



*A National Law University of Jodhpur
Publication*

Volume VIII Issue 2

2026

Journal on Governance

*‘Evolving Paradigms in Corporate Governance:
Navigating AI, ESG, and Board Accountability in the
Digital Era’*

www.jclg.in

ISSN No. 0976-0369

JOURNAL ON GOVERNANCE
VOLUME VIII ISSUE II
(3RD NLUJ-TRILEGAL CORPORATE
LAW SUMMIT, 2025)

Journal on Governance

The Journal on Governance (also known as 'Journal on Corporate Law and Governance') is published by the Centre for Corporate Governance at National Law University, Jodhpur.

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Cite as 8 J. on Governance [ii] 2026

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Published by:

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National Law University, Jodhpur

NH-65, Mandore, Jodhpur – 342304

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FOREWORD

We are delighted to present Volume VIII, Issue II of the Journal on Governance. This special issue features the winning papers from the 3rd NLUJ–Trilegal Corporate Law Review Summit, organised by the Journal on Corporate Law and Governance at National Law University, Jodhpur. Conceived as a platform to bridge academic scholarship with practical engagement, the Summit brought together students, practitioners, academicians, and industry experts to deliberate on emerging issues in corporate law and governance.

The Paper Presentation Competition, held as part of the Summit on the theme **“Corporate Governance in the Age of Artificial Intelligence and Digital Markets: Reimagining Accountability, Innovation, and Investor Protection,”** invited participants to examine the evolving relationship between technological innovation, regulatory frameworks, and corporate accountability. The overwhelming response to the competition, with over 150 submissions received from across the country, reflected the growing academic interest in these contemporary issues. Following a rigorous evaluation process, 15 papers were shortlisted for presentation before an eminent panel of judges, from which the five winning papers, featured in this volume, were selected.

The articles in this issue address some of the most pressing questions in corporate law today, ranging from artificial intelligence in corporate governance and algorithmic due diligence to insider trading, digital markets, and blockchain-enabled financial innovation. Together, they demonstrate how legal and regulatory frameworks must evolve to keep pace with rapid technological advancements while continuing to uphold accountability, transparency, fair competition, and investor confidence.

The first article, **“Bridging REITs and Tokens: Can India’s SM-REIT Regime Absorb Real Estate Tokenisation Without Compromising Investor Protections?”** by Shefali Usha and Vrinda Rajoria, examines the legal and regulatory implications of tokenising real estate through blockchain technology. The authors analyse whether India’s recently introduced Small and

Medium REIT framework is capable of accommodating tokenised ownership while continuing to protect investors. They discuss concerns relating to beneficial ownership, governance, market surveillance, and regulatory oversight, and suggest that India can gradually integrate tokenised real estate within its existing securities framework. The article also recommends using GIFT-IFSC as a regulatory sandbox to test such innovations before wider implementation, thereby balancing financial innovation with robust investor protection.

The second article, **“Fiduciary Duty of the Board in AI Decision-Making,”** by **Avni Vashishtha and Tarishi Verma**, examines the growing use of Artificial Intelligence in corporate governance and the challenges it poses to directors' legal duties. The authors discuss issues such as algorithmic bias, lack of transparency, cybersecurity risks, and the increasing reliance on AI-generated recommendations in boardrooms. They argue that while AI can improve efficiency and decision-making, directors cannot transfer their fiduciary responsibilities to technology. Instead, they advocate for stronger governance measures, including AI oversight mechanisms, independent algorithmic audits, greater transparency, and clearer legal standards to ensure that human accountability remains at the centre of corporate decision-making.

The third article, **“Prominence, Foreclosure and Design Neutrality: Assessing Google’s Above-the-Fold Self-Preferencing Under India’s Competition Act,”** by **Chirkankshit Bulani and Alok Krishna**, examines Google's search engine practices and their implications for competition law in India. The authors analyse whether Google's placement of its own services in the most prominent sections of search results amounts to anti-competitive self-preferencing and how digital interface design can influence consumer choice and market competition. Drawing upon comparative international developments and the evolving jurisprudence under India's Competition Act, they assess whether the existing legal framework is adequately equipped to regulate digital platforms. The article contributes to the ongoing debate on ensuring fair competition while continuing to encourage innovation in the digital economy.

The fourth article, **“A Tale of Three Regulators: The Jhunjhunwala Case and the Divergence of Insider Trading Law in India, the US, and the UK,”** by **Sejal and Vishrut Veerendra**, explores how different legal systems address insider trading when market-sensitive information originates from government or regulatory decisions. Using the Jhunjhunwala-Nazara case as its starting point, the authors compare the approaches followed in India, the United States, and the United Kingdom. They highlight the gaps in India's existing framework and recommend reforms such as improved coordination between regulators, stronger market surveillance, and clearer recognition of politically generated information as a potential source of insider trading. Through this comparative analysis, the article offers valuable suggestions for strengthening investor confidence and preserving the integrity of India's securities markets.

The fifth article, **“Beyond the Black Box: Proposing a Framework for Algorithmic Due Diligence in Indian Corporate Law,”** by **Purwesh Prabhakar Sahare and Janhvi Ashok Dhanvijay**, focuses on the increasing use of AI systems in corporate decision-making and argues that traditional governance practices are no longer sufficient. The authors explain how opaque algorithms can make it difficult for directors to exercise independent judgment and effectively discharge their legal duties. To address these concerns, they propose a framework for algorithmic due diligence that includes board-level technological expertise, independent audits of AI systems, enhanced investor disclosures, and sector-specific regulatory guidance. The article demonstrates how these measures can help companies adopt AI responsibly while maintaining transparency, accountability, and sound corporate governance.

Taken together, the articles in this volume demonstrate how corporate law is evolving alongside advances in technology and changing business practices. They address contemporary legal issues while encouraging discussion on reforms that can make India's regulatory framework more effective, balanced, and future ready. We hope this issue will be a valuable resource for students, researchers,

practitioners, policymakers, and everyone interested in the future of corporate governance.

Finally, we extend our sincere gratitude to the Editorial Board of the Journal on Governance. Their dedication, hard work, and commitment to academic excellence have made this publication possible. We are equally grateful to our authors, reviewers, and faculty advisors for their invaluable contributions. We hope this volume continues the Journal's tradition of encouraging meaningful and engaging scholarship in corporate law and governance.

Akrati Trivedi & Dwija Ranjan

Editors-in-Chief, Journal on Governance

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**BRIDGING REITS AND TOKENS: CAN INDIA'S SM-REIT REGIME
ABSORB REAL ESTATE TOKENISATION WITHOUT
COMPROMISING INVESTOR PROTECTIONS?**

*Shefali Usha & Vrinda Rajoria**

ABSTRACT

The rapid emergence of real estate tokenisation through distributed ledger technology presents a fundamental challenge to India's established securities law, particularly within the framework of the newly introduced Small and Medium Real Estate Investment Trust ("SM-REIT") Regulations. This paper conducts a detailed analysis of the legal and operational incompatibilities between blockchain-based RET and the Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations, 2014, as amended in 2024. Through a comparative examination of statutory provisions and international jurisprudence, this research identifies critical conflicts across the entire investment lifecycle. These include discrepancies in primary issuance mechanisms, where centralised dematerialised accounts clash with blockchain-based beneficial ownership; challenges in secondary trading surveillance, as peer-to-peer transfers bypass traditional stock exchange oversight; and inconsistencies in leverage and valuation, where on-chain lending and fluctuating token prices undermine conventional risk mitigation. Furthermore, the paper examines governance challenges posed by smart contract automation versus traditional corporate structures, revealing a tension between decentralisation and centralized regulatory control.

To navigate this tension, the paper proposes a two-pronged regulatory strategy. The first prong involves strategically analysing and borrowing from best global practices, which suggest tokens be characterised as 'securities' and therefore aligning SM-REIT Regulations with the increasing demand for tokenisation of real estate. The second, more ambitious prong, advocates for leveraging the Gujarat International Finance Tech-City International Financial Services Centre ("GIFT-IFSC") as a regulatory sandbox. This sandbox would serve as a controlled environment to test a "full-stack" tokenisation ecosystem, i.e., from issuance and trading to custody and governance, before implementing wider legislation. This approach addresses the tension between innovation facilitation and investor protection maintenance, positioning India to

* Shefali Usha and Vrinda Rajoria are fifth-year law students at the National University of Study and Research in Law, Ranchi.

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establish global precedents for regulated tokenisation of real-estate assets within existing legal frameworks.

Keywords: Real Estate Tokenisation, SM-REIT, Distributed Ledger Technology, Securities Regulation, Beneficial Ownership, SEBI, GIFT-IFSC, Regulatory Sandbox, Collective Investment Schemes

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I. INTRODUCTION

Real Estate Tokenisation (“**RET**”) involves the application of distributed ledger technology (“**DLT**”) to restructure property ownership and investment in real estate, an asset class that has traditionally been characterised by illiquidity. It involves the digital fragmentation of real estate assets into fungible tokens recorded on an immutable blockchain, thereby creating beneficial ownership that challenges property and securities law.

The global tokenisation market, currently valued at United States Dollar 2.78 billion as of 2023, is projected to grow at a compound annual growth rate of 19.50 per cent, reaching an estimated market capitalisation of United States

Dollar 16.51 billion by 2033.¹ This exponential growth reflects the technology's capacity to address inefficiencies in real estate markets, including illiquidity, transaction costs, opacity in ownership structures, and capital requirements that have historically limited retail investor participation.

Within the Indian jurisdiction, the fractional ownership ecosystem has demonstrated remarkable growth momentum despite operating amid regulatory uncertainty until recently. The aggregate assets under management by Fractional Ownership Platforms have increased from Indian Rupees 1,500 crore in 2019 to Indian Rupees 4,000 crore in 2023, representing a compound annual growth rate exceeding 25%.² This growth occurs against the backdrop of India's commercial real estate market, valued at approximately INR 4.5 trillion in completed Grade A office space, presenting opportunities for fractional ownership democratisation³.

The rapid growth of RET and fractional ownership via RET will present a challenge to India's laws. The innovative model, operating on a decentralised, automated, and often peer-to-peer ("**P2P**") basis, stands in stark contrast to the traditional securities markets, which are built on centralised, regulated, and intermediary-heavy infrastructure, including exchanges, depositories, and registrars.

The core problem is the risk of regulatory arbitrage. Without regulations in place, tokenisation platforms will operate in a grey zone, bypassing investor protections related to governance, valuation, disclosure, and dispute resolution. The central question, therefore, is how India can leverage the benefits of tokenisation such as enhanced liquidity, reduced transaction costs, and greater

¹ *Real Estate Tokenisation Market Size, Growth, Analysis, Forecasts*, SPHERICAL INSIGHTS, <https://www.sphericalinsights.com/reports/real-estate-tokenisation-market> (last visited Sept. 5, 2025).

² Business Standard, *Fractional Ownership Likely to List over Rs 4,000 Cr Worth of Existing AUM*, BUS. STANDARD (Apr. 30, 2024), https://www.business-standard.com/finance/personal-finance/fractional-ownership-likely-to-list-over-rs-4-000-cr-worth-of-existingaum-124043000548_1.html.

³ Kshitij Anand, *How SEBI's Attention towards Fractional Real Estate Investing Is Bound to Benefit Investors*, ECON. TIMES (Aug. 1, 2025), <https://economictimes.indiatimes.com/markets/digital-real-estate/how-sebis-attention-towards-fractional-real-estate-investing-is-bound-to-benefit-investors/articleshow/123037669.cms?from=mdr>.

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accessibility for investors while ensuring that the robust investor protection laws established by SEBI remain intact⁴.

Our research addresses three fundamental questions rooted in deficiencies of the current Indian REIT framework. First, whether the legal and technological components of RET can be integrated within India's existing Small and Medium Real Estate Investment Trust (“**SM-REIT**”) Regulations without displacing investor protections. For these, we look into the conflict between blockchain-based ownership records and the existing depository system, the inability of current market surveillance mechanisms to capture peer-to-peer token transfers, and the risk that on-chain lending protocols may circumvent prescribed leverage limits. Second, how international approaches inform India's policy choices and create a precedent for experimentation. Third, what amendments are necessary to enable such integration, and what role a sandbox can play in testing RET ecosystems before full-scale deployment. In this regard, the GIFT-IFSC regulatory sandbox presents a compelling avenue as an International Financial Services Centre operating under a distinct regulatory architecture administered by the International Financial Services Centres Authority (“**IFSCA**”); GIFT City offers an insulated environment wherein RET models may be piloted under controlled conditions, with findings thereafter informing amendments to the broader domestic framework administered by SEBI.

II. REIT & SM-REIT ARCHITECTURE AND DOOR TO RET REGULATION.

This section provides a comprehensive analysis of the regulation governing Real Estate Investment Trusts (“**REITs**”) and the emerging landscape of REITs in India. The Indian REIT market, while nascent, has witnessed significant recent activity. As of 2026, India has five listed REITs, namely Brookfield India Real Estate Trust, Embassy Office Parks REIT, Knowledge Realty Trust, Mindspace Business Parks REIT, and Nexus Select Trust. They

⁴ Vandana Ramnani, *SEBI Notifies SM REITs: Move to Regulate Fractional Ownership Industry and Safeguard Investors' Interests*, HINDUSTAN TIMES (Mar. 10, 2024), <https://www.hindustantimes.com/real-estate/sebi-notifies-sm-reits-move-to-regulate-fractional-ownership-industry-and-safeguard-investors-interests-101710072487673.html>.

have collectively distributed more than Rs 29,100 crore to unitholders, reflecting their increasing importance in India's capital markets.⁵

We will **A)** examine the established structure of REITs, including the recent introduction of SM-REITs as a direct regulatory response to the proliferation of Fractional Ownership Platforms (**"FOPs"**). Subsequently, we will delve into the nascent field of RET, exploring how economic interests in real estate are represented through digital tokens and the critical need for a legal framework to accommodate this fractional ownership model. The discussion will navigate **B)** the current regulatory environment, including the application of existing legislation and the ongoing efforts by regulatory bodies to establish a structured and legally recognised regulatory framework for these innovative investment structures.

A. REITs, SM-REITs, AND THE RISE OF TOKENISATION IN REAL ESTATE

REIT is a collective investment vehicle that pools capital from investors to acquire, manage, and operate income-generating real estate assets⁶. In India, REITs must be established as a trust under the Indian Trusts Act, 1882⁷ and registered with the Securities and Exchange Board of India (**"SEBI"**) under the SEBI (Real Estate Investment Trusts) Regulations, 2014 (**"SEBI REIT Regulations"**).⁸ REITs give investors a way to invest in expensive real estate without directly owning property. They not only provide regular dividend income but also the potential for capital growth, allowing investors to earn and build wealth at the same time.

On the other hand, RET creates a parallel ownership structure where economic interests in real estate are represented through digital tokens rather than traditional legal instruments. Unlike traditional real estate ownership, where

⁵ Press release, Indian REITs Association, *Five Listed Indian REITs Distribute Over Rs 2,450 Crore to Unitholders in Q3 FY26* (Feb. 16, 2026), <https://indianreitsassociation.com/five-listed-indian-reits-distribute-over-rs-2450-crore-to-unitholders-in-q3-fy26/>

⁶ Securities and Exchange Board of India (Real Estate Investment Trusts) (Amendment) Regulations, 2024, Gazette of India, pt. III. Sec.4, Reg. 2(1)(zm) (Mar. 8, 2024).

⁷ Indian Trusts Act, No. 2 of 1882 (Ind.).

⁸ Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations, 2014, Gazette of India, pt. III (Sept. 26, 2014).

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legal title to real property is transferred through registered deeds recorded in government land registries and requirements of stamp duties apply, etc, RET substitutes these mechanisms with tokenised representations. These tokens generally denote fractional interests in Special Purpose Vehicles (“SPVs”) that hold legal title to the underlying properties, thereby creating a layered ownership structure where token holders possess beneficial interests in entities that own the real estate assets. Accordingly, for RET to achieve legal recognition, there must first be recognition of fractional ownership in real property.

This gap is filled by the SEBI amendment to the REIT Regulations. In March 2024, SEBI amended the REIT regulations to introduce a new category of Real Estate Investment Trusts, known as SM-REITs⁹. This was a direct response to the market for FOPs. FOPs traditionally enabled investors to acquire securities such as equity shares or convertible instruments issued by SPVs that owned the underlying real estate. Following the introduction of SM REITs as a distinct category, these platforms are now required to operate under SEBI's REIT Regulations and fulfil the associated registration and regulatory requirements¹⁰.

Another feature of India's REIT market that bears directly on any tokenisation discussion is its concentration in office assets. Before the listing of Nexus Select Trust, all three REITs listed in India, Embassy Office Parks, Mindspace Business Parks, and Brookfield India Real Estate Trust, were focused exclusively on leased office assets.¹¹ Nexus Select Trust, listed on the NSE and BSE in May 2023, became India's first publicly listed retail REIT, holding 17 operational shopping malls across 14 cities totalling 9.2 million square feet of leasable area, along with two hotel assets and three office assets.¹² The top tenants across the three office REITs are drawn predominantly from the technology sector, and any sectoral downturn in technology-driven office

⁹ The Securities and Exchange Board of India (Real Estate Investment Trusts) (Amendment) Regulations, Gazette of India, pt. III. sec.4, 2024 (Ind.).

¹⁰ Ramnani, *supra* note 4.

¹¹ Zerodha, *Nexus Select Trust REIT IPO*, ZERODHA (May 15, 2026), <https://zerodha.com/ipo/349815/nexus-select-trust-reit/>.

