaluates their compatibility with the realities of early-stage investing.

This paper attempts to necessitate the need for recalibrating the regulations relating to angel funds and for the success of the same; the paper would also highlight all the tangents that one needs to be familiar with to comprehend the recommendations that have been made. Therefore, it is necessary to offer a brief overview of the fundamental ideas that underpin the regime. Finally, by using comparative insights from other jurisdictions to show how early-stage risk can be accommodated without making angel investors invisible within the regulatory framework, the paper presents calibrated recommendations aimed at addressing investor vulnerability without dismantling the current regulatory architecture.

II. FOUNDATIONAL & REGULATORY FRAMEWORK OF ANGEL FUNDS

The author presents the foundational and regulatory framework for Angel Funds and, consequently, Angel Investors participating through such funds, which is embedded within the core structure of AIF and is not easily alterable. Against this backdrop, *firstly*, the author explains the emergence of Angel Funds. *Secondly*, a distinguishing characteristic of Angel

⁶ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, s 19A (1).

Funds is their transition from a sub-category within Venture Capital Funds to formal recognition under Category 1 of AIF.

A. The Emergence of Angel Funds under the AIF Regime

The integration of Angel Investing into the Alternative Investment Fund framework should be viewed as a regulatory matter rather than an investor-centred one. In the past, Indian securities regulation was centred around a clear dichotomy between public capital markets and private investment arrangements. Strong disclosure requirements and investor protection norms governed public markets, while private investments were mostly subjected to contractual ordering based on the assumption of negotiated parity between the parties. Angel investing was disruptive to this model.⁷ It was considered to be private but was increasingly coming in the form of pooled capital, professional intermediation, repeated investment activities, and growing systemic importance within the startup ecosystem.

The AIF framework, which was introduced in 2012, was a residual regulatory category meant to accommodate non-traditional sources of capital without necessarily imposing public market-style paternalism.⁸ The main aim was not to redistribute the risk between investors and intermediaries but to impose governance discipline, registration supervision, and systemic visibility. Regulation under this framework is vehicle-oriented rather than transaction-oriented.⁹ It wants to regulate how capital is aggregated and managed rather than how individual investment transactions are structured or whether such transactions are substantively fair.

Angel investors put in money at a point when business models are still being tried, the chances of a loss are highest, and there are mostly no means of getting the money back. They do not have the luxury of being able to diversify their investments, negotiate better terms, and use a fixed exit option, as the institutional investors do.¹⁰ At this point, risk is not a result of making a wrong judgment, but it is a characteristic feature of being an early entrant. These truths

⁷ “SEBI AIF Regulations 2012: A Comprehensive Analysis”, (Bhatt & Joshi Associates, May 23,2025) <<https://bhattandjoshiassociates.com/sebi-aif-regulations-2012-a-comprehensive-analysis/>> accessed 10 December 2025.

⁸ Securities and Exchange Board of India (SEBI) (2012). SEBI (Alternative Investment Funds) Regulations, 2012. Gazette of India, Part III, Section 4.

⁹ India REIT Asset Managers v. SEBI. SAT Appeal No. 192 of 2020.

¹⁰ SEBI, “Consultation Paper on review of Regulatory framework for Angel Funds in AIF Regulations” <https://www.sebi.gov.in/reports-and-statistics/reports/nov-2024/consultation-paper-on-review-of-regulatory-framework-for-angel-funds-in-aif-regulations_88449.html >accessed 15 December 2025.

conflict with the assumptions that are part of the AIF framework, which gives importance to procedural governance and institutional compliance over deal-level vulnerability.

The regulatory decision to include angel investment in the AIF framework thus had less to do with investor protection and more with bringing early-stage pooled capital into a regulated area that avoided both unregulated private contracting and the paternalism of public market oversight. By doing so, the law controlled the phenomenon as a whole while leaving the individual exposure of angel investors mostly unregulated.

B. From Sub Categorisation to Category I AIFs

The move of Angel Funds from a sub-categorisation of Venture Capital Funds to Category I Alternative Investment Funds is an example of a change in the regulator's attitude that is very significant.¹¹ Category I AIFs are normally considered to be the instruments that create positive externalities like innovation, entrepreneurship, and economic development. The regulation of Category I AIFs is based on a model in which investors enjoy professional fund management, informed negotiation, and equal learning and power regarding contracts.¹²

However, Angel investors do not easily fit into this model. Their investment is in the very first stage of a business start-up, when the valuation is a mere guess, the protection of the downside is very complicated, and the exit route is very uncertain. Still, the transition treated angel investors as being the same as other participants of Category I and consequently imposed on them compliance requirements such as scheme-based investment structures, accreditation thresholds, and lock-in periods without recalibrating the safeguards for the investor side.¹³

The issue here is not one of misclassification, but of over-equivalence. By incorporating Angel Funds into Category I without changing the underlying protection logic, the law increased the intensity of the formal discipline while the substantive exposure remained the same.

¹¹ Securities and Exchange Board of India, Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128 (10 September 2025) 'Revised regulatory framework for Angel Funds under AIF Regulations' Para 10 <https://www.sebi.gov.in/legal/circulars/sep-2025/revised-regulatory-framework-for-angel-funds-under-aif-regulations_96553.html> accessed 15 December 2025.