¹² Nexus Select Trust, *Listed Real Estate Investment Trust*, NEXUS SELECT TRUST (May 15, 2026), <https://www.nexusselecttrust.com/>.

demand would affect the dominant share of India's REIT universe simultaneously.¹³ The commercial real estate literature has documented how the normalisation of hybrid working patterns depresses lease revenues, office occupancy, and lease renewal rates.¹⁴ For tokenisation, this concentration matters because it narrows the asset pool available for fractionalized digital investment and implies that early RET products in India will inherit the same sectoral risk profile as the existing REIT market unless the regulatory framework is deliberately designed to encourage asset-class diversity.

Furthermore, the influence of sponsors does not diminish upon listing. Under the SEBI REIT Regulations, the minimum sponsor unitholding requirement was the subject of SEBI's February 2023 Consultation Paper.¹⁵ In that consultation paper, SEBI expressly identified the risk that sponsors contract debt against REIT assets before their formal transfer into the trust structure, placing retail and institutional unitholders at a disadvantage since the trust must then service that debt from future cash flows.¹⁶ Existing REIT Regulations provide that no unitholder shall enjoy superior voting or any other rights over another unitholder, and there shall be no multiple classes of units. However, in practice, it places large institutional investors on equal formal footing with retail unitholders, a gap that large institutions have typically bridged by acquiring minority stakes in the investment manager entity with accompanying board nomination rights.¹⁷ In a tokenised governance model, these tensions are amplified: smart contract-based voting may formalise the numerical dominance

¹³ Krishna Appala & Sidhanth Paul, *Which Is the Best REIT in India?*, CAPITALMIND (Sept. 2024), <https://premium.capitalmind.in/2024/09/best-reit-india-2024/>.

¹⁴ Arpit Gupta et al., *Work from Home and the Office Real Estate Apocalypse* (Nat'l Bureau of Econ. Research, Working Paper No. 30526, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4238253.

¹⁵ SECURITIES AND EXCHANGE BOARD OF INDIA, Consultation Paper on Holding of Sponsor in REITs and InvITs (Feb. 23, 2023), https://www.sebi.gov.in/reports-and-statistics/reports/feb-2023/consultation-paper-on-holding-of-sponsor-in-reits-and-invits_68358.html.

¹⁶ Aashit Shah et al., *Real Estate Investment Trusts: Recent Amendments to the Regulations*, JSA LAW (Oct. 4, 2023), <https://www.jsalaw.com/newsletters-and-updates/real-estate-investment-trusts-recent-amendments-to-the-regulations-puts-the-spotlight-on-exits-and-governance/>

¹⁷ Touchstone Partners, *Analysing SEBI's Recommendations on Grant of Special Rights to Unitholders and Role of Sponsors in InvITs and REITs*, TOUCHSTONE PARTNERS (Jan. 22, 2024), <https://touchstonepartners.com/>.

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of a large token-holder without providing any substantive check on sponsor-aligned decision-making.

The sustainability of distributions presents a distinct but related concern. While Indian REITs are required to distribute ninety per cent of their net distributable cash flows, compliance does not always guarantee durability. Historical yields have been partly supported by pre-listing, sponsor-negotiated leases at above-market rents, and as this approach renews, distribution capacity becomes contingent on prevailing market rents, occupancy, and tenant retention. For retail token-holders, who may have entered the market based on headline yield figures, this creates a material informational risk, particularly given the absence of any forward-looking distribution sustainability disclosure requirement within the current SM-REIT framework.

Lastly, the tax treatment of REIT cash flows operates through a multi-layer pass-through structure. At the SPV level, rental income is subject to corporate tax. The SPV then distributes upward to the trust in two forms, i.e dividends on equity and interest on debt instruments held by the REIT in the SPV.

Upon distribution from the SPV to the REIT trust, dividends are exempt from tax at the trust level under Section 10(23FC) of the Income Tax Act,¹⁸ provided the SPV opts for the concessional tax regime under Section 115BAA. Interest income received by the REIT from SPV-level debt instruments is, however, taxable at the REIT level.

At the unitholder level, the tax character mirrors the source: dividend-component distributions carry no further burden, while interest-component distributions are taxed at the investor's applicable slab rate.

The inefficiency arises because Indian REIT financing is predominantly debt-structured, causing a disproportionate share of distributions to reach unitholders as interest income taxed at full marginal rates. Investors therefore receive debt-like returns at income tax rates rather than equity-like returns at a more

¹⁸ Income-tax Act, No. 43 of 1961, § 10(23FC) (Ind.).

favourable profile, a structural tax drag that any tokenisation-specific reform framework must directly address. b.

B. INDIA'S EMERGING REGULATORY PARADIGM FOR REAL ESTATE TOKENISATION

Under Indian law, the determination of whether tokenised real estate interests are “securities” under the Securities Contracts (Regulation) Act, 1956 (“**SCRA**”)¹⁹, requires careful analysis of the rights they confer upon token holders. As Section 2(h) of the SCRA defines “securities” to include “derivatives,” tokens linked to underlying debt or equity instruments could fall into this category²⁰. For example, if tokens are issued with debt instruments representing investor contributions for property, they may be regulated as derivatives²¹. Alternatively, some tokenised real estate arrangements may be considered Collective Investment Schemes (“**CIS**”) under Section 11AA of the SEBI Act, 1992²². This classification depends on whether the structure pools investor funds for professionally managed real estate, returning profits to investors. The CIS analysis focuses on economic substance over legal form, which is a well-practised principle that could capture tokenised arrangements regardless of their technological implementation.

The legal characterisation of tokenised real estate interests depends critically on the specific rights and obligations embedded within the tokens and their underlying contractual arrangements. Tokens might provide holders with rights to receive rental income distributions, participate in major decisions affecting property management, and receive proceeds from property sales, which will resemble equity securities in their economic characteristics, potentially subjecting them to securities regulation²³.

¹⁹ Securities Contracts (Regulation) Act, No. 42 of 1956 (Ind.).

²⁰ *Id.* § 2(h).

²¹ NISHITH DESAI ASSOCIATES, REAL ESTATE TOKENISATION (2025), https://nishithdesai.com/fileadmin/user_upload/pdfs/Research_Papers/Real-Estate-Tokenisation.pdf.

²² Securities and Exchange Board of India Act, No. 15 of 1992, § 11AA (Ind.).

²³ Rosa M. Garcia-Teruel & Héctor Simón-Moreno, *The Digital Tokenisation of Property Rights. A Comparative Perspective*, 41 COMPUTER LAW & SECURITY REVIEW 105543 (2021).

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The regulation of RET in India is still in its early stages. Despite a lack of dedicated legislation, a few key initiatives signal a positive move toward a structured framework. On September 12, 2023, the International Financial Services Centres Authority (**"IFSCA"**) formed a seven-member Expert Committee on Asset Tokenisation to develop regulations, assess the legal validity of smart contracts, and create a risk management regulation for digital tokens.²⁴ The IFSCA has also facilitated a regulatory sandbox for a private market investment platform, Terazo, and a tokenisation platform, Tokeny, which led to the first regulated tokenised real estate asset in the country. While the market is still developing at a slow pace, platforms like 'alyf', 'hBits', and 'RealX' have entered the space. RealX, in particular, offers a blockchain-based product in addition to the standard fractional ownership model.²⁵

The current legal position is that tokenised real estate is primarily unregulated in India. However, existing legislation may apply in certain situations. Under the Income Tax Act, 1961, RETs may be categorised as "virtual digital assets," subjecting any transfer to a 30% tax²⁶. This creates a structural disincentive for retail participation in RET products and means that even a tokenised SM-REIT unit, if classified as a VDA rather than a conventional unit, could attract a materially different and less favourable tax treatment than its non-tokenised equivalent. Resolving this classification ambiguity is essential for capital formation in any RET ecosystem.

The Prevention of Money Laundering Act, 2002 (**"PMLA"**) also covers the transfer, exchange, and safekeeping of virtual digital assets, giving the Enforcement Directorate authority to investigate such transactions.²⁷ The pending Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, also raises questions, as RETs could potentially be classified as

²⁴ Expert Committee on Asset Tokenisation, Report of the Expert Committee on Asset Tokenisation (Sept. 12, 2023).

²⁵ Vivek Mishra & Vatsal Srivastava, *Asset Tokenisation in the Indian Real Estate Sector*, Lexology (Jan. 8, 2025), <https://www.lexology.com/library/detail.aspx?g=3b05bb3b-8b83-4386-93b5-74bde3277399>.

²⁶ Income-tax Act, No. 43 of 1961, § 115BBH (Ind.).

²⁷ Prevention of Money Laundering Act, No. 15 of 2002, § 2(1)(u) (Ind.).

“cryptocurrency,”²⁸ though no legal clarity on this exists yet from SEBI or the Reserve Bank of India (“RBI”).

The Telangana State Government has taken a proactive step with its own guidance note on asset tokenisation,²⁹ which outlines technical complexities and suggests a structured approach for companies. The note distinguishes between custodial and non-custodial approaches to token ownership, a crucial point for understanding compliance with Indian foreign exchange laws. It also proposes establishing a ring-fenced regulatory apex body with a board of technocrats to oversee DLT and digital assets. This body would be responsible for key functions such as licensing, governance, risk mitigation, and dispute resolution for the nascent tokenisation ecosystem. This recommendation signals a forward-thinking approach aimed at creating a specialised authority to manage the unique technical and legal challenges of this emerging field, rather than trying to fit it entirely within existing laws and regulations. This proactive measure attempts to fill a significant regulatory void at the national level, providing a structured approach for companies and positioning the state as a leader in fintech innovation. This note can serve as a valuable reference point for national policy discussions.

To guide the market’s future, India can draw from inter-jurisdictional precedents. Countries like the USA, Canada, Dubai, and several in the European Union have already treated RETs as securities, with registration and licensing requirements. Comparative experience shows that regulators have taken two broad strategies towards RET: (i) applying existing securities law on a principle of technological neutrality, or (ii) developing experimental frameworks that integrate tokenisation within broader market reforms. Both models provide lessons for India in reconciling its regime with tokenisation.

²⁸ Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 (Ind.).

²⁹ TELANGANA STATE GOV'T, *Technical Guidance Note on Asset Tokenisation*, <https://it.telangana.gov.in/wp-content/uploads/2023/12/Technical-Guidance-Note-on-Asset-Tokenisation.pdf>

III. LEGAL AND OPERATIONAL CONFLICTS: CAN TOKENISATION MEET SM-REIT REQUIREMENTS?

Most global regulators have categorized RET as securities, rather than creating a new asset class; most jurisdictions have opted to amend or reinterpret existing security laws to bring RET within their scope. In the United States, the Securities and Exchange Commission (“**SEC**”) applies the Howey Test, which classifies an arrangement as a security if there is an investment of money in a common enterprise with an expectation of profits from the efforts of others³⁰ and the Reves Test, which determines whether a note is a security based on its economic substance³¹. On this basis, RET offerings are treated as “investment contracts”³² and regulated under the Securities Act of 1933³³ & 1934³⁴, which governs the issuance and registration of securities, secondary trading & market intermediaries.

In the European Union, the Markets in Crypto-Assets Regulation (“**MiCA**”) regulates crypto assets and expressly excludes security tokens³⁵ from its ambit but requires them to comply with the existing Markets in Financial Instruments Directive II (“**MiFID II**”), which governs traditional investment services³⁶. Accordingly, RETs that qualify as “transferable securities” must meet the Prospectus Regulation requirements on disclosure and investor protection³⁷.

³⁰ SEC v. W.J. Howey Co., 328 U.S. 293 (1946).

³¹ Reves v. Ernst & Young, 494 U.S. 56 (1990).

³² M. Todd Henderson & Max Raskin, *A Regulatory Classification of Digital Assets: Toward an Operational Howey Test for Cryptocurrencies, ICOs, and Other Digital Assets Survey: Privacy, Data, and Business*, 2019 COLUM. BUS. L. REV. 443 (2019).

³³ Securities Act of 1933, 15 U.S.C. §§ 77a–77aa (2018).

³⁴ Securities Exchange Act of 1934, 15 U.S.C. §§ 78a–78qq (2018).

³⁵ Regulation 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets, and amending Regulations (EU) No. 1093/2010 and (EU) No. 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, 2023 O.J. (L 150) 40, recital 9, art. 2(4).

³⁶ Directive 2014/65, of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, 2014 O.J. (L 173) 349.

³⁷ Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC, 2017 O.J. (L 168) 12, art.

In Asia, Singapore regulates RET through the Securities and Futures Act (“SFA”), which defines securities to include “*shares, units in a business trust or any instrument conferring or representing a legal or beneficial ownership interest*”³⁸. The Monetary Authority of Singapore has issued guidance confirming that RET structured as investment schemes are securities under the SFA³⁹, and it amended its licensing regime to cover digital securities intermediaries, ensuring parity with traditional securities dealers and custodians⁴⁰.

One common line in all of the approaches is the idea of continuity of the existing legislation with the adaptation of the new technologies. Tokenisation has been accommodated through clarifications on definitions, expanded disclosure obligations, and the extension of licensing requirements to new classes of digital intermediaries⁴¹. This has ensured that the end goals of securities regulation like investor protection, market integrity, and systemic stability remain intact, even in a blockchain environment.

India, however, confronts a more layered challenge. Its legal landscape is not limited to the SEBI Act and REIT regulations but is also deeply intertwined with other legislations like the Depositories Act 1996, the Companies Act 2013, the Contract Act 1872, and banking and other anti-money laundering laws. Each of these laws was designed around assumptions of centralisation from the government, with oversight and record-keeping in mind. Tokenisation, by contrast, is built on decentralisation, disintermediation, and self-executing code. This creates a problem not only in the issuance and custody of units, but also in areas such as secondary market surveillance, corporate governance, dispute resolution governing the tokens, etc.

2(a).

³⁸ Securities and Futures Act 2001, Cap. 289, § 2(1) (Sing.).

³⁹ Monetary Auth. of Sing., *A Guide to Digital Token Offerings*, (Sep. 8, 2025) <https://www.mas.gov.sg/regulation/explainers/a-guide-to-digital-token-offerings>.

⁴⁰ Securities and Futures (Amendment) Act 2017, Act 4 of 2017, § 99 (Sing.).

⁴¹ OECD, *Regulatory Approaches to the Tokenisation of Assets* (2021), https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/03/regulatory-approaches-to-the-tokenisation-of-assets_da7ae482/aea35466-en.pdf.

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In this part, we delve into some of the basic issues that can occur in the facilitation of RET and whether they can be solved through the existing mechanisms of SM-REIT Regulation or would require a structural change for India:

A. PRIMARY ISSUANCE

SM-REITs are issued through a book-building process and are credited to investors' dematerialised accounts maintained under the NSDL or CDSL⁴², which are the legally binding repositories of ownership under the Depositories Act of 1996⁴³. However, the issuance of RET is linked with blockchain-based tokens whose ownership is recorded on a distributed ledger. In such a scenario, the blockchain is itself considered the authoritative record of title of ownership. Therefore, there exists a gap in legal recognition of whether the statutory depositories or the blockchain ledger should prevail in the event of any discrepancy.

One possible solution is the creation of “tokenised dematerialised receipts.” In this model, blockchain tokens would act as digital representations (or wrappers) of the standard dematerialised units already held in depository accounts. To make this work, the Depositories Regulations would need to be amended to allow Registrar and Transfer Agents (“RTAs”)⁴⁴ to use blockchain as a supplementary record-keeping system, while still recognising the centralised depositories as the legal authority.

However, such a reform would not be simple. The law would need to clearly define how conflicts between on-chain records, which are stored directly on the

⁴² Securities and Exchange Board of India, Consultation Paper on Ease of Doing Business For Small And Medium REITS (Oct. 2024), https://www.sebi.gov.in/reports-and-statistics/reports/oct-2024/consultation-paper-on-ease-of-doing-business-for-small-and-medium-reits_88153.html; Securities and Exchange Board of India, Master Circular for Real Estate Investment Trusts (REITS) Form C, ¶ 3(b) (July 2023), https://www.sebi.gov.in/legal/master-circulars/jul-2023/master-circular-for-real-estate-investment-trusts-reits-_73585.html.

⁴³ Depositories Act, No. 22 of 1996 (Ind.).

⁴⁴ SEBI (Depositories and Participants) Regulations, 2018, Gazette of India, pt. III, sec.4, Reg. 28 (Oct. 3, 2018).

blockchain, such as token ownership and transaction history and off-chain records, which are traditional depository or exchange records, are to be resolved. It would also need to establish who bears liability in the event of technical failures, which could result in loss or misallocation of tokens. Only by addressing these legal and technical challenges can tokenisation be effectively integrated into the existing dematerialisation system.

B. SECONDARY MARKET TRADING AND MARKET SURVEILLANCE

Under the current SM-REIT Regulations, all secondary trading is required to take place on recognised stock exchanges such as the NSE or BSE⁴⁵. These exchanges provide a centralised and highly regulated system for trade matching, clearing, and settlement.

Tokenisation, by contrast, introduces a very different model. Blockchain-based systems allow for direct, P2P transfers of tokens without the need for a traditional exchange. While this enables faster and more flexible transactions, it also bypasses the centralised surveillance mechanisms that regulators like SEBI rely on to detect and prevent market abuse. This creates a serious problem for regulatory enforcement.

India has attempted to impose some transparency in the crypto ecosystem through fiscal measures, for example, by levying a 1% tax deducted at source (“TDS”) on certain virtual asset transfers.⁴⁶ However, this tax is a revenue-collection tool, not a substitute for securities market regulations. It does not address issues such as insider trading, market manipulation, or systemic risks.

Therefore, if tokenised REITs were to be permitted, the law would need to explicitly address the status of P2P token transfers and establish mechanisms to bring them under securities market regulation. Without such reforms, there would be a gap between the surveillance-based protections offered in the stock exchange system and the unregulated nature of on-chain transfers.