¹² SEBI, 'Consultation paper on providing flexibility to AIF to offer Co-Investment opportunities to investors with in the AIF structure under SEBI (Alternative Investment Funds) Regulations, 2012' (9 May, 2025) <https://www.sebi.gov.in/reports-and-statistics/reports/may-2025/consultation-paper-on-providing-flexibility-to-aifs-to-offer-co-investment-opportunities-to-investors-within-the-aif-structure-under-aif-regulations_93883.html> accessed 20 December 2025.

¹³ Securities and Exchange Board of India, Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128 (10 September 2025) 'Revised regulatory framework for Angel Funds under AIF Regulations' <https://www.sebi.gov.in/legal/circulars/sep-2025/revised-regulatory-framework-for-angel-funds-under-aif-regulations_96553.html> accessed 15 December 2025.

Accreditation filters market entry but does not eliminate the disadvantage in information or increase the bargaining power.

Despite this, the regulatory shift to Category I AIFs treated angel funds as though they shared core attributes with other vehicles that attract sophisticated institutional capital. Category I AIF regulation presumes a level of investor sophistication, negotiation capacity, and contractual parity that does not square with the practical characteristics of angel investing. Practical descriptions of angel investing make clear that this is not the case: early-stage capital is often deployed with limited data, evolving business models, and asymmetric access to information. By treating angels as though they operate with the same toolkit as institutional Limited Partners (“LPs”), the regulatory regime reproduces inequality rather than redressing it.

III. STRUCTURAL RISKS IN THE REVISED ANGEL FUNDS FRAMEWORK

A. Accreditation as a Challenge to Angel Investing

As per the amended Angel Fund framework released in September 2025, all investors in Angel Funds will now be accredited investors according to SEBI’s directive.¹⁴ This change has replaced the earlier system of self-declared angel status with a formal accreditation process, verified by an independent agency. The rationale behind this amendment was to plug the holes in the regulation that were caused by unverified investor claims and outdated economic thresholds, which, in turn, made investor protection more difficult and created a situation where not all participants had the required financial strength and sophistication to partake in high-risk early-stage investments.¹⁵ Analytically, this change signifies a shift from a self-attestation-based system to one where participation is contingent upon independently verified financial thresholds and documentation. However, the accreditation requirement, which was aimed at enhancing transparency and providing better regulatory supervision, has also incidentally decreased the number of eligible participants, hence driving capital into fewer, financially

¹⁴ Securities and Exchange Board of India, Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128 (10 September 2025) ‘Revised regulatory framework for Angel Funds under AIF Regulations’ Para 2 <https://www.sebi.gov.in/legal/circulars/sep-2025/revised-regulatory-framework-for-angel-funds-under-aif-regulations_96553.html > accessed 15 December 2025

¹⁵ Vinod Joseph & Paridhi Jain, ‘SEBI issues consultation paper with proposals to amend the regulatory regime for Angel Funds’ (*ELP*, 14 November 2024) <<https://elplaw.in/leadership/sebi-issues-consultation-paper-with-proposals-to-amend-the-regulatory-regime-for-angel-funds/> > accessed 20 December 2025.

accredited investors.¹⁶ And making it possible that the diversity and volume of early-stage investment flows that have been typical of India's angel ecosystem might be reduced.

Accredited investors are a group that is allowed to take part in the regulated securities market, which is done to provide different levels of regulation according to the access granted to the investors.¹⁷ In India, the Accredited Investors recognised by SEBI are the wealthy individuals or entities that fulfil the income or net-worth criteria set by SEBI and are certified by an Accreditation Agency for a period of three years. The Accredited Investors have the privilege of not only being granted the safety net of regulations but also being able to access and participate in advanced investment opportunities like AIFs, PMS, hedge funds, and private placements with usually lower entry requirements.¹⁸ This is based on the argument that these investors can tolerate losses, understand the risks involved, and secure their positions through contracts without the need for extensive regulatory intervention. For Instance, the institutional investors who invest in Venture Capital Funds (VCFs) have power over the information through negotiation rights, protection against losses, board representation, and set exit paths. Therefore, accreditation in the Indian securities law is not a strange thing; it is a well-known regulatory tool that is meant to conduct the involvement of investors and not to totally eliminate their protection.

The present accreditation system, which is openly meant to provide a better level of investor protection, does not take into account the economic and temporal factors of angel investing and thus creates the opposite effect: *it excludes rather than protects*. In the case of investment in startups, risk is not only the result of investor ignorance but also of the very nature of the business ideas, unclear exits, and the lack of sources of information that are known only to the investors and that can be used to reduce the risk, which is a quite different scenario compared with the traditional wealth-based risk assumptions. The very high net-worth thresholds established by SEBI are, in fact, a barrier to entry for investors based on the form their money takes rather than the actual capability of the investors, that is, wealth is more valued than the richness of the understanding of the context which, incidentally, is also the reason for the shrinking pool of active capital when the need is greatest, that is, when startups are trying to get off the ground.