⁴⁵ Securities and Exchange Board of India (Real Estate Investment Trusts) (Amendment) Regulations, 2024, Gazette of India, pt. III, sec. 4, Reg. 21 (Mar. 8, 2024)

⁴⁶ Income-tax Act, No. 43 of 1961, § 194S (Ind).

C. LEVERAGE, VALUATION, AND INVESTOR DISTRIBUTIONS

Leverage is a defining feature of REIT returns. By borrowing against stable, income-generating real estate, a REIT can enhance equity returns. However, this amplification works symmetrically: leverage magnifies downside risk in a falling rental or valuation environment. For investors evaluating a tokenised REIT, understanding the trust's loan-to-value ratio, the tenor and cost of its debt, and whether it is fixed or floating rate is essential to assessing true risk-adjusted returns. A token price that appears stable may mask significant balance-sheet risk if the trust is approaching its leverage ceiling or is exposed to interest rate repricing.

The SM-REIT Regulations place limits on leverage as a safeguard. Specifically, it caps debt at 49% of the value of the underlying asset.⁴⁷ This ceiling is enforced through conventional financial reporting and independent audits, making it a reliable risk-mitigation tool. Tokenisation, however, introduces a new challenge. On-chain lending protocols allow investors to instantly borrow against tokenised assets by using them as collateral.⁴⁸ If such mechanisms were applied to SM-REIT tokens, there is a real risk that the trust could become over-leveraged on-chain, outside the visibility of both the manager and SEBI. This would effectively undermine the SEBI's designed debt limits, and a regulated entity would collapse due to excessive borrowing in an unregulated digital environment. To prevent this, any tokenisation regulation must explicitly regulate on-chain borrowing and require managers to disclose all forms of debt, whether incurred on traditional markets or through blockchain-based protocols.

Valuation presents a similar tension. Under the SM-REIT Regulations, an independent valuation of the underlying assets must be carried out twice a year to determine the trust's Net Asset Value (“NAV”).⁴⁹ This NAV serves as the

⁴⁷ Securities and Exchange Board of India (Real Estate Investment Trusts) (Amendment) Regulations, 2024, Gazette of India, pt. III, sec. 4, Reg. 17(1) (Mar. 8, 2024).

⁴⁸ Angelo Aspris & Jiri Svec, *Locked in, Levered up: Risk, Return, and Ruin in DeFi Lending*, 101691 THE BRIT. ACC. REV. (2025).

⁴⁹ Securities and Exchange Board of India (Real Estate Investment Trusts) (Amendment) Regulations, 2024, Gazette of India, pt. III, sec. 4, Reg. 15(2) (Mar. 8, 2024).

authoritative measure of the REIT's intrinsic worth. Token markets, however, operate differently as the price of a token on a secondary exchange is constantly shifting in response to supply, demand, and speculation. This raises a legal question as to whether SEBI recognize the professionally calculated NAV or the fluctuating on-chain market price as binding? A possible middle path is to use blockchain "oracles" to securely feed the off-chain NAV into the distributed ledger. In this model, the NAV would remain the official, legally binding figure, while the on-chain market price would be treated merely as an indicator of investor sentiment.

Despite these conflicts, tokenisation also offers opportunities for efficiency. One area of potential synergy is the automation of investor distributions. At present, SM-REITs pay dividends through traditional banking channels, which can involve delays and administrative costs. Smart contracts could streamline this process by automatically transferring payouts to investors' digital wallets as soon as the required conditions are met.⁵⁰ Importantly, to comply with existing banking laws, these automated transfers would still need to be routed through verified bank accounts. This makes distribution automation one of the most feasible bridges between traditional SM-REIT practices and tokenised models.

India's listed REITs have historically offered distribution yields in the range of 6–8%,⁵¹ but these yields are sensitive to occupancy rates, lease renewal terms, and weighted average lease expiry ("**WALE**") profiles. Where WALEs are shortening or vacancy is rising, distributions face compression risk irrespective of the trust's compliance with the 90% mandatory distribution requirement. In a tokenised environment, where investors may rely on smart contract-automated payouts as a proxy for stable income, this compression risk is particularly acute: automated distributions do not distinguish between contractually mandated payouts and distributable cash flow that is genuinely recurring.

⁵⁰ Vedant Jayesh Oza et al., *Smart Contracts and Tokenisation: Revolutionizing Real Estate Transactions with Blockchain Technology*, in 2024 International Conference on Inventive Computation Technologies (ICICT) 1598 (2024), <https://ieeexplore.ieee.org/abstract/document/10544886>.

⁵¹ MOFSL, *List of Best REIT Stocks in India 2026*, MOTILAL OSWAL (Mar. 27, 2026), <https://www.motilaloswal.com/learning-centre/2026/3/list-of-best-reit-stocks-in-india-2026>.

D. CORPORATE GOVERNANCE AND SMART CONTRACT AUTOMATION

The governance of an SM-REIT, along with the protection of unitholder rights, is currently anchored in the Companies Act, 2013, and SEBI's Regulations.⁵² Under this model, investors exercise their voting rights through conventional means, which include attending physical meetings or participating in virtual meetings arranged by the manager.

A tokenised framework, however, opens the door to a very different model. Here, voting can be automated through smart contracts, where each token directly represents a vote. This system promises greater efficiency, faster execution, and enhanced transparency by removing intermediaries and relying on code to record and tally decisions in real time.⁵³

The challenge lies in the legal recognition of such mechanisms. In India, smart contracts technically fall under the ambit of the Indian Contract Act, 1872, if they fulfil the basic elements of contract law. Yet, their enforceability remains uncertain. Critical questions arise as to what happens if a smart contract contains a coding error or bug. How should courts intervene if the code produces an unfair or unintended outcome? And, most importantly, can an on-chain vote be considered legally equivalent to a vote taken in a traditional meeting?⁵⁴

To resolve these uncertainties, India would need to establish a clear legal regulation that defines the validity and finality of smart contract-based governance. Thus, it would also need to allocate liability in cases of malfunction or manipulation of the code. One possible avenue for experimentation is the International Financial Services Centre (“IFSC”) sandbox, which provides a controlled environment for testing innovative financial products. This sandbox

⁵² Companies Act, 2013, §§ 149, 166 (Ind.); Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations, 2014, Gazette of India, pt. III, sec. 4, Regs. 26H, 26L, 26P (Sept. 26, 2014).

⁵³ Oza et al., *supra* note 39.

⁵⁴ Law School Policy Review, *Are Smart Contracts Really Smart?*, LAW SCHOOL POLICY REVIEW & KAUTILYA SOCIETY (Jan. 13, 2024), <https://lawschoolpolicyreview.com/2024/01/13/are-smart-contracts-really-smart/>.

could serve as an operational testbed for integrating blockchain-based voting into the governance of SM-REITs. This is discussed further in the next section.

IV. EXPERIMENTATION BEFORE REGULATION: PRE-STEPS TO CREATE A FOCUSED REGULATION

The previous section established that significant legal and operational conflicts exist between India's centralised regulatory framework and the decentralised nature of RET and thus, legislative overhaul is both complex and impractical without a clear, evidence-based strategy. The most prudent path forward, therefore, is through a phased approach of controlled experimentation. This section will A) explore the global strategy of leveraging regulatory sandboxes and pilot programs. It will then detail B) how India is applying these lessons through the pioneering initiatives of the IFSCA and GIFT City. Finally, the analysis will C) culminate in the proposal of a comprehensive full-stack regulatory sandbox framework designed to systematically test the entire tokenisation lifecycle from issuance to governance, thereby informing the development of a robust and effective national regulatory regime.

A. EXPERIMENTATION AS A GLOBAL REGULATORY STRATEGY FOR TOKENISATION

The global approach to regulating tokenisation is to use experimentation over rushed statutory amendments. Various jurisdictions are relying on pilot programs and regulatory sandboxes to test how DLTs can be integrated with existing laws. This strategy allows regulators to build practical knowledge and mitigate risk before establishing laws.

Dubai's Real Estate Electronic System ("**REES**") serves as a clear illustration of this model. Launched in March 2024, the pilot project tokenised property title deeds on a blockchain, making the Dubai Land Department the first real estate registrar in the Middle East to experiment with DLT-based ownership records⁵⁵. By framing this as a phased pilot, Dubai could assess the

⁵⁵ *Dubai Land Department Launches Pilot Phase of the 'Real Estate Tokenisation Project,'* <https://mediaof.fice.ae/en/news/2025/march/19-03/dubai-land-department-launches-real-estate-tokenisation-project> (last visited Sep. 9, 2025).

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technological resilience, investor safeguards, and integration with existing court enforcement processes. This allowed the regulator to observe how blockchain registries interact with principles of property law, such as title, transfer, and dispute resolution, before attempting wider implementation.

Similarly, the European Union created a six-year framework that permits financial institutions to test DLT-based systems for the trading, settlement, and custody of tokenised financial instruments.⁵⁶ This regime is explicitly experimental, relaxing certain obligations under key directives like MiFID II, the Settlement Finality Directive, and the Central Securities Depositories Regulation, but only for approved projects and under stringent conditions.⁵⁷ The DLT Pilot, which applies broadly to financial instruments and not just real estate tokens, creates a test environment for regulators.

Indonesia and Luxembourg are especially the ones that have integrated RET into private pilot projects, with Indonesia allowing minimum investments as low as \$1,000 to democratize access.⁵⁸ In technologically advanced hubs like Singapore, the Monetary Authority of Singapore (**"MAS"**) has also approached tokenisation through structured pilots, such as Project Guardian.

Collectively, these examples demonstrate that pilot programs enable regulators to create a space for experimentation while avoiding premature or rigid regulation in the same space. This lesson is particularly critical for India, where real estate tokenisation intersects with some of the most sensitive aspects of law, including immovable property rights and SEBI's securities regulations.

⁵⁶ European Securities and Markets Authority, *DLT Pilot Regime*, <https://www.esma.europa.eu/emas-activities/digital-finance-and-innovation/dlt-pilot-regime>.

⁵⁷ Autorité des Marchés Financiers, *The Regulation on a Pilot Regime for Market Infrastructures Based on Distributed Ledger Technology*, AMF FRANCE <https://www.amf-france.org/en/news-publications/depth/pilot-regime..>

⁵⁸ *Unlock Indonesian Real Estate Investment with a Revolutionary Platform*, THE BALI HOMES, <https://www.thebalihomes.com/blog/unlock-indonesian-real-estate-investment-with-a-revolutionary-platform>.

B. INDIA'S EMERGING EXPERIMENTS: THE ROLE OF IFSCA AND GIFT CITY

India has already begun to internalise this global lesson by its early tokenisation initiatives in pilot programs within GIFT City, under the supervision of the IFSCA as mentioned above. GIFT City offers a distinct legal and regulatory environment where entities incorporated there are treated as non-residents for foreign exchange law purposes and are required to transact in foreign currency, making it much easier for financial innovation.

The most prominent example of this is the partnership between Terazo and Tokeny, which launched India's first regulated tokenised real estate fund in GIFT City. Approved by IFSCA, the project, named Oryx, structured a \$7 million tokenised fund, enabling qualified primary investors to participate with minimum investments of \$100,000 and secondary investors with as little as \$1,000.⁵⁹ This was made possible by the regulatory sandbox framework introduced by IFSCA in 2022, which allows FinTech entities to test innovations in a controlled environment with temporary exemptions and close regulatory oversight.⁶⁰ By confining the project within GIFT City, IFSCA could monitor operational risks, investor responses, and compliance challenges without exposing the wider Indian market to systemic risks.

C. DESIGNING A FULL-STACK TOKENISATION SANDBOX IN INDIA

The legal basis for India to pursue these experiments lies in the International Financial Services Centres Authority Act, 2019 ("**IFSCA Act**").⁶¹ Its provisions are drafted in deliberately broad terms, granting IFSCA the flexibility to recognise instruments like tokenised securities for their regulation.⁶²

⁵⁹ *Terazo and Tokeny Join Forces for India's First Regulated Tokenisation Project - Tokeny*, (Nov. 6, 2023), <https://tokeny.com/terazo-and-tokeny-join-forces-for-indias-first-regulated-tokenisation-project/>.

⁶⁰ Press release, Press Information Bureau, *IFSCA Introduces Framework for Regulatory Sandbox to Tap into Innovative FinTech Solutions*, (Oct. 19, 2020) <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1665858®=48&lang=2>.

⁶¹ International Financial Services Centres Authority Act, 2019, No. 27, of 2019 (Ind.).

⁶² International Financial Services Centres Authority Act, No. 27 of 2019, §§ 12–13 (Ind.).

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Within this context, a full-stack tokenisation sandbox in GIFT City would provide a legally sound mechanism for experimentation. Extending IFSCA's existing framework specifically to tokenisation would mean designing pilots that test the entire transactional chain, from the issuance of tokens to secondary trading, custody, clearing, and governance.

For such a sandbox to be effective, pilots should unfold in phased stages, each serving a distinct regulatory function:

1. Proof-of-concept stage:

Participants would demonstrate technical feasibility and compliance planning. This includes explaining how token ownership will be represented, how smart contracts will enforce investor rights, and how KYC/AML requirements will be embedded. Legally, this stage addresses whether tokenised instruments can fit within existing legal categories such as “securities” under the SCRA or “units” under REIT/SM REIT Regulations.

2. Controlled testing:

Live issuance would take place with a limited number of accredited or institutional investors. This dual purpose of restricting access is to reduce exposure in case of failure and to generate data on whether tokenised claims can deliver enforceable rights equivalent to dematerialised securities.

3. Scaled implementation:

If earlier phases are successful, access would expand to a wider investor base, including sophisticated but non-institutional participants. This stage would test questions of market integrity as to whether tokenised securities can be traded fairly and efficiently on alternative trading systems without breaching prohibitions on “off exchange” trading under the SCRA. Enhanced disclosure and periodic reporting obligations, similar to those under SEBI's Listing Obligations and Disclosure Requirements, would be imposed.

4. Evaluation and exit:

At the conclusion of the pilot, IFSCA would publish a detailed assessment of legal, operational, and investor-protection outcomes. This ensures that experiments contribute to broader law reform.

A sandbox must also embed strong investor protection mechanisms. Accordingly, sandbox participants should provide enhanced disclosures specific to tokenisation risks, including vulnerabilities in smart contracts, risks of private key loss, and potential liquidity mismatches. Investor categorisation is also essential, with participation in early-stage pilots confined to “sophisticated investors” to minimise the risk of retail losses. Complementarily, a system of mandatory investor education could be introduced, and a specialised dispute resolution mechanism, perhaps a panel of arbitrators or mediators trained in both securities law and DLT, could provide specialised forums for redress.

Finally, the sandbox must be structured as a knowledge transfer mechanism. Participants should be obligated to provide detailed periodic reports to IFSCA. IFSCA could then publish anonymised case studies, ensuring lessons are disseminated to the wider regulatory community. Coordination with domestic regulators like SEBI and RBI, and international engagement with bodies like IOSCO and the Financial Stability Board, would allow India to align its practices with emerging global norms.

V. CONCLUSION

India stands at a critical juncture in the evolution of its financial markets. The rise of real estate tokenisation presents an opportunity to unlock liquidity and democratise an asset class that has historically been out of reach for most retail investors. The challenge, however, is to integrate this new technology without compromising the robust investor protection paradigm that SEBI has meticulously built.

The two-pronged approach proposed in this paper is designed to directly address the specific legal and structural gaps identified in the analysis. The first prong that is, incremental amendments to the SM-REIT Regulations responds to the specific operational conflicts identified in Part III: amending the

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Depositories Act and REIT Regulations to recognize tokenized dematerialized receipts addresses the primary issuance gap; mandating disclosure of on-chain borrowing addresses the leverage surveillance gap; empowering SEBI to recognize blockchain oracles as permissible valuation feed mechanisms addresses the NAV conflict; and legislating the enforceability of smart contract-based governance addresses the corporate governance gap.

The second prong, that is, the GIFT-IFSC sandbox, responds to the broader need for evidence-based regulatory development: the phased sandbox structure maps directly onto the issues of market surveillance, investor protection, and tax characterisation that cannot be resolved through statutory amendment alone without empirical data. A recommendation that does not trace back to a diagnosed problem risks being either over-inclusive or unworkable in practice; each element of this framework is deliberately tethered to a specific conflict identified in this paper. Thus, by bridging the gap between established financial infrastructure and DLT, India can create a more efficient, transparent, and inclusive real estate investment ecosystem for the future.

FIDUCIARY DUTY OF THE BOARD IN AI DECISION-MAKING

*Avni Vashishtha & Tarishi Verma **

ABSTRACT

Artificial Intelligence is increasingly being integrated into corporate decision-making processes, with boards relying on algorithmic systems for risk assessment, compliance, forecasting, and strategic governance. While such systems enhance efficiency and predictive accuracy, they also challenge the traditional foundations of fiduciary accountability under company law. Directors' duties under Section 166 of the Companies Act, 2013 are premised on human judgment, independent application of mind, and identifiable accountability. However, the growing reliance on opaque and data-driven AI systems complicates the extent to which directors may rely upon algorithmic outputs while continuing to satisfy their duties of care, diligence, loyalty, and good faith. This paper examines the tension between AI-assisted decision-making and fiduciary obligations of the Board of Directors under the Companies Act, 2013. It analyses how algorithmic opacity, embedded bias, data privacy concerns, and the increasing reliance on AI-generated outputs in corporate decision-making create challenges for corporate accountability, oversight, and independent board judgment. It further evaluates whether existing legal standards governing directors' duties, oppression and mismanagement, and board oversight adequately address harms arising from decisions materially influenced by AI systems. In doing so, it critically analyses Section 166 of the Companies Act, 2013, SEBI's Draft AI Governance Framework, 2025, and comparative regulatory developments in the United Kingdom and the European Union concerning algorithmic accountability and human oversight. The author argues that the present Indian legal framework does not adequately address liability where corporate decisions are materially influenced by AI systems. Therefore, they propose targeted reforms, including mandatory AI disclosure requirements for board decisions, independent algorithmic audits, board-level AI oversight mechanisms, AI competency standards for directors, and statutory clarification regarding fiduciary liability in AI-assisted decision-making. The paper concludes that while AI may assist corporate governance, fiduciary accountability must ultimately remain grounded in human oversight and responsibility.

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Keywords: Artificial Intelligence (“AI”), Corporate Governance, Fiduciary Duties, Board of Directors (“BOD”), Algorithmic Bias, Data Privacy and Security.

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I. INTRODUCTION

The fiduciary duties of directors are traditionally grounded in the principles of care, loyalty, good faith, and independent judgment.¹ Under Section 166 of the Companies Act, 2013, directors are required to exercise due care, diligence,

¹ Vijay P. Singh, *Directors' Fiduciary Duties to the Company: A Comparative Study of the UK and Indian Companies Act*, 27 TRUSTS & TRUSTEES 132 (2021).

and accountability while acting in the best interests of the company.² These duties are fundamentally premised upon human judgment and identifiable responsibility in corporate decision-making. However, the increasing integration of Artificial Intelligence (“AI”) into boardroom governance has begun to challenge these foundational assumptions underlying directors’ duties under the Companies Act, 2013.³

This transformation is no longer theoretical. In 2025, UAE’s largest International Holding Company introduced “Aiden Insight 2.0,” an AI Board Observer designed to participate in board processes through data analysis, risk assessment, and strategic recommendations.⁴ Such developments demonstrate that AI systems are no longer confined to operational functions but are increasingly influencing decisions traditionally dependent upon directors’ independent judgment. As boards rely upon AI systems for forecasting, compliance, investment strategy, and risk assessment, significant legal questions arise regarding accountability when AI-assisted decisions result in corporate harm.⁵

While AI may enhance efficiency and predictive capability, it also creates concerns regarding fiduciary accountability. Algorithmic opacity, embedded bias, and the increasing reliance on AI for decision-making complicate the ability of directors to independently evaluate and supervise AI-assisted decisions.⁶ This becomes particularly significant because the fiduciary duty framework under

² Bharath Prakash & Jyotirmoy Banerjee, *The Rise of Artificial Intelligence in Corporate Accountability: Legal Implications for Corporate Governance in India*, 13 INT’L J. CREATIVE RSCH. THOUGHTS a250, a251–52 (2025).

³ DEIRDRE AHERN, *Corporate Law, Corporate Governance and AI: Are We Ready for Robots in the Boardroom?*, THE CAMBRIDGE HANDBOOK OF PRIVATE LAW AND ARTIFICIAL INTELLIGENCE 409 (Ernest Lim & Phillip Morgan eds., 2024).

⁴ Manal Ahdadou, Ayoub Ahdadou, Abdellah Aajly & Mohamed Tahrouch, *Artificial Intelligence in Corporate Boards: A Dual-Dimensional Framework for Integration Across Autonomy and Structural Levels*, DATA SCI. & MGMT. (2025).

⁵ Göktürk Kalkan, *The Impact of Artificial Intelligence on Corporate Governance*, 18 JOURNAL OF CORPORATE FINANCE RESEARCH 17 (2024).

⁶ Floris Mertens, *The Use of Artificial Intelligence in Corporate Decision-Making at Board Level : A Preliminary Legal Analysis* (FIN. L. INST., Working Paper No. WP 2023-01, 2023), <https://ssrn.com/abstract=4350583>.

Section 166 of the Companies Act, 2013, was developed around the assumption that corporate decisions are ultimately made through human judgment and oversight.⁷ The increasing reliance on algorithmic systems therefore raises a central legal question: to what extent may directors rely on AI-generated outputs without compromising their duties of care, diligence, good faith, and independent judgment under Section 166 of the Companies Act, 2013? While AI may assist directors in discharging these duties, it still remains an assistive tool and not a delegated decision-making authority.

This paper examines whether the existing fiduciary duty framework under the Companies Act, 2013, is capable of addressing accountability gaps created by AI-assisted corporate decision-making. It analyses issues of board oversight, reliance on AI-assisted decision-making, algorithmic accountability, shareholder protection, and liability allocation in the context of AI governance, while comparatively examining emerging approaches under the European Union AI Act and the United Kingdom regulatory model.⁸ It further argues that although AI may assist corporate decision-making, fiduciary accountability and oversight obligations continue to remain with directors, thereby necessitating clearer governance safeguards, oversight standards, and liability frameworks for AI-assisted board decisions.

II. ROLE OF AI IN CORPORATE GOVERNANCE AND EMERGING RISKS

Corporate governance is fundamentally premised on accountability, transparency, oversight, and the exercise of independent judgment by the Board of Directors.⁹ In recent years, AI has become increasingly integrated into corporate governance processes, with boards relying on algorithmic systems for risk assessment, compliance monitoring, forecasting, ESG analysis, recruitment,

⁷ Prakash and Banerjee, *supra* note 2.

⁸ Yavuz Selim Balcioğlu, Ahmet Alkan Çelik & Erkut Altındağ, *A Turning Point in AI: Europe's Human-Centric Approach to Technology Regulation*, 23 J. RESPONSIBLE TECHNOLOGY 100128 (2025).

⁹ Niamh M. Brennan & Jill Solomon, *Corporate Governance, Accountability and Mechanisms of Accountability: An Overview*, 21 ACCOUNTING, AUDITING & ACCOUNTABILITY JOURNAL 885, 885–906 (2008).

and strategic decision-making.¹⁰ While AI enhances efficiency and predictive capability, the increasing reliance on AI-generated outputs also raises concerns regarding the extent to which directors can continue to exercise meaningful oversight and independent judgment in corporate decision-making.¹¹

One of the primary concerns associated with AI-assisted governance is the opacity of algorithmic systems, commonly referred to as the “black-box” problem. AI systems often operate through highly complex computational processes that remain difficult to interpret or meaningfully interrogate.¹² This creates significant challenges for corporate accountability, particularly where directors are expected to justify decisions affecting shareholders and stakeholders. In 2023, the National Eating Disorders Association replaced human support staff with an AI chatbot named “Tessa,” which began providing harmful and contradictory advice within days of deployment.¹³ The organisation remained unable to explain the reasoning underlying the chatbot’s responses, illustrating how opaque algorithmic systems may undermine transparency and complicate oversight obligations in AI-assisted decision-making.

Algorithmic bias presents another significant fiduciary concern. Since AI systems are trained on historical datasets, they may reproduce and reinforce pre-existing social and institutional biases.¹⁴ A prominent example is Amazon’s AI recruitment tool, which reportedly downgraded women’s résumés after being trained on historically male-dominated hiring patterns.¹⁵ Although the system was not intentionally programmed to discriminate, it replicated biases embedded

¹⁰ Yangyan Liu et al., *Artificial Intelligence Applications and Corporate ESG Performance*, 104 INT. REV. ECON. FINANCE 104559 (2025).

¹¹ Steve Kourabas & Cheng-Yun Tsang, *The Board Monitoring Function: Artificial Intelligence in the Era of Heightened Accountability*, 13 CHIN. J. COMP. LAW cxaf013 (2025).

¹² Yavar Bathaee, *The Artificial Intelligence Black Box and the Failure of Intent and Causation*, 31 HARV. J.L. & TECH. 889 (2018).

¹³ Faye Kollig et al., *Fictional Failures and Real-World Lessons: Ethical Speculation Through Design Fiction on Emotional Support Conversational AI 1*, THE PROCEEDINGS OF THE 2025 CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (Naomi Yamashita et al. eds., 2025).

¹⁴ Dinesh Deckker & Subhashini Sumanasekara, *Bias in AI Models: Origins, Impact, and Mitigation Strategies*, 3 J. ADVANCES ARTIFICIAL INTELLIGENCE 234, 236 (2025).

¹⁵ Xinyu Chang, *Gender Bias in Hiring: An Analysis of the Impact of Amazon’s Recruiting Algorithm*, 23 ADV. ECON. MANAG. POLIT. SCI. 134 (2023).

within the underlying data.¹⁶ Such outcomes become particularly concerning within corporate governance because algorithmic outputs may appear objective despite producing discriminatory or inequitable results, thereby weakening directors' ability to exercise independent judgment.

The increasing use of AI systems in corporate governance also raises concerns relating to data governance and cybersecurity oversight.¹⁷ AI systems frequently rely on large-scale processing of sensitive financial and personal data, increasing the risks associated with unauthorised disclosures and cybersecurity failures.¹⁸ Between 2020 and 2023, Microsoft AI researchers reportedly exposed approximately 38 terabytes of sensitive data due to an oversight failure rather than an external cyberattack.¹⁹ Such incidents demonstrate how failures in supervising AI-driven systems may create substantial corporate risks despite the absence of deliberate misconduct. Consequently, directors' duties of care and diligence increasingly extend to ensuring meaningful oversight over the deployment, monitoring, and governance of AI systems within corporate structures.

III. WHAT HAPPENS WHEN AI ENTERS THE BOARDROOM: CONCEPT OF ROBO DIRECTORS

As Artificial Intelligence becomes increasingly integrated into boardroom decision-making, AI systems are no longer limited to supporting directors through data analysis and strategic recommendations but are also capable of participating in board-level deliberations. This evolution has given rise to the concept of the "robo-director," where AI systems assume an increasingly influential role in corporate decision-making.²⁰ Since AI systems lack legal

¹⁶ *Id.*

¹⁷ WORLD ECONOMIC FORUM, *Artificial Intelligence and Cybersecurity: Balancing Risks and Rewards* 5 (2025), <https://www.weforum.org/publications/artificial-intelligence-and-cybersecurity-balancing-risks-and-rewards/>.

¹⁸ Nadav Voloch & Ron S. Hirschprung, *Both Ends of Artificial Intelligence Impacting Privacy: A Review of Violation and Protection*, 9 FRONT. ARTIF. INTELL. 1686454 (2026).

¹⁹ Declan Humphreys et al., *AI Hype as a Cyber Security Risk: The Moral Responsibility of Implementing Generative AI in Business*, 4 AI ETHICS 791 (2024).

²⁰ Biranchi Naryan P. Panda, *Boardroom in AI Age, Scope for "Robo-Directors": An Analysis of the Indian Companies Act, 2013 and International Trends*, 11 ATHENS J. L. 143 (2025).

personality and independent fiduciary responsibility, the introduction of a robo-director raises fundamental concerns regarding control over decision-making. The concept of human responsibility underlies major governance principles. Hence, it is unclear who will have legal responsibility. This concern is no longer purely hypothetical. Deep Knowledge Ventures, a Hong Kong-based venture capital firm, reportedly experimented with appointing an AI system named “VITAL” as a voting participant in board-level investment decisions and stated that no investment would be approved without its recommendation.²¹ Such developments raise important questions regarding accountability when AI-generated recommendations result in financial losses or unlawful outcomes. If the decision recommendation of a Robo Director leads to losses of money or illegality, including violations of ethical codes, the responsibility may arise for the developers of the AI, the corporation, or the human directors approving the decision.

The increasing reliance on AI-assisted decision-making also raises concerns regarding the possibility of discriminatory or distorted outcomes where AI systems rely upon flawed or historically skewed datasets. Within corporate governance structures, such risks become particularly significant because directors continue to remain legally accountable for decisions materially influenced by algorithmic systems.²²

IV. INDIAN LEGAL FRAMEWORK

Despite the increasing influence of AI in boardroom decision-making, the Companies Act, 2013 continues to place fiduciary accountability upon human directors even where corporate decisions are substantially influenced by AI-generated outputs.²³ However, the increasing integration of AI into boardroom

²¹ SILJA VOENEKY ET AL. EDS., *THE CAMBRIDGE HANDBOOK OF RESPONSIBLE ARTIFICIAL INTELLIGENCE: INTERDISCIPLINARY PERSPECTIVES* 331 (Cambridge University Press 1st ed. 2022).

²² Panda, *supra* note 20.

²³ GAL PASTIRK & ANDREJA PRIMEC, *The Legal Implications of AI in Corporate Governance: From Directors' Responsibilities to Regulatory Evolution*, J. BELAK & Z. NEDELKO eds., *9th FEB International Scientific Conference: Sustainable Management in the Age of ESG and AI: Navigating Challenges and Opportunities* 751, 754 (UNIVERSITY OF MARIBOR PRESS 2025).

decision-making complicates the application of traditional fiduciary standards, particularly where directors rely upon unexplainable AI systems while continuing to remain legally responsible for corporate outcomes.²⁴

Section 166 of the Companies Act, 2013, which governs directors' duties, becomes particularly significant in this context. The requirement under Section 166(1) to act with due care and diligence extends beyond conventional business judgment and increasingly encompasses the supervision and evaluation of AI-assisted decision-making processes.²⁵ While directors may not be expected to possess technical expertise equivalent to AI developers, excessive or mechanical reliance upon algorithmic recommendations may undermine the degree of independent judgment and oversight expected from a reasonable director.²⁶ Consequently, directors may be expected to meaningfully interrogate AI-generated outputs, assess their reliability and limitations, and identify material inconsistencies or risks before relying upon them in significant corporate decisions.

This obligation assumes particular significance where directors rely upon AI-generated outputs without adequately evaluating their reliability and limitations.²⁷ In such circumstances, reliance upon AI systems cannot by itself insulate directors from fiduciary accountability under Section 166. Rather, the continued exercise of informed and independent judgment remains central to the discharge of directors' duties even within AI-assisted governance structures.

Section 166(2), which requires directors to act in good faith in the interests of the company and its stakeholders²⁸, also requires careful consideration of whether independent judgment has been exercised where decisions are

²⁴ Ahdadou et al., *supra* note 4.

²⁵ Companies Act, No. 18 of 2013, § 166(1) (Ind.).

²⁶ Alfred R. Cowger Jr., *Corporate Fiduciary Duty in the Age of Algorithms*, 14 CASE W. RES. J.L. TECH. & INTERNET 138 (2023).

²⁷ Munifah Munifah, Eka Satria Wibawa & Kasih Purwantini, *Ethical Challenges in AI-Driven Decision-Making: Addressing Bias and Accountability in Business Applications*, 3 J. MANAG. INFORM. 105 (2024).

²⁸ Companies Act, 2013, No. 18 of 2013, § 166(2) (Ind.).

substantially influenced by AI systems..²⁹ Similarly, Section 166(4), which addresses conflicts of interest,³⁰ assumes significance where companies increasingly depend upon third-party AI vendors, technology consultants, and external data providers whose commercial priorities may not always align with the interests of the company.³¹ Such dependence may weaken objective oversight and compromise independent board judgment in AI-assisted decision-making processes.

The Companies Act, 2013, further reflects the human-centric foundation of Indian corporate governance by permitting only natural persons to serve as directors under Section 149.³² However, this creates a significant governance tension where directors remain legally accountable for decisions increasingly shaped by algorithmic systems despite lacking clear statutory guidance regarding the permissible extent of AI reliance under existing fiduciary standards.³³

India's emerging AI governance framework also reflects growing regulatory concern regarding accountability and oversight in algorithmic decision-making. Securities and Exchange Board of India's ("SEBI") AI/ML Governance Framework, 2025 requires regulated entities to adopt board-approved AI governance policies based upon principles such as accountability, transparency, auditability, fairness, and data protection.³⁴ Similarly, Regulation 17(1) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 requires independent directors to exercise independent judgment in board

²⁹ Mihir Naniwadekar & Umakanth Varottil, *The Stakeholder Approach Towards Directors' Duties Under Indian Company Law: A Comparative Analysis* (NUS Ctr. for L. & Bus., Working Paper No. 16/03, 2016), https://law.nus.edu.sg/wp-content/uploads/2020/04/006_2016_Umakanth.pdf.

³⁰ Companies Act, 2013, No. 18 of 2013, § 166(4) (Ind.).

³¹ Prakash & Banerjee, *supra* note 2.

³² Companies Act, 2013, No. 18 of 2013, § 149 (Ind.).

³³ Rudresh Mandal & Siddharth Sunil, *The Road Not Taken: Manoeuvring through the Indian Companies Act to Enable AI Directors*, 21 OXF. UNIV. COMMONW. LAW J. 95 (2021).

³⁴ SEC. & EXCH. BD. OF INDIA, CONSULTATION PAPER ON GUIDELINES FOR RESPONSIBLE USAGE OF AI/ML IN INDIAN SECURITIES MARKETS, https://www.sebi.gov.in/reports-and-statistics/reports/jun-2025/consultation-paper-on-guidelines-for-responsible-usage-of-ai-ml-in-indian-securities-markets_94687.html.

deliberations.³⁵ However, increasing reliance on common AI systems and algorithmic recommendations raises concerns regarding whether meaningful independence can truly be maintained where board deliberations become heavily dependent upon the same technological systems and data models.

The increasing use of AI systems in corporate governance also strengthens the importance of board oversight and monitoring obligations. In *re Caremark International Inc. Derivative Litigation* (1996), the Delaware Court held that directors have a duty to establish adequate reporting and compliance systems capable of bringing significant corporate risks to the board's attention.³⁶ The decision clarified that directors may incur liability not merely because corporate misconduct occurs, but where there is a sustained or systematic failure to exercise meaningful oversight over corporate operations.³⁷ Subsequent decisions such as *Stone v. Ritter* further developed this oversight doctrine by recognising that directors may be liable where they fail to implement monitoring systems altogether or consciously disregard clear warning signs and compliance risks.³⁸ Applied in the context of AI-assisted governance, these principles suggest that directors cannot avoid accountability merely because harmful outcomes arise from the use of AI systems.³⁹ Rather, increasing reliance upon AI systems arguably strengthens the obligation upon boards to maintain effective oversight, reporting, and risk-management mechanisms capable of identifying algorithmic failures, compliance risks and material inaccuracies in AI-generated outputs.⁴⁰

³⁵ SEC. & EXCH. BD. OF INDIA, SECURITIES AND EXCHANGE BOARD OF INDIA (LISTING OBLIGATIONS AND DISCLOSURE REQUIREMENTS) REGULATIONS, 2015, https://www.sebi.gov.in/legal/regulations/jul-2024/securities-and-exchange-board-of-india-listing-obligations-and-disclosure-requirements-regulations-2015-last-amended-on-july-10-2024-_84817.html.