¹⁶ SEBI, 'Data relating to activities of Alternative Investment Funds (AIFs)' (30 September 2025) <<https://www.sebi.gov.in/statistics/1392982252002.html> >accessed 10 December 2025.

¹⁷ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, s 2(ab).

¹⁸ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, s 2(ab).

This formality of the regulation is in direct opposition to the judicial views, which always consider the case in terms of economic substance and context and not rigid classifications. In *Hyatt International Southwest Asia Ltd. v. Additional Director of Income Tax*,¹⁹ The Supreme Court was not willing to accept that a taxpayer was sheltered from tax due to the absence of a formal office or lease, but rather that the existence of a fixed place for permanent establishment must depend upon economic substance, whether business functions were effectively carried on through the premises, even without exclusive ownership or formal structures. Likewise, in *Mansi Brar Fernandes v. Shubha Sharma*,²⁰ The Supreme Court ruled that speculative investors, whose interest was in profit and not substantive economic engagement, could not trigger insolvency proceedings, thus pointing out that courts divide investor types based on economic purpose and context rather than formal labels. Through these judgments, it is stressed that the regulatory treatment should be in line with the underlying economic reality, purpose, and context, rather than being rigid.

The difference in approach is highlighted by comparison with Singapore. India has imposed restrictions on the participation of certain angel fund structures to only accredited investors, while Singapore has approved early-stage investment through tax incentives instead of qualifying barriers. The Singapore Income Tax Act Section 37K²¹ allows individuals to deduct a part of their investment if they invest in start-up companies and meet the holding and other conditions. In reality, this incentive scheme aims to attract investments at the early stage by cutting down the tax burden for investors and not through eligibility restriction; rather, any person is allowed to invest in startups, no matter his/her income or net worth. It is the opposite situation in India, where fund access for early-stage investments is strictly linked to accreditation, thus shutting out investors who may not meet the formal wealth thresholds but have good experience and are already embedded in the sector.

Therefore, the Singapore model represents a regulatory design that not only broadens participation but also creates incentives without imposing any entry barriers, whereas that of India may narrow down the circle of active investors, thus impeding the capital and knowledge inflow into the startup development stage that is most critical.

To sum up, the requirement for accreditation under the AIF rule is not a mistake by default. It is conceptually valid and backed by legal arguments. However, in the Indian angel investment ecosystem, it works as a rough instrument due to the lack of contextual calibration. The

¹⁹ *Hyatt International Southwest Asia Ltd. v. Additional Director of Income Tax* [2025] INSC 891.

²⁰ *Mansi Brar Fernandes v. Shubha Sharma* [2025] INSC 1110.

²¹ Singapore Income Tax Act 1947, s 37K.

framework confuses the source of risk by equating wealth with invulnerability and thus inadvertently discourages early-stage participation. Unless the accreditation is revamped to recognise exposure instead of negation, angel investing in India may be filtered out not only because of the usual reasons but also because of the ambiguous ones, by market failure, but by regulatory over-formalisation divorced from economic reality.

B. Mandatory Lock-in and the Denial of Early-Stage Liquidity

The introduction of a statutory lock-in requirement for Angel Fund investments based on the updated AIF framework under Regulation 19F (3) is indeed a significant regulatory shift.²² The one-year lock-in imposed on Angel Funds has made it impossible for them to exit before the most fragile period of the investee company, i.e. early-stage. However, the lock-in period can be reduced to six months for an exit by way of sale to an unrelated third party, which is a little relaxation and is also subject to the company's Articles of Association.²³ The amendment is aimed at promoting long-term capital commitment and reducing speculative or short-term churning in the early-stage enterprises. *On the other hand*, it is observed that the provision imposes a rigidity which is not in concert with the economic logic of angel investing; the flexibility of exit, especially through secondary sales, is often the key to risk management in early-stage investments. Thus, the amendment is reshaping the angel investment from a flexible risk-capital model to a more constrained, quasi-patient capital structure, thereby recalibrating both risk appetite and participation incentives by constraining liquidity at the entry stage itself. A lock-in period is a time specified by a contract or rule during which an investor is not allowed to sell, redeem or move their invested money, thus supporting the commitment of that money to the particular investee or instrument.²⁴ The purpose of this mechanism is to offer stability and discourage quitting processes that are too quick and could make the firm lose its place in the market; however, it still holds back angel investors a lot since the liquidity at that point is already very low due to the uncertainties surrounding information, valuation, and exit paths. The Supreme Court in the case of *Niranjan Shankar Golikari v. Century Spg. & Mfg. Co.*²⁵ Ruled that restrictive covenants are not automatically invalid and their enforcement relies on

²² Securities and Exchange Board of India, Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128 (10 September 2025) 'Revised regulatory framework for Angel Funds under AIF Regulations' Para 6 <https://www.sebi.gov.in/legal/circulars/sep-2025/revised-regulatory-framework-for-angel-funds-under-aif-regulations_96553.html> accessed 15 December 2025.