³⁶ Angela N. Aneiros & Karen E. Woody, *Caremark's Butterfly Effect*, 72 AM. U. L. REV. 719 (2023).

³⁷ In *re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959, 970 (Del. Ch. 1996).

³⁸ Elizabeth Pollman, *Corporate Oversight and Disobedience*, 72 VAND. L. REV. 2013 (2019).

³⁹ Fazail Asrar Ahmed, Seema Gul & Salman Shahzad, *Ensuring Accountability and Transparency in AI-Driven Corporate Governance*, 3 INT'L J. SOC. SCI. BULL. 330 (2025).

⁴⁰ Joel Frenette, *Ensuring Human Oversight in High-Performance AI Systems: A Framework for Control and Accountability*, 20 WORLD J. ADV. RES. REV. 1507 (2023).

V. REGULATORY GAPS IN THE INDIAN LEGAL FRAMEWORK

Although existing fiduciary duties under the Companies Act, 2013 continue to apply to AI-assisted corporate governance, the Indian legal framework does not provide specific guidance regarding the extent to which directors may rely upon AI-generated outputs while continuing to satisfy standards of due care, oversight, and independent judgment. Unlike the European Union and the UK, which have introduced comprehensive AI regulations, India's current laws do not specifically address algorithmic accountability. Current fiduciary duty provisions do not clearly define directors' obligations regarding explainability, oversight, and reliability standards for AI systems used in corporate decision-making. The law does not mandate the directors to ensure that AI systems provide explainable decisions, creating potential conflicts between the duty of due diligence and reliance on non-explainable AI systems.

This statutory silence creates significant interpretive uncertainty. Existing fiduciary standards were developed around human-centred decision-making and provide limited guidance regarding how duties such as “due care,” “reasonable care,” and “independent judgment” should operate where corporate decisions are substantially influenced by AI systems.⁴¹ Consequently, uncertainty remains regarding whether directors are expected to understand the underlying functioning of AI systems, meaningfully interrogate algorithmic outputs, or merely rely upon their apparent reliability and efficiency.

Further, current legal frameworks do not clearly address liability allocation where harmful outcomes arise from AI-assisted decision-making involving directors, companies, and third-party AI vendors. Similarly, no uniform statutory standards presently exist requiring explainability audits, bias assessments, or oversight mechanisms for AI systems materially influencing corporate governance processes. As a result, the adequacy of the present Indian legal framework in governing fiduciary accountability within AI-assisted corporate governance remains uncertain, thereby necessitating targeted regulatory intervention.

⁴¹ Panda, *supra* note 20.

VI. OPPRESSION AND MISMANAGEMENT IN THE AGE OF AI

The regulatory uncertainty surrounding AI-assisted decision-making also extends to shareholder protection, particularly where algorithmic bias or inadequate oversight results in decisions that disproportionately prejudice minority shareholders. As companies increasingly rely on AI systems for strategic decisions, risk evaluation, and investment analysis, questions arise regarding the adequacy of existing remedies under the Companies Act, 2013.⁴² Where AI-assisted decisions influence matters such as proxy voting, dividend allocation, or investment decision-making, they may disproportionately disadvantage minority shareholders and undermine their ability to meaningfully challenge such decisions or establish unfair prejudice under the Companies Act, 2013.⁴³ When the board implements AI-assisted decisions without adequate oversight or fails to ensure algorithmic transparency, shareholders may find themselves unable to assess whether the decision was taken fairly and in their best interests, creating substantial gaps in corporate accountability.⁴⁴

The jurisdiction under Sections 241-242 of the Companies Act focuses primarily on the effect of corporate conduct rather than merely its legality. In *Shanti Prasad Jain v. Kalinga Tubes Ltd.*, the Supreme Court held that oppression requires a continuous course of burdensome, harsh, and wrongful conduct.⁴⁵ While articulated in the context of human conduct, this standard remains relevant where AI systems repeatedly generate biased outcomes that prejudice minority shareholders. Although Section 241(1)(a) gives relief for those cases in which corporate conduct has been carried on in a manner that has been prejudicial or oppressive to any member, applying this standard to AI-assisted corporate decisions raises novel legal questions - particularly regarding whether algorithmic outputs constitute ‘conduct’ attributable to those in control, whether

⁴² Mustafa Kenan Ustahililoğlu, *Artificial Intelligence in Corporate Governance*, 7 CORP. L. & GOV. REV. 123 (2025).

⁴³ Roberta Medda-Windischer & Katharina Crepaz, *Reframing Minority Rights Amid Global Challenge The Role of AI and Algorithmic Fairness in Promoting Diversity and Inclusion*, MIDAS (May 12, 2025), https://doi.org/10.57708/BQZYA_PKTSY-XRRQOEGMBHA.

⁴⁴ Huosong Xia et al., *Exploring the Impact of Responsible AI Governance on Corporate Performance: A Quasi-Natural Experiment*, 223 TECH. FORECAST. & SOC. CHANGE 124425 (2026).

⁴⁵ *Shanti Prasad Jain vs Kalinga Tubes Ltd.* AIR 1965 SC 1535 (Ind.).

bias embedded in a dataset satisfies the threshold of oppressive behaviour, and how courts may assess prejudice where the decision-making process itself remains opaque and non-explainable.⁴⁶ Indian courts have repeatedly held that oppression under Sections 241–242 is not confined to acts motivated by deliberate malice. In *Needle Industries (India) Ltd. v. Needle Industries Newey (India) Holding Ltd.*, the Supreme Court observed that even legally permissible acts may amount to oppression where they unfairly prejudice minority shareholders.⁴⁷ Likewise, in *V.S. Krishnan v. Westfort Hi-Tech Hospital Ltd.*, the Court emphasized that the remedy is equitable in nature and is directed against unfair prejudice in the conduct of corporate affairs rather than merely unlawful acts.⁴⁸ Applying these principles to AI governance, directors who rely upon non-explainable algorithmic systems without adequate supervision may expose the company to claims of oppression or mismanagement where such systems disproportionately harm minority shareholders or unfairly prejudice shareholder interests. Accordingly, the absence of deliberate human intent should not shield boards from liability where AI-assisted decision-making results in continuing unfair prejudice.

While the Companies Act, 2013, provides established remedies for oppression, mismanagement, and breach of fiduciary duty, it was not designed to address the unique challenges posed by AI systems, including opacity, technical complexity, and unintentional discrimination. Consequently, shareholders may face considerable difficulty in proving algorithmic bias, identifying responsible parties, or securing effective remedies under traditional legal standards, thereby exposing important gaps in corporate accountability and shareholder protection.⁴⁹

⁴⁶ Companies Act, No. 18 of 2013, § 241(1)(a) (Ind.).

⁴⁷ *Needle Industries India Ltd. v. Needle Industries Newey India Holdings Ltd.*, (1981) 3 SCC 333 (Ind.).

⁴⁸ *V.S. Krishnan and Ors. vs. Westfort Hi-tech Hospital Ltd. and Ors.* (2008) 2 Comp LJ 1 (SC) (Ind.).

⁴⁹ David Nersessian & Ruben Mancha, *From Automation to Autonomy: Legal and Ethical Responsibility Gaps in Artificial Intelligence Innovation*, MICH. TECH. L. REV. 55, 55 (2021).

VII. ALLOCATION OF LIABILITY: DIRECTORS, COMPANIES AND THIRD-PARTY VENDORS

The availability of shareholder remedies does not by itself resolve the question of accountability for AI-assisted boardroom decisions. Equally important is the question of how liability should be allocated among directors, companies, and third-party AI vendors within the existing legal framework.⁵⁰ The duty of care, which applies to the board of directors' management and oversight duties, is a norm of conduct mandated by Section 166 of the Companies Act, 2013. Even where directors lawfully delegate powers, they continue to remain under an obligation to exercise reasonable supervision and monitoring.⁵¹ In *Dale and Carrington Inv't. P. Ltd. v P.K. Prathapan*,⁵² The Supreme Court held that directors must act with utmost good faith, care, skill, and diligence in the interests of the company and its shareholders. The increasing use of AI in boardroom decision-making complicates this fiduciary framework because modern AI systems can analyse large volumes of data and generate complex recommendations that significantly influence corporate decision-making. When AI systems are used to assist in management or strategic decisions, directors must therefore critically evaluate and supervise such recommendations instead of relying on them blindly. Accordingly, directors should incur personal liability where they blindly rely upon AI-generated recommendations, fail to conduct reasonable oversight, ignore obvious algorithmic risks, or mechanically approve AI outputs without exercising independent judgment. Liability in AI-assisted corporate governance may arise at multiple levels, involving directors, the company, and third-party AI vendors.

The company itself may incur liability where AI-assisted decisions result in inaccurate disclosures, discriminatory practices, breach of statutory obligations, or failures relating to data protection and cybersecurity, including liability under Section 43A of the IT Act, 2000, where applicable. Since AI systems are

⁵⁰ John Armour et al., *Agency Problems and Legal Strategies*, in THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH 31, 37 (Reinier Kraakman et al. eds., 3d ed. 2017).

⁵¹ Re Barings plc, [1999] 1 BCLC 433 (ChD).

⁵² Dale and Carrington Inv't. P. Ltd. v. P.K. Prathapan, (2005) 12 SCC 212 (Ind.).

deployed as part of the company's decision-making framework, the company remains primarily responsible for the consequences of those decisions, irrespective of whether the immediate recommendation originated from an algorithm.

In addition, third-party AI vendors or technology providers may face contractual or negligence-based liability where defective algorithms, inadequate safeguards, or biased datasets contribute to corporate harm. However, such liability should ordinarily supplement rather than replace the fiduciary obligations of directors. Outsourcing AI development cannot amount to outsourcing fiduciary responsibility.⁵³

Liability in AI-assisted corporate governance should therefore be viewed as layered rather than mutually exclusive. Directors remain liable for failures of oversight and independent judgment under Section 166; companies remain liable for corporate acts carried out through AI systems; and third-party AI vendors may incur contractual or negligence-based liability where defects in the technology contribute to the harm. The involvement of AI should therefore influence the allocation of liability without displacing the fundamental principle that fiduciary accountability ultimately rests with human actors.⁵⁴

VIII. GLOBAL APPROACHES: UK & EU

The governance and accountability challenges discussed above have prompted several jurisdictions to adopt regulatory approaches specifically addressing the use of AI in corporate decision-making. In this context, it is useful to examine the approaches adopted in other leading jurisdictions to identify regulatory practices that may inform future reforms in India.

A. THE UK FCA AND PRA MODEL

A principles-based AI governance framework has been established by the UK's Financial Conduct Authority (“FCA”) and Prudential Regulation

⁵³ Samil Demir, *Legal Liability of Artificial Intelligence (AI) Operators: A Global Analysis* (June 12, 2025), <https://doi.org/10.5281/zenodo.15647905>.

⁵⁴ WILLIAM E. KNEPPER, DAN A. BAILEY & KATHARINE B. BOWMAN, *LIABILITY OF CORPORATE OFFICERS AND DIRECTORS* (LexisNexis 8th ed. 2009).

Authority (“**PRA**”), with the present Senior Managers and Certification Regime (“**SMCR**”) placing final responsibility on boards and senior managers.⁵⁵ Instead of drafting AI-specific laws, UK regulators use the SMCR framework to keep senior management functions personally responsible for overall AI outcomes in the business areas they have responsibility for, whether AI systems are in-house developments or third-party procurements.⁵⁶ The FCA April 2024 AI Update highlights that boards of directors have to set up proper governance arrangements under SYSC 4.1.1R, including proper organisational structures and effective AI system-specific risk management, and PRA SS1/23 guidance has moved AI model oversight to mandatory board-level responsibility with AI-specific metrics requirements for incorporation into risk reports.⁵⁷

In this framework, senior managers do not have the discretion of delegating responsibility for AI decisions and results, and regulators have the right to take direct action against individuals for AI breaches.⁵⁸ This approach was reflected in the FCA’s action against Starling Bank in 2024, where deficiencies in its AI-powered screening systems reportedly failed to identify thousands of high-risk accounts, resulting in a penalty of approximately £29 million for weak oversight and compliance failures.⁵⁹ The case illustrates how UK regulators continue to place accountability on senior management even where AI systems contribute to operational failures. The approach to regulation includes intensive requirements, such as enterprise-wide lists of AI, “Know Your Technology” obligations such that senior managers know and can explain AI systems they have responsibility for, and strong consumer protection measures by Consumer Duty requirements

⁵⁵ H.M. TREASURY, *Reforming the Senior Managers & Certification Regime: Consultation Response 7* (Apr. 2026), <https://www.gov.uk/government/publications/reforming-the-senior-managers-and-certification-regime-consultation-response>.

⁵⁶ Jennifer Holyoake, *FCA and PRA AI Update: Senior Managers’ Accountability for the Use of AI*, DLA PIPER (Apr. 30, 2024), <https://www.dlapiper.com/en/insights/publications/2024/04/fca-and-pra-ai-update-senior-managers-accountability-for-the-use-of-ai>.

⁵⁷ FIN. CONDUCT AUTH., *Senior Managers & Certification Regime Review Consultation Paper* (Consultation Paper No. CP25/21, July 2025), <https://www.fca.org.uk/publication/consultation/cp25-21.pdf>.

⁵⁸ H.M. TREASURY, *supra* note 55.

⁵⁹ PRERNA BEDI ET AL., *Starling Bank Fined 29 mln Pounds for "Shockingly Lax" Financial Crime Controls*, REUTERS (Oct. 2, 2024), <https://www.reuters.com/world/uk/starling-bank-fined-29-million-pounds-shockingly-lax-financial-crime-controls-2024-10-02/>.

that ensure AI systems provide good results without foreseeable harm.⁶⁰ The result is an intensive accountability framework in which boards and senior managers have individual responsibility for AI governance failures, operational resilience breaches, and refusals of consumer protection, effectively rendering directors fiduciarily accountable for the ethical rollout and ongoing oversight of AI decision-making technology within their own institutions.⁶¹ For India, the UK framework provides a useful model because it strengthens AI accountability through existing corporate governance structures rather than creating a separate AI-specific regime. Measures such as board-level oversight, AI risk reporting, and clearer attribution of managerial responsibility could be incorporated within the Companies Act, 2013 and SEBI's governance framework. However, the stringent enforcement structure of the SMCR⁶² may require adaptation to suit India's regulatory and institutional realities.

B. THE EU AI ACT

The EU AI Act⁶³ establishes standardized rules for artificial intelligence. It is the first comprehensive legal framework for artificial intelligence in the world. In order to differentiate AI from more basic software systems, the Act defines AI in Article 3(1) and lays forth explicit requirements for AI providers, deployers, importers, distributors, and product producers. The Act establishes a “risk-based approach” to regulate and classify AI systems according to the severity and extent of the dangers they can produce in order to adopt a reasonable and efficient set of regulations for AI systems. “High-risk AI systems,” or systems that pose a “high” risk, are divided into two categories. Firstly, there are AI systems that are employed as a product's safety feature (or in other ways covered by EU health and safety harmonization laws); and secondly, AI systems are used in eight specific areas, such as employment, education, law enforcement, migration, access to key public and private services, and in administering justice

⁶⁰ Holyoake, *supra* note 56.

⁶¹ FCA, *Cp25/21: Senior Managers & Certification Regime Review*, *supra* note 57.

⁶² Eleanore Hickman & Alan Brener, *The Senior Managers and Certification Regime in UK Practice and Global Context*, J. BANKING REGUL. 26, 356 (2025).

⁶³ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), 2024 O.J. (L 1689).

(Art. 6(1)–(2) and Annex III EU AI Act). The Act also imposes a wide range of obligations on the various actors involved in the lifecycle of a “high-risk AI system.”

To ensure deterrence and regulatory compliance, the EU AI Act prescribes substantial financial penalties for violations, including fines of up to EUR 35 million or 7% of global annual turnover for prohibited AI practices.⁶⁴ The Act also grants individuals the right to report non-compliance, seek explanations for AI-driven decisions, and file complaints before market monitoring authorities under Articles 85–87.⁶⁵

The EU framework illustrates how risk-based classification, mandatory transparency obligations, and audit requirements can strengthen accountability in AI governance.⁶⁶ Certain elements of this model, particularly enhanced oversight for high-risk AI systems in sectors such as finance, healthcare, and digital governance, could meaningfully inform future Indian regulation.⁶⁷ However, the EU’s extensive compliance and reporting framework may be difficult to replicate fully in India given the prevalence of start-ups and resource-constrained enterprises. Therefore, a sector-specific and calibrated adaptation may be more suitable within the Indian regulatory context. Unlike the UK and EU, where compliance with structured AI risk management rules is mandated, Indian boards continue to function under the general fiduciary standards under the Companies Act, 2013. This can either lead to over-reliance on AI without proper oversight or to reluctance to use AI at all due to the fear of future liability, both of which undermine shareholder protection and long-term value creation.

⁶⁴ *Id.*

⁶⁵ Balcioglu et al., *supra* note 8.

⁶⁶ Merve Gül Özsağ & Emin Emrah Özsağ, *AI Governance Capacity in Public Administration: A Comparative Analysis of the EU and Türkiye*, 13 INT. J. PUB. ADMIN. DIGIT. AGE 1 (2026).

⁶⁷ Press release, Ministry of Electronics & IT, India AI Governance Guidelines Do Not Allow Unrestricted Deployment of High-Risk AI Systems (Dec. 19, 2025), <https://pib.gov.in/PressReleasePage.aspx?PRID=2206769>.

IX. RECOMMENDATIONS

The comparative approaches discussed above demonstrate that effective AI governance requires clearer standards for oversight, accountability, and liability than those presently available under the Indian legal framework. In light of the identified regulatory gaps and comparative approaches, the following recommendations are proposed.

A. MANDATE AI IMPACT STATEMENTS IN BOARD RESOLUTIONS

Require that whenever AI algorithms or systems influence a board decision, the board resolution must include a formal, concise “AI Impact Statement” explaining: (i) The type of AI involved and its role in the decision, (ii) The data sources used, (iii) Known limitations or biases identified in the AI system, and (iv) How the board validated or challenged the AI’s recommendation.

This would strengthen transparency and assist directors in demonstrating compliance with their duties of care and oversight under Sections 134(5) and 166 of the Companies Act, 2013.⁶⁸ An AI Impact Statement would serve as documentary evidence in the Board’s Annual Report. This would operationalise directors’ duty of due care and oversight under Sections 134(5) and 166 of the Companies Act, 2013 by creating a documented record of board-level evaluation of AI-assisted decisions.

B. INTRODUCE A LEGAL AI LIABILITY CLAUSE FOR DIRECTORS

The Companies Act, 2013 shall be amended to include an AI liability clause for directors that clarifies that they cannot delegate the duty of care to AI—holding them legally liable if they fail to carefully evaluate AI outputs before adoption and ensuring that the fiduciary duty of the board is extended to AI-based decision-making.⁶⁹ This would address the “ignorance” loophole and enforce active board involvement with AI governance. Such clarification would reinforce the existing fiduciary principles of good faith, diligence, and

⁶⁸ Muzaffer Eroğlu & Meltem Karatepe Kaya, *Impact of Artificial Intelligence on Corporate Board Diversity Policies and Regulations*, 23 EUR. BUS. ORG. L. REV. 541 (2022).

⁶⁹ Rajasi Guharoy And Saheli Biswas, *AI and Legal Decisions Making in the Corporate Governance*, 3 INT. J. LEG. SCI. INNOV. 312 (2021).

independent judgment embodied under Section 166 of the Companies Act, 2013.

C. IMPLEMENT MANDATORY AI AUDITS PRE-BOARD REVIEW

Develop a regulation that all AI tools used for decision-making, such as financial forecasting, investment decisions, or decisions which affect the stakeholders and shareholders of the company, must pass independent audits for algorithmic fairness, data privacy compliance and explainability of the decision taken based on the AI output.⁷⁰ Such audits can draw inspiration from the EU AI Act's conformity assessment requirements for 'high-risk AI systems,' ensuring that Indian companies follow international best practices while retaining board-level accountability. This would align with directors' obligations to maintain adequate internal controls and supervise risk management mechanisms under Section 134(5) of the Companies Act, 2013 and SEBI governance standards.

D. PERIODIC AI COMPETENCY TRAINING

A minimum level of certified training on AI fundamentals, associated risks, and legal implications, specifically tailored to Indian corporate law and fiduciary duties, should be implemented for the board. This certificate should be renewed periodically to keep pace with emerging AI technology.⁷¹ Without digital literacy, directors risk becoming overly dependent on opaque algorithms. Periodic competency training would enable directors to meaningfully evaluate AI-generated outputs. Such training would strengthen directors' ability to exercise informed and independent judgment, a core component of fiduciary responsibility under Section 166.

E. ESTABLISH AN AI OVERSIGHT COMMITTEE

A specialized committee in the company can be formed responsible for monitoring AI systems deployed in the company, reviewing updates to AI

⁷⁰ Jakob Mökander et al., *Ethics-Based Auditing of Automated Decision-Making Systems: Nature, Scope, and Limitations*, 27 SCI. & ENG. ETHICS 44 (2021).

⁷¹ Mónica Santana & Mirta Díaz-Fernández, *Competencies for the Artificial Intelligence Age: Visualisation of the State of the Art and Future Perspectives*, 17 REV. MGMT. SCI. 1971 (2023).

models and data quality, and investigating anomalies or AI-driven outputs flagged by the internal auditor.⁷² Initially, it can be modelled on the Audit Committee structure under SEBI's (LODR); such a body would institutionalise board-level supervision of AI, ensuring continuous monitoring consistent with OECD principles of corporate governance. This would further support the board's monitoring and supervisory obligations recognised under Indian corporate governance principles and SEBI's LODR framework.

F. PILOT AI “RED TEAM” SIMULATIONS ON BOARD DECISIONS

A “Red Team” exercise can be done periodically after every quarter, where a dedicated team simulates AI-based decision errors, system failures, or bias impacting the company or the stakeholders.⁷³ The board can use these findings to stress-test current AI oversight mechanisms and improve policies before any foreseen fallacy happens. Red-teaming exercises, already used in cybersecurity and defence, would allow companies to pre-emptively identify algorithmic vulnerabilities. These simulations would also help directors demonstrate proactive compliance with their duty of care by identifying foreseeable AI-related risks before they result in shareholder or corporate harm.

X. CONCLUSION

In conclusion, the integration of “Artificial Intelligence” into corporate governance presents both transformative opportunities and significant challenges. AI's capabilities to enhance decision-making efficiency, risk assessment, and strategic forecasting have the potential to redefine the boardroom landscape fundamentally. However, this technological shift simultaneously raises crucial questions about fiduciary duties, transparency, accountability, and legal liability for directors. The inherent opacity of AI systems, coupled with risks of algorithmic bias and data privacy concerns, necessitates a careful recalibration of existing governance frameworks, especially within the Indian corporate legal context.

⁷² Emmanouil Papagiannidis et al., *Responsible Artificial Intelligence Governance: A Review and Research Framework*, 34 J. STRATEGIC INFO. SYS. 101885 (2025).

⁷³ Lama Ahmad et al., *OpenAI's Approach to External Red Teaming for AI Models and Systems*, OPENAI (2025) <https://doi.org/10.48550/arXiv.2503.16431>.

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To ensure that AI serves as a force for good rather than a source of governance risk, boards must adopt proactive oversight measures including mandatory AI disclosures, rigorous third-party audits, specialized AI competency training, and continuous ethical evaluations. Policymakers and regulators, too, must evolve legal standards to close current gaps and clarify directors' responsibilities in AI-assisted decision-making. While AI has considerable potential to assist directors by enhancing the quality and efficiency of corporate decision-making, it should remain an assistive tool rather than a substitute for the exercise of independent judgment or fiduciary responsibility. Ultimately, striking a balance between embracing AI's innovative potential and upholding the core principles of transparency, fairness, and accountability will be essential to safeguarding shareholder interests and sustaining long-term corporate value in the AI era.

**PROMINENCE, FORECLOSURE AND DESIGN NEUTRALITY:
ASSESSING GOOGLE'S ABOVE-THE-FOLD SELF-
PREFERENCING UNDER INDIA'S COMPETITION ACT**

*Chirkankshit Bulani & Alok Krishna **

ABSTRACT

With the rapid evolution of Google Search Engine Results Page, the modern digital economy has seen the exploitation of design and equitable access to search become undermined. This article proposes the concept of “prominence foreclosure”, an abuse of dominance done through UI manipulation. In this concept, Google reserves the “above-the-fold” (immediate screen on first load without scrolling) for paid advertisements, pushing down the results. This shift negatively impacts the visibility of non-advertising businesses. This article proposes that this conduct is a novel antitrust harm under Section 4 of the Competition Act, 2002. This article argues that traditional enforcement mechanisms, which focus on pricing and contractual terms, are insufficient to address UI-based exclusionary conduct. With perspectives from behavioural economics, it is argued that Google’s UI changes leverage cognitive biases such as primary, salience and default biases, coupled with scroll inertia, to distort user choices and restrict competition.

Taking this example, this article compares international perspectives such as the EU’s Digital Markets Act and recent U.S. litigation to highlight limitations of India’s ex-post enforcement and advocate for ex-ante regulatory tools. This article further proposes a Design Neutrality Toolkit to tackle this novel kind of antitrust harm, focusing on parity slots mandate, standardised ad labelling, among other remedies. With an emphasis on the need for regulatory agility, this article also proposes the integration of antitrust risk assessments into corporate governance to enable timely changes.

In summary, recognition of novel means of antitrust conduct and addressing UI/UX changes as being anti-competitive is imperative to maintain fairness in India’s digital markets.

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Keywords: Prominence Foreclosure, Design Neutrality, Digital Market, Ex-Ante Regulation, SERP, Competition Law

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I. INTRODUCTION

For the purposes of this article, “above-the-fold” refers to the portion of a webpage visible to a user immediately upon page load without scrolling. “Search Engine Results Page” (“**SERP**”) refers to the interface displaying search results generated by a search engine in response to a user query. “Organic results” refer to non-paid search listings ranked algorithmically on the basis of relevance, while “paid listings” refer to sponsored search placements displayed in exchange for advertising payments.

Google's SERP has come a long way since its debut and bears little resemblance to the utility-focused interface which allowed it to capture the global markets. In the platform's earlier iterations, it was celebrated for its clean interface, where distinction was laid between advertisements and organic search

results on the basis of merit. This design was a testament to its value proposition, where the most relevant information, as determined by the algorithm, was shown first, and commercials were a secondary priority. However, in the present, the dismantling of this proposition through deliberate design tweaks has resulted in the colonisation of the most important real estate in the digital world, which is the “above-the-fold” screen space visible to a user without scrolling, by sponsored content.

The central concern raised by this redesign is not merely aesthetic degradation or reduced search quality, but the allocation of discoverability itself. In digital markets, visibility functions as a competitive input because user traffic, consumer attention, and downstream commercial opportunities are heavily dependent upon discoverability within dominant search infrastructures. Accordingly, the systematic displacement of organic competitors from premium visibility locations may constitute a form of exclusionary conduct affecting meaningful market access. The issue therefore extends beyond interface design and enters the domain of competition law.

This transformation began in 2016 with the elimination of sidebar adverts, a move allowing for 4 sponsored entries before the organic results.¹ Further, visual cues distinguishing sponsored from organic results were further eroded. The prominent coloured background in 2014 was slowly tweaked to just a subtle black “Ad” icon by 2019, allowing for confusion between paid and organic results.² What compounded this effect was the introduction of Google’s own modules, such as AI overviews and specialised search units, pushing organic content further below. The outcome is the hijacking of the real estate of the ‘fold’, which was once reserved for relevant information. This particular redesign has deeper repercussions for all stakeholders in the ecosystem. While the design has diluted the search results for consumers who are looking for quality and merit-based search results, it plays directly into Google’s monetary benefits by

¹ Jennifer Slegg, *Google Adwords Switching to 4 Ads on Top, None on Sidebar*, THE SEM POST (Feb. 19, 2016), <http://www.thesempost.com/google-adwords-switching-to-4-ads-on-top-none-on-sidebar>.

² Jon Wiley, *A New Design for Google Search*, GOOGLE BLOG (May 11, 2016), <https://blog.google/products/search/new-design-google-search>

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serving its revenue model, deviating from its value proposition. This article argues that systematic displacement below the fold may amount to a form of exclusionary foreclosure because discoverability within dominant search infrastructures operates as a competitive gateway. With the established data of user attention having its major focus on the first screen, this displacement leads to a loss of visibility and traffic, and a shifting of goalposts from relevance to the ability to display advertisements.³

For regulators, which in the context of India would be the Competition Commission of India, there is a novel challenge. Given the current nature of India's digital ecosystem, where there is the presence of one of the largest user bases in the world⁴, rapidly digitising markets and government-led initiatives such as UPI and ONDC transforming e-commerce⁵, the repercussions go beyond just revenue. The impact is magnified by the low levels of digital literacy⁶ and dependence of Micro, Small and Medium Enterprises (“**MSMEs**”) on search visibility for market access. The Parliamentary Standing Committee's 2025 Report on the evolving role of the CCI in the digital economy⁷ has acknowledged the need for an Indian framework made for Indian realities, highlighting the dominance of large tech companies and their ability to significantly distort competition. This makes the evaluation of the ‘above-the-fold self-preferencing conduct’ not just about protecting businesses but about

³ Ginny Marvin, *Study: Different Types of Ads Influence Organic CTR in Google*, SEARCH ENGINE LAND (Aug. 20, 2014), <https://searchengineland.com/different-types-ads-influence-organic-ctr-google-204676>.

⁴ Josh Howarth, *Countries with the Highest Number of Internet Users*, EXPLODING TOPICS (May 21, 2025), <https://explodingtopics.com/blog/countries-internet-users>.

⁵ The Wits Lab, *Digital Public Infrastructure (DPI): Driving India Towards a \$1 Trillion Digital Economy*, THE WITS LAB BLOG (last updated 2025), <https://blog.thewitslab.com/digital-public-infrastructure-dpi-driving-india-towards-a-1-trillion-digital-economy>.

⁶ DATTOPANT THENGADI NAT'L BD. FOR WORKERS EDUC. & DEV., MINISTRY OF LABOUR & EMP., GOV'T OF IND., DIGITAL LITERACY (2025), https://dtnbwed.cbwe.gov.in/images/upload/Digital-Literacy_3ZNK.pdf.

⁷ STANDING COMM. ON FIN., GOV'T OF IND., EVOLVING ROLE OF COMPETITION COMMISSION OF INDIA IN THE ECONOMY, PARTICULARLY THE DIGITAL LANDSCAPE (2025), https://sansad.in/getfile/lsscommittee/Finance/18_Finance_25.pdf?Source=loksabhadocs.

protecting the very fabric of India's digital economy, protecting businesses and consumers alike.

The harm in this scenario is non-price, executed through subtle changes in user interface (“**UI**”) and user experience (“**UX**”) design. This would require a fundamental reconsideration of traditional antitrust tools by increasing the focus on behavioural economics and design theory.

This article argues that Google's systematic prioritisation of paid and platform-preferred content within the above-the-fold portion of its SERP constitutes a novel form of exclusionary abuse termed “prominence foreclosure.” The paper contends that such conduct may fall within Sections 4(2)(a), 4(2)(c), and 4(2)(e) of the Competition Act, 2002, by denying meaningful market access to organic competitors and leveraging dominance in general search into adjacent advertising markets. Drawing from behavioural economics, comparative digital competition frameworks, and Indian competition jurisprudence, the article further argues that traditional ex-post enforcement mechanisms are inadequate to address UI-driven exclusionary conduct and proposes a design neutrality framework combining ex-ante obligations, audit mechanisms, and governance safeguards.

The paper proceeds in eight parts. Part II conceptualises the fold as a competitive bottleneck using empirical and behavioural evidence. Part III examines the legal basis for treating prominence foreclosure as abuse under Indian competition law. Part IV develops the theory of harm and explains the role of cognitive biases in reinforcing exclusionary effects. Part V comparatively analyses the EU, US, and Organisation for Economic Co-operation and Development (“**OECD**”) approaches to digital platform regulation. Part VI evaluates India's existing enforcement framework and the limitations of ex-post regulation. Part VII proposes a Design Neutrality Toolkit and analyses the legal feasibility of ex-ante obligations within the Indian framework. Part VIII addresses corporate governance and compliance considerations, followed by concluding observations in Part IX. Ultimately, the paper concludes that mitigating interface-driven exclusion requires a definitive legislative shift toward

an ex-ante regulatory framework tailored to the unique realities of the Indian digital economy.

II. THE FOLD AS A COMPETITIVE BOTTLENECK

The concept of “above the fold” is not new but rather originates from when newspapers entered circulation. It is referred to as the fold because of the middle crease where the newspaper was folded along before being circulated, and where the most compelling headlines were placed at the top end of the fold, in order to attract attention from passersby when the newspaper was placed on a newsstand.⁸ As it translates to the digital world, the term refers to the webpage that is visible to the user upon initial load, without any scrolling action. This article acknowledges that the precise pixel dimensions of the fold may vary depending upon the resolution, screen size, and design type. However, the concept remains a cornerstone of web design and digital marketing due to its being the primary focal point of user attention. With this fold being the user's first interaction, it also impacts their subsequent engagement, making exposure in this space a critical competitive bottleneck.

The critical nature of the fold is repeatedly affirmed by user behaviour studies. The Nielsen Norman Group found in its research that users spend 57% of their page-viewing time on content visible above the fold.⁹ It noted that there was a drop in attention as users scroll down, which divides the visible and hidden content. It is imperative to note that this ‘scroll inertia’ is a sufficiently powerful force, where even though the user might be accustomed to scrolling, the content presented initially has a great impact upon their further engagements with the page. This behaviour becomes even more pronounced in search engine result pages. Studies have indicated that 75% of users never go beyond the first page of results.¹⁰ On the first page, primary traffic is heavily concentrated toward the apex of the page; empirical clickstream modelling, which captures real user

⁸ *What Is “Above the Fold”?* OPTIMIZELY GLOSSARY (Aug. 20, 2025), <https://www.optimizely.com/optimization-glossary/above-the-fold>

⁹ Therese Fessenden, *Scrolling and Attention*, NIELSEN NORMAN GROUP (Apr. 15, 2018), <https://www.nngroup.com/articles/scrolling-and-attention>

¹⁰ *Organic vs. Paid Search Statistics*, DIGITAL SILK (Aug. 3, 2025), <https://www.digital-silk.com/digital-trends/organic-vs-paid-search-statistics>.

interaction paths rather than relying on raw server-log data, indicates that the top 3 results capture the vast majority of all clicks, directly correlating visual prominence with traffic acquisition.¹¹ This essentially puts a lot of businesses out of visibility.