²³ *Id.*

²⁴ Julia Kangan, 'Understanding Lock-Up Periods: Definitions, Uses, and Impacts' (*Investopedia*, 4 October 2025) <<https://www.investopedia.com/terms/l/lockup-period.asp>> accessed 17 December 2025.

²⁵ *Niranjan Shankar Golikari v. Century Spg. & Mfg. Co.* (1967) 2 SCR 378.

reasonableness and the kind of commercial relationship that is in place. This doctrine was reiterated in *Vijaya Bank & Anr. v. Prashant B. Narnaware*,²⁶ Wherein the Court stated that lock-ins constituted by business continuity and risk allocation do not constitute an unreasonable restriction on trade. Therefore, the situation for angel investors is that the legal lock-in period might worsen their exposure to early-stage investments without the safeguards that the private market lock-ups have, and this can lead to less flexibility in coping with uncertainty. Consequently, a shift in investor behaviour and a change in capital allocation patterns can result, which will be examined in the subsequent analysis of the paper.

In the realm of angel investing, the mandatory lock-in under Regulation 19F(3) is not a stabilising factor but rather a hindrance to the management of risks in early-stage investments. Angels come in at the budding stage, where the valuation can go up or down at any time, the control of the company is still very limited, and the timing of the exit depends on the new investors whom the angels neither direct nor foresee.²⁷ The law imposes a minimum period of one-year for the lock-in, and only in the case of a third-party sale with no promoter buy-backs, the period could be cut down to six months. In this way, it becomes a disadvantage for the angel investors who are in a situation where the information is not even, and the investors are already at their worst point. The Indian judiciary has continuously warned that the regulatory measures should have a rational connection with the problem they are trying to solve. In the case of *Niranjan Shankar Golikari v. Century Spinning & Manufacturing Co.*,²⁸ the Supreme Court said that any restriction on economic freedom must be reasonable and, at the same time, not very stringent in terms of the objective being pursued. Also, in the case of *SEBI v. Rakhi Trading Pvt. Ltd.*,²⁹ the Court pointed out that the market regulations have to be very close to the economic realities prevailing and cannot be based on strict presumptions. Turning to angel investing, the lock-in does not pass this test. Unlike lock-ins of promoters, which keep the price intact and stop the exit of the insiders, the lock-ins of angels only hold the money without solving the main problem of the risky early-stage investments, which is the changing control and dilution of the post-investment. The difference is further tightened by the fact that the founders and later-stage investors have the option of changing the terms or restructuring their connection, while the angels are stuck in their contract.

²⁶ *Vijaya Bank & Anr. v. Prashant B. Narnaware* (2025) INSC 691.

²⁷ Benjamin, 'Deciphering Startup Valuation for Angel Investments' (*Easy Street Investing*, 6 September 2024) <https://www.easystreetinvesting.com/deciphering-startup-valuation-for-angel-investments/> accessed 20 December 2025.

²⁸ *Niranjan Shankar Golikari v. Century Spg. & Mfg. Co.* (1967) 2 SCR 378.

²⁹ *Securities And Exch. Bd. of India v. Rakhi Trading P.Ltd.* (2011) Civil Appeal No. 1969 Of 2011.

C. Institutionalisation without Schemes

The newly amended regulations in the Angel Funds sector bring a new trend of investing by allowing the fund to make direct investments without the necessity of creating scheme-specific vehicles for each of the investee companies.³⁰ At the same time, the rule that required the Angel Funds to send term sheets to SEBI before making any such investments has been completely abolished. This particular regulatory amendment signifies a deliberate move on the part of the regulators to simplify, make more efficient and less cumbersome the whole process, thus bringing angel investing almost at the same level as the other Category I AIFs that follow a pooled, fund-level investment model instead of transaction-specific ones.

At a fundamental level, this regulation means a transition from a transaction-based oversight to a vehicle-based regulation. The scheme-based investing was previously a type of regulation checkpoint, where each and every investment had its own informational building structure, term sheets, valuation justification, exit contours, and risk distribution under regulatory visibility.³¹ The removal of schemes not only makes compliance easier but also changes the very way risk, disclosure, and accountability are shared. By merging a number of different investments into one fund-level structure, the regulation favours administrative efficiency over deal-specific transparency.³² It has been the consistent position of the Supreme Court, including in the *Swiss Ribbons Pvt Ltd v Union of India case*,³³ The assessment of the regulatory frameworks should be based not on the elegance of their procedures but on their real economic impact on the stakeholders involved. Compliance separation from the transaction where risk actually materialises could make formal regulation normatively hollow.

Historically, scheme-based structures served a major role in protecting during early-stage investments. The investors were able to view the risk of the investment from the viewpoint of the fund's individual investments rather than through accumulated assumptions at the fund level. In the case of *Vodafone International Holdings BV v Union of India*,³⁴ The court made it clear that the legal nature of an arrangement must be decided according to its commercial

³⁰ Securities and Exchange Board of India, Circular No SEBI/HO/AFD/AFD-POD-1/P/CIR/2025/128 (10 September 2025) 'Revised regulatory framework for Angel Funds under AIF Regulations' para 4 <https://www.sebi.gov.in/legal/circulars/sep-2025/revised-regulatory-framework-for-angel-funds-under-aif-regulations_96553.html >accessed 15 December 2025.

³¹ Rasika Sanjay Ghate, 'Regulation of Collective Investment Schemes' (*Legal Service Journal*) <<https://www.legalserviceindia.com/legal/article-5956-regulation-of-collective-investment-schemes.html> >accessed 21 December 2025.

³² *M/S P.G.F Ltd. vs Union of India* (2004) Civil Appeal No. 6572 OF 2004.

³³ *Swiss Ribbons Pvt Ltd v Union of India* (2019) 4 SCC 17.

³⁴ *Vodafone International Holdings B.V v Union Of India & Anr* (2012) Civil Appeal No 733 of 2012 (Supreme Court of India).

substance and not its formal configuration. Following this logic, the real exposure of angel investors occurs at individual deals, where valuation uncertainty, preference stacking, and exit sequencing are determined rather than at the abstract fund vehicle level. Consequently, the deletion of schemes cuts off regulatory oversight from the point where economic consequences are most keenly felt.

The impact of this change on angel investing is out of proportion to the number of investors. Angel investments are, by nature, personalised, not in the same way as the standard market, and very much dependent on the terms of the deal. Different from institutional investors who count on diversification at the portfolio level and negotiated downside protection, angel investors put their money where information is not clear and contractual asymmetry is unavoidable. The lack of scheme-level disclosures, along with the pre-investment term sheet scrutiny, intensifies the informational opacity and weakens investor agency. Indian judges have often spoken out against the kind of regulatory formalism that hides distributive inequalities, as in the case of *Essar Steel India Ltd v Committee of Creditors*,³⁵ where the court rejected the enactment of procedures that, albeit uniformly, would lead to substantively unequal outcomes. When the requirement for disclosure is lessened at the transaction level, the law accidentally promotes unawareness rather than informed participation.

To sum up, the transition to direct fund-level investment without schemes corresponds to a larger trend of the AIF regime: institutionalisation without recalibration. Although this model is administratively efficient, it is poorly matched with the realities of angel investing, where risk cannot be standardised nor made interchangeable across deals. The framework, by taking away scheme-based protections without offering compensatory deal-level measures, solidifies the dilemma of angel regulation - treating investors as institutional for compliance purposes while leaving them private and unprotected at the point of exposure, which is the most acute. If this structural disconnect is not rectified, simplification will likely be equated with silence, and regulatory efficiency will mean investor invisibility.

³⁵ *Essar Steel India Ltd v Committee of Creditors* (2019) 16 SCALE 319.

IV. RECOMMENDATIONS FOR INCREASING THE PROTECTION OF ANGEL FUNDS

A. Retaining Regulatory Disclosure Duties within the Accredited Investor Framework

Firstly, the paper recommends that the regulatory disclosure duties should be retained within the Accredited Investor framework for angel funds under Chapter-III(A) of AIF,2012.³⁶ The AIF regime that exists today views accreditation as an alternative to protection and not a gateway to measured participation. It is suggested that SEBI either publish a targeted circular or provide interpretive guidance, which would confirm that accreditation is the only factor determining participation and, at the same time, not reduce the obligation of the parties involved to make deal-specific disclosures.

To bring such a clarification, no legislative overhaul would be necessary. SEBI has traditionally applied the methods of phased disclosure of obligations of Category I and II AIFs and circulars and interpretive guidance to re-tune obligations without upsetting the statutory architecture. With the implementation of this system, the angel funds would still be allowed to give pre-investment disclosure regarding the anticipated dilution, preference stacking, governance rights, and exit timelines, even to the accredited investors. These factors are inherent to angel investing and cannot be properly covered by wealth-based accreditation.

This solution is dogmatically compatible with Indian jurisprudence. The Supreme Court has numerous times found that regulatory classification could not prevail over economic substance.³⁷ In the same vein, accreditation cannot be a surrogate for transparency, especially where the risks are due to time, information asymmetry and structural subordination rather than financial incapacity. This line of argument is consistent with the Singapore model, in which accredited investors have wider access but are still under the disclosure and fair-dealing obligations of the Monetary Authority of Singapore.³⁸ Hence, accreditation is a criterion of entry, not a defence against liability. India can adopt this model by reintroducing disclosure symmetry at the angel investment stage without changing the legal framework.

The limitations of the solution are acknowledged. Disclosure is not capable of eliminating speculative risk, nor can it provide predictions of the results of future funding rounds. In addition, there is the risk of producing large amounts of disclosures that are non-meaningful. However, as the Indian courts have pointed out, the goal of regulation is not to eliminate risk

³⁶ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, Chapter III(A).

³⁷ *BSES Rajdhani Power Ltd. & Ors. v. Union of India & Ors.* [2025] INSC 937.

³⁸ Securities and Futures (Classes of Investors) Regulations 2018 (Singapore).

but to remove the ignorance that is created. Even in an imperfect situation, the disclosure is asymmetrical, but the angels are now aware of the potential costs before the exit, when the corrective measures may no longer be possible. So, this solution maintains the role of accreditation as a gatekeeper while shifting the burden of regulation downwards, thus making Indian practice compliant with judicial reasoning and regulatory experience worldwide.