The metric which can aid in adjudication of the economic value of above-the-fold placement is extensive Click-Through Rate (“CTR”) analysis. This metric is defined as the ratio of clicks to impressions, directly correlating user engagement and preference.¹² The data reflects a stark difference in metrics between above-the-fold and below-the-fold listings.

A 2025 First Page Sage study¹³ which methodologically aggregates a clickstream dataset mapping over ten billion search impressions across several hundred thousand search queries spanning diverse B2B and B2C industry verticals in the US and EU, shows that the first-placed organic result commands an average CTR of 39.8%, nearly double the second position and nearly four times the third (10.2%), while receiving 19 times more clicks than the top paid advert. This organic advantage is systematically cannibalised by design-based interface layouts; a 2026 cross-vertical data analysis demonstrates that the aggressive expansion of top-of-page paid search listings has driven a massive shift in user click distribution, causing baseline organic clicks to plummet by 23%.¹⁴ Despite the occupation of the fold, studies show that paid listings perform poorly in comparison to organic listings, with it having only 2.1% CTR in comparison to 39.8% CTR, which highlights a stark difference in the requirements and present structure of Google’s SERP design. In supplementation with the quantitative data, there are qualitative observations from everyday users and industry observers. Technology publications have recently highlighted reductions in Google’s search quality, with analysis noting

¹¹ *Google Click-Through Rates (CTRs) by Ranking Position in 2025*, FIRST PAGE SAGE (May 28, 2025), <https://firstpagesage.com/reports/google-click-through-rates-ctrs-by-ranking-position>.

¹² *Clickthrough Rate (CTR): Definition*, GOOGLE ADS HELP (Aug. 18, 2025), <https://support.google.com/google-ads/answer/2615875?hl=en>

¹³ *Id.*

¹⁴ *ALM Corp, Paid Search Click Share Doubles While Organic Clicks Fall 23% Across Major Verticals: 2026 Data Analysis*, ALM CORP (Feb. 21, 2026) <https://almcorp.com/blog/paid-search-clicks-double-organic-clicks-fall-2026-data/>.

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that the average starting position of the first organic link on Google SERP has dropped from 375 pixels down to 616 pixels, which is due to the expansion of ad space.¹⁵ The data reflects the importance of the above-the-fold space on Google SERP in the modern digital economy. While based on international clickstream data (primarily US/EU), Indian market data is limited, but consumer behaviour parallels can be reasonably inferred.

This data is also supplemented by regulatory observations. In the 2017 Google Shopping Case,¹⁶ the European Commission noted that traffic to rival listings declined by over 85% when Google promoted its own services in the 'above-the-fold' section. Additionally, in the OECD's 2021 report on self-preferencing, the OECD warned about self-preferencing by dominant digital firms, which can distort competition for smaller businesses by reducing visibility.¹⁷

This makes the 'fold' a critical bottleneck for consumer outreach, and by systematic re-engineering of the UI/UX, Google has reserved the fold for its own revenue-generating ad products. This allows it to erect a formidable non-price barrier to entry for those entities which do not engage with its Google advertising services. It can be seen not as a neutral design choice but rather as an act of prominence foreclosure which forces all other entities which create their listings to engage in Google's advertising services, leveraging its dominance in the search engine market.

The exclusionary significance of such conduct is inseparable from Google's dominant position within the general search market. Similar ranking or interface decisions by a non-dominant search provider would not ordinarily generate appreciable foreclosure effects because users and businesses could readily shift to alternative discovery channels. However, where a dominant undertaking

¹⁵ Barry Schwartz, *Bitter, Cynical Verge Article Blames seos for Ruining the Internet*, SEARCH ENGINE LAND (Apr. 12, 2023), <https://searchengineland.com/critical-cynical-verge-article-blames-seos-for-ruining-the-internet-434059>.

¹⁶ Google LLC v. European Commission, Case T-612/17 (Gen. Ct. Nov. 10, 2021).

¹⁷ ORG. FOR ECON. CO-OPERATION & DEV., SELF-PREFERENCING BY DIGITAL PLATFORMS (2020), <https://www.oecd.org/daf/competition/self-preferencing-by-digital-platforms.pdf>.

controls a critical gateway infrastructure through which a substantial proportion of digital traffic flows, visibility allocation itself acquires competitive significance. In such circumstances, systematic displacement from premium discoverability locations may impair meaningful market access and distort competitive conditions within adjacent digital markets.

III. INDIAN COMPETITION LAW & GOOGLE'S TRACK RECORD

The legal framework which holds the potential to address Google's fold conduct is the Competition Act, 2002.¹⁸ Critically, the law does not prohibit dominance, but rather its abuse. Section 4 of the Act¹⁹ prohibits abuse of a dominant position, with dominant position defined herein as a position of strength that enables an enterprise to operate independently of competitive forces or to affect its competitors, consumers, or the relevant market in its favour.²⁰ With Google fitting these criteria,²¹ Section 4 lists specific practices which constitute an abuse. These include the imposition of discriminatory conditions in the purchase or sale of goods or services, denial of market access, leveraging dominance, among others. This paper argues that the 'above-the-fold self-preferencing conduct' by Google firstly, denies market access in specifically the 'fold' space to relevant competing websites being violative of Section 4(2)(c) of the Competition Act, 2002, and secondly, leveraging its dominance in the search engine market to enter into the adjacent "market for online search advertising", where it brings more traffic to paid listings, which is violative of Section 4(2)(e) of the Competition Act, 2002²² and thirdly, the imposition of unfair and discriminatory terms to organic listings, which is violative of Section 4(2)(a) of the Competition Act, 2002.²³

¹⁸ Competition Act, 2002, No. 12 of 2003 (Ind.).

¹⁹ *Id.* § 4.

²⁰ *Id.* § 4, Explanation (a).

²¹ Press release, Press Information Bureau, Cabinet Approves Competition (Amendment) Bill, 2022 (Oct. 5, 2022), <https://www.pib.gov.in/pressreleasepage.aspx?PRID=1869748>.

²² Competition Act, 2002, No. 12 of 2003, § 4(2)(e) (Ind.).

²³ *Id.* § 4(2)(a).

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The recent jurisprudence by the Competition Commission of India (“**CCI**”) concerning Google provides a foundation for the scrutiny of the ‘above-the-fold self-preferencing conduct’.

In *Umar Javeed, Sukarma Thapar, Aaqib Javeed v. Google LLC & Ors.* (“**Android**”),²⁴ the CCI examined whether Google leveraged its dominance in the market for licensable mobile operating systems to impose restrictive conditions upon device manufacturers. The Commission held that Google’s control over critical digital infrastructure enabled it to extend its dominance into adjacent markets by tying and preferentially positioning its own applications. The doctrinal significance of the decision lies in the CCI’s recognition that dominant digital ecosystems may distort competition not only through pricing conduct, but also through infrastructural control over access pathways. The CCI’s test in *Android* involved three elements: (i) a finding of dominance in an identified upstream market (licensable mobile OS); (ii) a direct causal link between the dominant position and the impugned conduct; and (iii) evidence that the conduct extended or reinforced dominance in an adjacent downstream market. Applying this framework to the fold-hijack conduct: (i) Google’s dominance in the general search market is well-established and has been accepted by the CCI in prior proceedings; (ii) the above-the-fold design changes are directly attributable to Google’s control over SERP architecture; and (iii) the systematic channelling of user attention toward paid listings leverages search dominance to advantage Google’s advertising revenue model in the adjacent online advertising market.

Similarly, the CCI’s intervention in the Google Play Store billing investigations²⁵ solidifies the doctrinal framework governing platform architectural fairness. In that case, the Commission evaluated whether a dominant gatekeeper could weaponise its core ecosystem infrastructure, specifically its app distribution gateway, to impose one-sided, discriminatory operational conditions on downstream service providers. The key doctrinal

²⁴ Umar Javeed, Sukarma Thapar, Aaqib Javeed v. Google LLC & Ors., Case No. 39 of 2018, Competition Commission of India (2019).

²⁵ People Interactive India Pvt. Ltd. (and others) v. Alphabet Inc. & Ors., Case Nos. 37 of 2022, 17 of 2023 & 27 of 2023, Competition Commission of India (2023).

takeaway from People Interactive is that a digital intermediary abuses its dominance under Section 4 when it leverages control over a critical infrastructural touchpoint to artificially manipulate user choices and distort the commercial viability of independent rivals. Applying this doctrine to the present case, Google's fold-hijack architecture operates as a structurally identical platform abuse; instead of manipulating payment and distribution pathways, Google manipulates visual interaction paths above the fold, enforcing a predatory interface design that systematically denies downstream organic alternatives an equitable opportunity to compete.

Another significant precedent involving manipulation of search-result visibility is *Matrimony.com Ltd. and Consumer Unity & Trust Society (CUTS) v. Google Inc. & Ors.*²⁶ In that case, the CCI examined whether Google's preferential display and ranking practices distorted neutrality within the SERP and conferred an unfair competitive advantage upon Google's own specialised search services. The Commission recognised Google's position as a critical digital gateway and treated premium SERP real estate as competitively significant because ranking visibility directly affected traffic diversion and user access. Importantly, the case established that abuse under Section 4²⁷ need not arise solely through contractual restraints or explicit exclusion but may also occur through discriminatory visibility allocation within a dominant platform interface. In doing so, the Commission applied a rigorous effects-based test rather than a per se rule, establishing that liability turns on whether architectural choices cause demonstrable market distortion. Applying this precedent to the fold-hijack facts, Google's manipulation of above-the-fold interface real estate similarly compromises search neutrality, weaponizing its gateway dominance to grant an unfair competitive advantage to its own paid listings at the direct expense of organic search alternatives, thereby fulfilling the elements of the effects-based standard through documented visibility foreclosure.

²⁶ *Matrimony.com Ltd. And Consumer Unity & Trust Society (CUTS) v. Google Inc. & Ors.*, Case Nos. 07 & 30 of 2012, Competition Commission of India (2018).

²⁷ Competition Act, 2002, No. 12 of 2003, § 4 (Ind.).

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In relevance to Google cases, what differentiates this particular 'above-the-fold self-preferencing conduct' is a design choice in comparison to a contractual requirement. This, however, does not enjoy relevance given the similar objective, which is to leverage control over a gateway to foreclose rivals, which in this case are those entities which do not engage Google Ads.

The theory of constructive foreclosure articulated in *MCX Stock Exchange Ltd. v. National Stock Exchange of India*²⁸ is also particularly relevant to the present analysis, illustrating how a gatekeeper can orchestrate a form of input foreclosure by structurally degrading a rival's operational capacity rather than cutting them off entirely. In that case, the CCI recognised that denial of market access under Section 4(2)(c) does not require absolute exclusion from the market. Rather, conduct that materially impairs a rival's ability to compete effectively may itself constitute exclusionary abuse. The doctrinal importance of *MCX*, therefore, lies in its acceptance of constructive market denial through structural disadvantage rather than formal prohibition. Google's above-the-fold self-preferencing conduct operates in a comparable manner. Organic competitors remain technically accessible within the SERP, yet systematic displacement below premium visibility locations may substantially reduce discoverability, traffic acquisition, and effective competitive participation. Applying this constructive foreclosure framework to the present case, while Google's fold-hijack architecture does not completely de-list organic rivals, it systematically displaces them below premium visibility zones. This satisfies the Section 4(2)(c) impairment threshold by functionally destroying their operational ability to compete effectively for real-time user clicks.

The economic mechanism underlying this leveraging claim operates directly through the systematic manipulation of interface real estate. The SERP functions as the literal economic conduit between the dominant market (online general web search services) and the target market (online search advertising services). By expanding above-the-fold real estate for paid advertisements and proprietary vertical services, Google compresses and depreciates the space

²⁸ *MCX Stock Exchange Ltd. v. National Stock Exchange of India*, Case No. 13 of 2009, Competition Commission of India (2011).

reserved for free organic search results. This systematic devaluation breaks the traditional efficacy of Search Engine Optimisation for downstream businesses. Consequently, to maintain consumer visibility and traffic acquisition, downstream enterprises are structurally coerced to transition from organic competitors into paying advertisers. Google thus leverages its gatekeeper control over general search queries to artificially inflate demand and extract rents in the adjacent search advertising market, an advantage it could not command without weaponizing its layout dominance.²⁹

Finally, this layout-driven foreclosure cannot be legally shielded under the guise of an ‘efficient design’ choice or an objective commercial justification. While a non-dominant platform might optimise its interface to enhance user navigation, Google’s systematic allocation of premium above-the-fold real estate to paid and self-preferred properties is fundamentally dominance-driven rather than efficiency-justified. Under Section 4 jurisprudence, an architectural modification ceases to be a legitimate product improvement when its primary structural effect is the disproportionate degradation of independent rival visibility. Because the severe reduction in organic click-through rates cannot be balanced by any verifiable, pro-competitive consumer efficiency that outweighs this exclusionary market distortion, the fold-hijack design stands exposed as an exercise of market power designed to extract rents rather than a bona fide optimisation of search utility.

Despite the principles laid down by CCI in the abovementioned cases, to the best of publicly available information on the date of writing this article, no formal investigation appears to have been initiated. This is a representation of a critical enforcement gap. Given the dynamic nature of digital markets, Prominence foreclosure, operating fundamentally as a digital mechanism of input foreclosure where above-the-fold visibility and user attention serve as the restricted critical inputs, may represent the next frontier for Indian competition law jurisprudence, given its subtlety but extremely potent exclusionary conduct. As the Indian competition law landscape becomes ready to tackle these new-age

²⁹ Competition Act, 2002, No. 12 of 2003, § 4(2)(e) (Ind.). *See also* Matrimony.com Ltd. v. Google LLC, Case Nos. 07 & 30 of 2012 (Competition Comm'n of India 2018) (Ind.).

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methods, Google's conduct reveals certain shortcomings in India's enforcement. Given its ex-post nature, investigation and appeals take time, allowing dominant firms to modify their conduct before regulators can respond.³⁰ Further, as in the instant case, proving harm can be a tedious task, requiring sophisticated technical and economic evidence.³¹

The evidentiary difficulties associated with documenting this layout-driven input foreclosure further complicate enforcement under India's existing ex-post framework. Since dominant digital intermediaries possess exclusive access to internal ranking data, interface experimentation records, and traffic-allocation metrics, affected competitors may face substantial informational asymmetry in demonstrating exclusionary effects. While the Competition Act presently offers limited scope for proactive audit-based oversight, existing investigative powers of the Director General may still permit the collection of internal records and technical evidence relevant to abuse-of-dominance inquiries. Operationally, these investigative capabilities are anchored in Section 41 read with Section 36(2) of the Competition Act, 2002³², which vests the Director General (“DG”) with the plenary powers of a civil court under the Code of Civil Procedure, 1908. This statutory framework empowers the DG to mandate the production of internal books of accounts, algorithms, source codes, and interface testing logs, alongside summoning key personnel for examination under oath. Crucially, to mitigate the risk of data spoliation or concealment of algorithmic changes, the DG can deploy the powerful tool of search and seizure operations (‘dawn raids’) under Section 41(3) of the Act. However, these civil investigative tools are inherently retrospective; by the time complex algorithmic evidence is extracted and litigated, the digital market has already tipped irreversibly. Forensic ex-post enforcement simply cannot keep pace with real-time interface updates, rendering traditional procedural mechanisms structurally ill-equipped to counter gatekeeper dominance.

³⁰ Geeta Gouri, *Economic Evidence in Competition Law Enforcement in India*, COMPETITION LAW ENFORCEMENT IN THE BRICS AND IN DEVELOPING COUNTRIES 223, 223–238 (2016).

³¹ Payal Malik, *Competition Issues in Digital Markets*, ICRIER Policy Brief (2025) <https://icrier.org/publications/competition-issues-in-digital-markets>.

³² Competition Act, 2002, No. 12 of 2003, §§ 36(2), 41 (Ind.).

The challenge nevertheless illustrates the broader institutional limitations of purely ex-post enforcement in rapidly evolving digital markets. This rekindles the long debate of agile, ex-ante tools to complement traditional legislation.

IV. THEORY OF HARM: PROMINENCE FORECLOSURE

In order to address Google's 'above-the-fold self-preferencing conduct' under competition law, it is imperative to establish a clear and coherent theory of harm. This article proposes the concept of 'prominence foreclosure' as a distinct manifestation of input foreclosure within a digital abuse of dominance framework. Under this theory, an enterprise controlling an essential digital infrastructure manipulates its user interface to withhold or degrade the critical upstream input of user attention, granting preferential visibility to its own vertical services or paid listings. This structural manipulation deprives competing downstream services of the non-preferential visibility they require, thereby translating interface design into an effective input foreclosure mechanism. Further, this article would provide a structured framework for analysis of the conduct, its effects, and the harm so caused.

The competitive harm from this layout-driven input foreclosure ripples across the vertical market structure, establishing a clear causal chain that links Google's design conduct directly to the eventual customer foreclosure and economic marginalisation of downstream rivals. In accordance with Section 2(r) of the Competition Act, 2002, the relevant market framework must be established through the dual prongs of product and geographic characteristics. The primary relevant product market is delineated as the 'market for online general web search services,' while the adjacent affected market is the 'market for online search advertising services.' While traditional antitrust analysis applies the Small but Significant and Non-transitory Increase in Price ("SSNIP") test to determine market boundaries, general search operations function as a zero-price market for consumers. Consequently, demand-side substitutability is properly assessed via a Small but Significant and Non-transitory Decrease in Quality framework, as systematic interface degradation and ad-cluttering directly erode search utility.