B. Conditional Liquidity with Deal-Level Safeguards in Lock-In and Direct Investments

The existing regulatory framework already includes a legal lock-in for angel fund investments under Regulation 19F(3) of the SEBI (Alternative Investment Funds) Regulations, 2012, which dictates that the investment of an angel fund in the capital of an undertaking shall be locked-in for a specified time period, and permits shorter lock-in if the exit is through the sale to a third party (secondary sale) for a stipulated period.³⁹

In this regard, introducing conditional exit mechanisms permitting early objective triggers for liquidity could be one way of overcoming inflexibility without affecting the regulatory policy of providing long-term capital support to startups. One such method grounded in commercial practice is the use of escrow arrangements commonly used in India and elsewhere in the world for keeping the investor's money safe until specific contractual or regulatory conditions are fulfilled. An escrow account is a neutral third-party arrangement where the money or assets are kept until the agreed contingencies are met, which lowers the risk of the other party not performing and increases the clarity of the transaction.⁴⁰

In reality, an escrow-type mechanism at the time of secondary exits might stipulate that the selling price in a secondary sale be retained in escrow until the stipulated contractual conditions are met.⁴¹ These may be, for example, regulatory approvals, achievement of governance milestones, or verified compliance with the agreed exit terms. This is advantageous for both parties: the investors are assured that the money is safe until the conditions are met, and the start-ups are not put under the pressure of managing cash flow from escrow that could otherwise squeeze investor protections. Escrows are valid in Indian commercial law as neutral

³⁹ Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, s 19F (3).

⁴⁰ Caroline Banton, "Understanding Escrow: Protecting Parties in Financial Transactions" (*Investopedia*, 12 November 2025) < <https://www.investopedia.com/terms/e/escrow.asp> > accessed 31 December 2025.

⁴¹ Shantanu Gupta and Rohan Shrivastava, "Navigating Secondary Exits: Key Legal And Regulatory Considerations For Financial Sponsors" (*Lexology*, 14 June 2023) < https://www.khaitanco.com/sites/default/files/2023-06/Navigating%20Secondary%20Exits_%20Key%20Legal%20And%20Regulatory%20Considerations%20For%20Financial%20Sponsors%20-%20Lexology.pdf > accessed 31 December 2025.

holding arrangements where neither party can make use of the funds before conditions are met, and courts have upheld this.⁴²

Moreover, the banning of scheme-based investing could be offset by stipulating, at the deal level, disclosures even in a pooled investment structure. When risks occur at the specific investee company level, the disclosures meant for those risks (e.g., dilution, governance rights, and contingencies related to an exit) give the investor substantial insight that is not available through the fund reporting at the level of risk investment. In different places, the private market investment setups give priority to the exit terms that are flexible as well as the detailed and specific information regarding the deal: the UK regulators are working on the private share trading frameworks that allow the share trading to be carried out at intervals and that the necessary investor information is provided for private company shares, thus facilitating negotiated secondary sales instead of strict statutory lock-ins;⁴³ Singapore, on the other hand, sees the use of private placement or offering memoranda as a widely accepted practice to inform accredited investors about the tender.⁴⁴ In this way, the investments made even outside the public markets are well-versed. The use of such conditional exit and escrow mechanisms is indeed complex and may attract more regulatory oversight. The supervisory frameworks that will be set up will have to distinguish between material changes that legitimately trigger exits and opportunistic claims, and in the process, they will have to use the regulator's discretion in deciding whether the conditions for the release of escrow funds have been met. However, the Indian securities law has always been based on reasonable standards, and thus compliance is evaluated case by case nowadays, whereas, in the past, it used to impose absolute ex-ante prohibitions.⁴⁵ The systemic benefit of increased angel investor confidence and more exact liquidity expectations in line with the regulatory objectives is greater than the marginal regulatory costs.

Seen this way, the challenges of the revised AIF regime are not because of the inadequacy of regulation but rather because of regulatory design that does not cater well enough to the early-

⁴² *Hira Mistan v. Rustom J Noble and Ors* [2000] 1 Bom CR 716.

⁴³ Policy Statement, “Private Intermittent Securities and Capital Exchange System: Sandbox Arrangements” (*Financial Conduct Authority*, June 2025) < https://www.fca.org.uk/publication/policy/ps25-6.pdf?utm_source=chatgpt.com > accessed 1 January 2025.

⁴⁴ “Legal Obligations for Issuers in Private Placements: PPM Disclosure Best Practices” (*Generis Global*, 25 October 2024) < <https://generisonline.com/legal-obligations-for-issuers-in-private-placements-ppm-disclosure-best-practices/> > accessed 1 January 2025.

⁴⁵ Dr. Devendra Singh, “Evolution of Securities Regulation in India: An Analysis of Challenges and Evolving Jurisprudence” (2025) 2 (3) *IJARIE* < https://ijariie.com/AdminUploadPdf/Evolution_of_Securities_Regulation_in_India_An_Analysis_of_Challenges_and_Evolving_Jurisprudence_ijariie26607.pdf > accessed 25 December 2025.

stage investment realities. The use of conditional exits and escrow structures is not entirely outside the regulatory framework; on the contrary, they become tools that help when they are adapted to the specific risk and liquidity profile of angel investing.

Both of the above solutions would be entirely within the current law, would be supported by the reasoning of the Supreme Court, and would borrow judiciously from the practice of Singapore and the UK without bringing in alien concepts. They remodel, not deconstruct, the structure. Above all, they grasp a basic fact that the present regime is ignoring, which is that, in a situation with both temporal, informational, and structural risk, wealth will not eliminate vulnerability. Angel investing is not going to fall due to market failure, unless the Indian securities regulation internalises this distinction, but due to regulatory over-formalization unlinked to economic reality.

V. TREATMENT OF ANGEL FUNDS IN FOREIGN JURISDICTIONS

There are several foreign jurisdictions wherein primacy is given to the requirement of sophistication level for Angel Funds, but statutory investor protection is also accorded. Several cases from such jurisdictions are outlined in the following.

Jurisdictions	Regulatory Model Followed for Angel Investment	Accredited / Sophisticated Investors Required?	Statutory Investor Protection Continues Post-Accreditation?	Mandatory Lock-in Imposed?	Governance Rights for Angel Investors Preserved?

United Kingdom	Market-oriented & company law–anchored framework.	Partially Yes ⁴⁶	Yes ⁴⁷	No	Yes ⁴⁸
Singapore	Tax-incentivised framework.	No (but incentives exist) ⁴⁹	Yes ⁵⁰	No	Yes ⁵¹
India	Institutional fund-based regulation under the AIF regime	Yes	No	Yes	No

Following this table, certain explicit clauses differing in these foreign jurisdictions are far and wide, with most of the framework being essentially the same.

Like how in the United Kingdom, the application of company law protections is not limited by the designation of an investor as sophisticated. Fiduciary duties owed by those in control are still enforceable regardless of investor wealth or experience, and angel investors continue to have remedies against dilution, exclusion, and abuse of corporate power.⁵² Exit restrictions only result from private ordering; illiquidity is not imposed by statute.

Additionally, in Singapore, even though only accredited investors are allowed to participate in early-stage investments, this classification does not eliminate the need for fair dealing or governance accountability. Relationship-driven or informal investments are still subject to fair

⁴⁶ The Financial Services and Markets Act 2000 (Financial Promotion) (Amendment and Transitional Provision) Order 2024, SI 2024/301.

⁴⁷ Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, SI 2005/1529.

⁴⁸ Financial Services and Markets Act 2000, s.21.

⁴⁹ Singapore Income Tax Act 1947, s 37K.

⁵⁰ Id.

⁵¹ Editorial Team, “Decoding Angel Investment in Singapore: A Startup’s Guide” (Raffles Corporate Services, 6 September 2025) < <https://rafflescorporateservices.com/what-is-an-angel-investor-singapore-guide/> > accessed 20 December 2025.

⁵² *Howard Smith Ltd v Ampol Petroleum Ltd* [1974] AC 821 (PC).

scrutiny, and when asymmetry or reliance is abused, relief is available.⁵³ Investor qualification serves as a gateway to participation in both jurisdictions rather than as a justification for judicial or regulatory withdrawal.

The policy makers of India must take due regard for all these practices in foreign jurisdictions and incorporate them into the Indian landscape. It must be noted that the Early-stage risk can be accommodated without making investors invisible, as demonstrated by the experiences of Singapore and the United Kingdom. The paper recommends that for the enforcement of the methods followed by these jurisdictions, the first and foremost issue that needs to be resolved is the recalibration of the current regulatory framework to take investor exposure at the point of entry into account. The formalisation of angel investment runs the risk of exacerbating structural asymmetries rather than reducing them in the absence of such recalibration. Participation limitations function without a corresponding protective logic in the absence of mechanisms that identify and address early-stage vulnerability.

VI. CONCLUSION

One of the foundational premises upon which regulatory law is constructed is that exposure cannot exist without accountability, and participation cannot be demanded in the absence of corresponding protection.⁵⁴ The present treatment of angel investors under the AIF regime unsettles this equilibrium. While the institutionalisation of angel investing has been justified as a means of enhancing governance, transparency, and systemic oversight, the practical consequence has been the imposition of duties without the conferral of proportionate rights. Early-stage investors are required to assume heightened risk, restricted liquidity, and diminished agency, without any commensurate recalibration of regulatory safeguards. Such an outcome reflects not regulatory neutrality, but a structural imbalance.

The formalisation of angel investment was intended to strengthen India's startup ecosystem by channelling early capital through regulated vehicles. However, as demonstrated in **Annexure 1**, angel investing was already a comparatively narrow segment of the alternative investment landscape. The data further indicates that following the tightening of participation thresholds and the introduction of mandatory lock-in requirements, capital mobilisation has increasingly

⁵³ Companies Act, 1967 Part 5 (Singapore).

⁵⁴ Julia Black, Reinier Kraakman and Anna Tarassova, 'Russian Privatization and Corporate Governance: What Went Wrong?' (2000) 52 Stanford Law Review 1731.

concentrated within Venture Capital Funds rather than Angel Funds.⁵⁵ This shift is neither accidental nor purely market-driven. It reflects a rational response to regulatory incentives. Investors with the financial capacity to meet accreditation thresholds are simultaneously presented with alternative vehicles offering greater liquidity flexibility, clearer governance rights, and more predictable exit sequencing. Faced with a choice between early-stage exposure burdened with statutory constraints and later-stage vehicles offering structural protection, capital predictably migrates away from angel investing.

This outcome undermines the very objective that Category I AIFs purport to advance. Angel investors occupy a distinct position within the capital formation cycle. They absorb uncertainty before valuation stabilises, before governance structures mature, and before exit pathways crystallise. Treating such exposure as equivalent to institutional participation, without modifying the protective logic of the framework, results in over-formalisation without fairness. The consequence is not merely reduced participation but the erosion of trust in early-stage investment as a viable avenue for capital deployment.

The paper does not contend that accreditation, lock-ins, or institutional discipline are inherently flawed. Rather, it argues that their unmodified transplantation into the Indian angel ecosystem ignores contextual realities. Comparative experience from jurisdictions such as the United Kingdom and Singapore demonstrates that investor sophistication and legal protection are not mutually exclusive. In those systems, accreditation functions as an entry threshold, not as a justification for regulatory withdrawal. India's present framework, by contrast, risks rendering angel investors invisible precisely at the point where vulnerability is greatest.

Ultimately, the responsibility for correction lies with policymakers. Judicial intervention, bound by statutory design, can offer only limited relief. What is required is a recalibration of the AIF regime that recognises exposure-based vulnerability rather than presuming invulnerability through wealth. Without such reform, the formalisation of angel investing will continue to suppress participation rather than strengthen it, and a critical source of entrepreneurial capital will be steadily, and perhaps irreversibly, diminished.

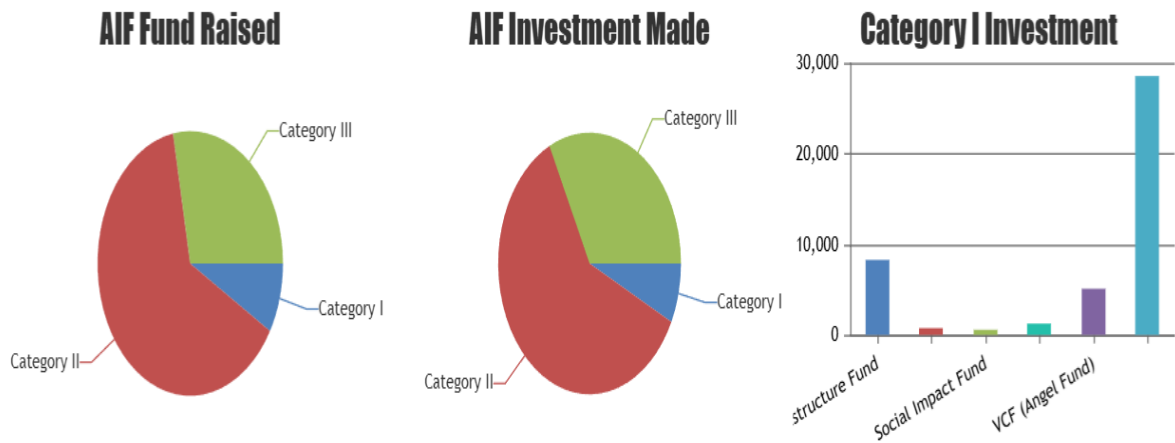
⁵⁵ Payal Agarwal, 'Angel Funds 2.0: Navigating the New Regulatory Landscape' (*Vinod Kothari Consultants*, 4 October 2025) < <https://vinodkothari.com/2025/10/angel-funds-2-0-navigating-the-new-regulatory-landscape/> > accessed 10 December 2025.

ANNEXURE-1⁵⁶

(All figures in Rs. Crores)			
Category of AIF	Commitments Raised	Funds Raised	Investments Made
Category I AIF - Infrastructure Fund	20,096	9,451	8,365
Category I AIF - SME Fund	1,476	958	837
Category I AIF - Social Impact Fund	1,707	699	659
Category I AIF - Special Situation Fund	4,552	1,489	1,337
Category I AIF - VCF (Angel Fund)	10,200	5,818	5,186
Category I AIF - Venture Capital Fund	54,354	35,809	28,650
Category I Total	92,385	54,224	45,034
Category II AIF	11,20,589	4,04,212	3,69,570
Category III AIF	2,92,398	1,77,982	1,97,335
Grand Total	15,05,372	6,36,418	6,11,939

Table:1: Represents the figures of Alternative Investment Funds as of September 30, 2025.

Figure 1: Graphical Representation of Table 1



⁵⁶ SEBI, 'Data relating to activities of Alternative Investment Funds (AIF's)' (30 September 2025) <<https://www.sebi.gov.in/statistics/1392982252002.html> > accessed 15 December 2025.