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The relevant geographic market is bounded by the territory of India, given distinct regulatory conditions, consumer preferences, and localised network effects. This two-part market delineation directly comports with the CCI's established jurisprudence in *Matrimony.com Ltd. v. Google LLC*. Within this architecture, this article does not conceptualise the 'fold' as a distinct relevant market but rather characterises above-the-fold visibility as a critical infrastructural input and a non-substitutable competitive bottleneck within the broader product design of search services. The present conduct exhibits characteristics of both input foreclosure and customer foreclosure. First, organic competitors are deprived of effective access to the critical input of user attention and discoverability, both of which are necessary for traffic acquisition in digital markets. The above-the-fold portion of the SERP functions as a concentrated gateway for user engagement, and systematic displacement from this space may therefore impair rivals' ability to compete effectively. Secondly, the conduct resembles customer foreclosure because users are steered toward sponsored or platform-preferred results before meaningful exposure to organic alternatives occurs. This reduces rival firms' effective access to downstream consumers and may distort competitive conditions within adjacent digital advertising and discovery markets. Accordingly, prominence foreclosure operates not through outright exclusion, but through controlled visibility allocation within a dominant discovery infrastructure.

A. THE CONDUCT

The anticompetitive conduct in the present scenario consists of deliberate design changes in the UI/UX of the Google SERP, with elimination of sidebar ads and degradation of ad labelling from coloured backgrounds to subtle 'sponsored' tags. Additionally, the prioritisation of Google's own content modules such as its knowledge panels shows an attempt to monopolise the above-the-fold space.

B. THE EFFECT

This particular act results in the displacement of organic results below the fold. As established earlier, this displacement bears severely negative

consequences for visibility and traffic of organic listings. This essentially forecloses rivals (organic listings) from a substantial market, as they are denied access to where the user's attention is concentrated. Their ability to attract users and generate revenue is crippled, limiting their ability to compete fairly against paid listings.

C. THE CONSUMER HARM

The harm in this particular case is multifaceted. Firstly, there is a reduction in the overall quality of Google's SERP through poor user experience. Secondly, there is a distorted consumer choice by the exploitation of cognitive biases, restricting consumer choice. Thirdly, there is harm accrued to organic listings, which would find it hard to survive through decreased traffic, thus harming competition, which leads to reduced choices available for consumers, leading to a vicious cycle.

The potency of prominence foreclosure as an exclusionary act is supported by well-documented cognitive biases which shape user behaviour.³³ This article argues that Google SERP is not a mere representation of choices, but a carefully structured choice architecture to exploit psychological tendencies. The first bias is the primacy bias, which is the tendency to better recall and retain items viewed first.³⁴ Google's placement of adverts in the fold exploits this, given that above-the-fold is a domain of primacy. The second bias is the salience bias, which is the tendency to direct more focus on visually striking items.³⁵ Inclusion of eye-striking images, star ratings, etc., in the paid listings exploits this particular bias. The third bias, which is exploited by the 'above-the-fold self-preferencing conduct', is the default bias and scroll inertia. The default bias is the tendency to stick with a pre-selected option, as changing would require additional cognitive effort.³⁶ The cost of scrolling down requires additional cognitive effort, which

³³ Keith Burghardt et al., Quantifying the Impact of Cognitive Biases in Question-Answering Systems (ARXIV Working Paper No. 20 of 2019), <https://arxiv.org/abs/1909.09633>.

³⁴ Andrew Coleman, *DICTIONARY OF PSYCHOLOGY* 688 (2d ed. 2006).

³⁵ Deborah H. Schenk, *Exploiting the Salience Bias in Designing Taxes*, 28 *YALE J. REG.* 253, 253 (2011).

³⁶ William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 *J. RISK & UNCERTAINTY* 7, 7 (1988).

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creates a 'scroll inertia', restricting most users from making their choice in the fold.³⁷ Even if Google argues in defence of improving consumer experience, the same measures could be outweighed by its anti-competitive effects.

The combined operation of these cognitive biases strengthens the case for a limited rebuttable presumption of competitive harm in cases involving dominant digital gatekeepers. In traditional competition-law analysis, establishing consumer harm often requires extensive counterfactual modelling demonstrating how market conditions would have evolved absent the impugned conduct. However, where a dominant undertaking controls a critical discovery infrastructure and deliberately structures visibility allocation in a manner that systematically prioritises paid or affiliated content, the foreclosure risks may become sufficiently predictable to justify calibrated burden-shifting.

Comparative developments in ex-ante digital regulation provide explicit, statutory architectures for this presumptive shift. The European Union's Digital Markets Act ("**DMA**"), for instance, codifies this approach by establishing operational presumptions of gatekeeper status under Article 3 based on quantitative thresholds, shifting the legal onus onto the platform to rebut designation. Once designated, Article 6(5) of the DMA imposes a clear, presumptive prohibition against self-preferencing, requiring gatekeepers to refrain from treating their own services more favourably in ranking, indexing, or visual presentation compared to independent third-party alternatives.³⁸ Similarly, the United Kingdom's Digital Markets, Competition and Consumers ("**DMCC**") Act 2024 mirrors this logic; once a firm is designated with Strategic Market Status ("**SMS**") under Section 2, Section 19 and Section 20 empower the Competition and Markets Authority ("**CMA**") to pre-emptively impose binding

³⁷ N. Çetin, Cognitive Load Measurement During Navigation and Information Retrieval in Digital Text (ResearchGate, Working Paper, 2021), https://www.researchgate.net/publication/355028495_Cognitive_load_measurement_during_navigation_and_information_retrieval_in_digital_text.

³⁸ 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 O.J. (L 265) 1, arts. 3, 6(5).

conduct requirements to prevent predatory interface interventions before ex-post market foreclosure materialises.³⁹

Similarly, EU competition jurisprudence anchors this heightened scrutiny in the foundational “special responsibility” doctrine articulated in *Michelin I* and affirmed in *AstraZeneca*.⁴⁰ This doctrine dictates that a dominant undertaking has an objective legal duty to abstain from conduct that further impairs competition on a market already weakened by its presence. In digital ecosystems, this special responsibility directly underpins the shift toward a presumptive framework; when a gateway platform intentionally manipulates its visual interface to degrade rival visibility, its *prima facie* breaches this special duty, providing a clear doctrinal justification for shifting the initial evidential onus onto the platform.

Accordingly, a rebuttable presumption may arise where:

- i. a dominant digital platform controls a significant discovery or traffic gateway;
- ii. deliberate interface or ranking interventions systematically prioritise paid or platform-preferred content; and
- iii. Empirical evidence demonstrates substantial diversion of user attention away from relevance-ranked organic alternatives.

Within the domestic landscape, while Section 4 of the Competition Act, 2002⁴¹ (as amended by the Competition (Amendment) Act, 2023)⁴² lacks an explicit statutory presumption equivalent to the horizontal cartel presumptions under Section 3(3), a workable procedural and evidentiary hook for burden-shifting can be constructed from the statutory architecture and enforcement practice. Section 36(1) frees the CCI from the rigidities of the Code of Civil Procedure, 1908, and directs it to be guided instead by principles of natural justice, a procedural autonomy the Supreme Court has recognised as allowing

³⁹ Digital Markets, Competition and Consumers Act 2024, c. 13, §§ 2, 19, 20 (U.K.).

⁴⁰ See Case 322/81, *NV Nederlandsche Banden-Industrie Michelin v. Commission*, [1983] ECR 3461, ¶ 57; Case C-457/10 P, *AstraZeneca v. Commission*, [2012] ECR I-0000, ¶ 134.

⁴¹ Competition Act, 2002, No. 12 of 2003 (Ind.).

⁴² Competition (Amendment) Act, 2023, No. 9 of 2023 (Ind.).

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the Commission to evolve its own inquiry procedure. This flexibility does not itself shift evidentiary burdens, but it creates the institutional space for a presumption to operate without CPC-style rigidity.

The more direct anchor lies in the CCI's treatment of Google's conduct in the Android matter.⁴³ Once the DG's investigation and the Commission's findings established a *prima facie* case that Google's bundling and anti-fragmentation conditions restricted manufacturers' ability to develop alternative Android versions, in breach of Section 4(2)(b)(ii), the practical burden shifted to Google to substantiate its claimed technical and business justifications, which both the CCI and the NCLAT on appeal found unconvincing.⁴⁴ This mirrors the EU's own Android decision, where objective justifications advanced by a dominant platform were held to a high proof standard once anti-competitive effect was shown.⁴⁵ A textual foothold exists in Section 4(2)(a), which excludes conduct undertaken "to meet competition" from the definition of abuse, an express, if narrow, recognition that a dominant enterprise may need to justify conduct once a *prima facie* case is made, though its scope for digital-market justifications remains unsettled.

Because proprietary layout telemetry and algorithmic configurations are facts uniquely within the gatekeeper's internal knowledge, Section 106 of the Indian Evidence Act, 1872⁴⁶ (now Section 109 of the Bharatiya Sakshya Adhiniyam, 2023)⁴⁷ supplies an independent doctrinal foundation for allocating the burden of explanation to the party in possession of the relevant facts. Read together: Section 36(1)'s procedural latitude, the Google Android precedent's practical burden allocation, Section 4(2)(a)'s justification carve-out, and Section 106/109's "especially within knowledge" doctrine: these provisions offer a coherent, though judicially untested in the specific context of algorithmic layout distortion,

⁴³ Umar Javed v. Google LLC, Case No. 39 of 2018 (Competition Comm'n of India 2022) (Ind.).

⁴⁴ Google LLC v. Competition Comm'n of India, Competition Appeal (AT) No. 1 of 2023 (NCLAT 2023) (Ind.).

⁴⁵ Google Android, Case AT.40099, Comm'n Decision (July 18, 2018) (E.U.), T-604/18, Google and Alphabet v. Commission, ECLI:EU: T-2022:541 (Gen. Ct. Sept. 14, 2022).

⁴⁶ Indian Evidence Act, No. 1 of 1872, § 106 (Ind.) (repealed 2023).

⁴⁷ Bharatiya Sakshya Adhiniyam, No. 47 of 2023, § 109 (Ind.).

basis for arguing that once a *prima facie* showing of systematic above-the-fold distortion is established, the burden should shift to the dominant platform to adduce objective technological justification.

Such a presumption would remain rebuttable. A dominant undertaking may discharge this burden by demonstrating objective consumer-welfare justifications, including measurable improvements in relevance, reduction of spam or fraudulent content, accessibility enhancements, or other efficiency gains incapable of being achieved through less exclusionary alternatives.

V. COMPARATIVE INSIGHTS FROM FOREIGN JURISDICTIONS

There exists a substantial body of jurisprudence on the regulation of a digital dominant entity in foreign jurisdictions, given that this challenge is not at all unique to India. Regulatory authorities across the world have penalised Google on many occasions for its self-preferencing activities.

A. THE EUROPEAN UNION AND THE UK

The primary provisions which regulate anti-competitive practices in the EU are Articles 101 and 102 of the Treaty on the Functioning of the European Union⁴⁸, which prohibit anti-competitive conduct. The strategy of the EU has seen an evolution from an ex-post regime to an ex-ante regulatory mechanism. In the Google Shopping case in 2017⁴⁹, the commission found Google exploiting its dominance in the general search market, where it provided preferential treatment to its own comparison-shopping service through a favourable display format over other rivals in its rankings. The judgement was a landmark in the sense of establishing the precedent that a dominant firm is endowed with a special responsibility not to impair competition where it is based merits.

Building upon this particular experience, the EU enacted the DMA in 2022⁵⁰, which evolved it from an ex-post regulation to a proactive ex-ante regulatory

⁴⁸ TFEU arts. 101–102.

⁴⁹ Google LLC v. European Commission, Case T-612/17 (Gen. Ct. Nov. 10, 2021).

⁵⁰ 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 O.J. (L 265) 1

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regime. Article 3 of the DMA⁵¹ designates 'Gatekeepers', which are entities which exercise tremendous control over the market, with Alphabet Inc (Google's parent company) being designated in 2023.⁵² Under Article 6(5), a gatekeeper is obligated to be fair and unbiased in their rankings and indexing of search results.⁵³ The DMA's significance for the present analysis lies not merely in its prohibition of explicit self-preferencing, but in its recognition that ranking architecture and discoverability allocation within dominant digital interfaces possess independent competitive significance. The framework is therefore instructive for India because it shifts regulatory focus away from purely contractual restraints toward structural visibility manipulation within gateway infrastructures. A similar logic may be relevant in assessing whether above-the-fold prioritisation practices distort neutrality within dominant search ecosystems.

The United Kingdom has similarly moved toward a more proactive digital competition framework through the Digital Markets, Competition and Consumers Act, 2024.⁵⁴ The legislation empowers the CMA, under Section 2, to designate firms possessing "Strategic Market Status" in respect of a distinct digital activity, and subsequently impose binding conduct requirements under Sections 19 and 20 tailored toward preventing exploitative and exclusionary conduct such as self-preferencing within digital markets.⁵⁵ While this activity-specific, ex-ante model offers an agile legislative blueprint, its institutional transferability to developing antitrust regimes like India is structurally limited by severe administrative asymmetries, as domestic regulators require substantially scaled technical expertise and separate, ring-fenced digital units to manage such fluid interventions. The UK model is instructive for India because it adopts a flexible conduct-based framework rather than rigid sectoral prohibitions, thereby allowing regulators to address emerging forms of interface-driven self-preferencing and discoverability manipulation.

⁵¹ DMA art. 3.

⁵² EUR. COMM'N, *Commission Decision C(2023) 6101 Final of Sept. 5, 2023, Designating Alphabet as a Gatekeeper Pursuant to Article 3 of Regulation (EU) 2022/1925 (Digital Markets Act)* (2023), https://ec.europa.eu/competition/digital_markets_act/cases/202344/DMA_100002_145.pdf

⁵³ DMA art. 6(5).

⁵⁴ Digital Markets, Competition and Consumers Act 2024, c. 13 (U.K.).

⁵⁵ Digital Markets, Competition and Consumers Act 2024, c. 13, §§ 2, 19–20 (U.K.).

B. THE UNITED STATES OF AMERICA

In the United States, the primary antitrust legislation is the Sherman Antitrust Act of 1890⁵⁶. While the US has not pursued an ex-ante law like the DMA, the Department of Justice (“DoJ”) has been increasingly proactive in its litigation against Google for anti-competitive practices. In the Case of *DoJ vs Google* (also known as the Search Monopoly Case) in 2020,⁵⁷ the DoJ alleged that Google maintained its monopoly over general search and advertising markets. They did this through multi-billion-dollar exclusionary contracts. In the August 2024 Judgement, Justice Amit Mehta ruled against Google and remedial measures were explored by the DoJ. In another landmark ruling Google in the *DOJ v. Google* (Ad Tech Monopoly Case) in 2023⁵⁸, Google was found violating the Sherman Act again by abusing its dominance of the “ad tech” stack, and Judge Leonie Brinkema found it to be a monopoly, harming both consumers and rivals. This case is particularly relevant for the ‘above-the-fold self-preferencing conduct’ argument, since it establishes the precedent of abuse of the advert ecosystem by a dominant digital entity.

C. THE OECD REPORT

The jurisprudence established above is consonant with reports from the OECD, which has examined choice architecture as the design of an environment that is not neutral but actively shapes individual decision-making. This insight is particularly relevant to prominence foreclosure because it recognises that interface architecture and behavioural nudging may independently influence market outcomes even in the absence of explicit contractual exclusion.⁵⁹

D. ACADEMIC DISCOURSE

In academic discourse, the Stigler Committee on Digital Platforms' Final

⁵⁶ Sherman Antitrust Act, 15 U.S.C. §§ 1–2 (2018).

⁵⁷ United States v. Google LLC, No. 1:20-cv-3010 (D.D.C. filed Oct. 20, 2020).

⁵⁸ United States v. Google LLC, No. 1:23-cv-01646 (E.D. Va. Filed Nov. 14, 2023).

⁵⁹ ORG. FOR ECON. CO-OPERATION & DEV., BACKGROUND NOTE ON ONLINE CHOICE ARCHITECTURE (2018), <https://one.oecd.org/document/DAF/COMP/WD/2018/129/en/pdf>.

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Report (2019)⁶⁰ has acknowledged search prominence as a crucial gateway for entities to advertise, which can be extended to Google's 'above-the-fold self-preferencing conduct'. Professor Oren Bar-Gill's book "Seduction by Contract: Law, Economics, and Psychology in Consumer Markets"⁶¹ embraces the behavioural antitrust concept, highlighting the susceptibility of consumers to cognitive biases, and the seduction of consumers happening through choice architecture. Relating to the 'scroll inertia' described above, there is the existence of 'sludge', which is excessive or unjustified friction which pulls you away from a choice. Coined by Professor Cass Sunstein in his book "*Sludge: What Stops You from Getting Things Done and What to Do About It*,"⁶² he describes how this can be a deliberate choice, and in the context of the fold, it is a deliberate choice by Google to sludge users towards the fold, which is filled by paid listings.

This foreign jurisprudence establishes that the new digital environment requires reconsideration of the traditional interpretation of how anti-competitive behaviour works, with recognition of how algorithms and designs can affect consumer behaviour and foreclose competition. While specific legal instruments differ from the US to the EU, the EU's model of ex-ante regulation provides a better model for India's inspiration and its digital competition regulation.

Table on Comparative Provisions:

Regulatory Objective / Remedy	EU Digital Markets Act ("DMA") Equivalent	UK Digital Markets, Competition & Consumers ("DMCC") Act	Proposed Indian Statutory Framework (Draft DCB 2024)

⁶⁰ STIGLER CTR. FOR THE STUDY OF THE ECON. & THE STATE, *STIGLER COMMITTEE ON DIGITAL PLATFORMS: FINAL REPORT* (2019), <https://www.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf>.

⁶¹ OREN BAR-GILL, *SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS* (OUP Oxford 1st ed. 2012).

⁶² CASS R. SUNSTEIN, *SLUDGE: WHAT STOPS YOU FROM GETTING THINGS DONE AND WHAT TO DO ABOUT IT* (The MIT Press 1st ed. 2021).

Ex-Ante Platform Designation	Article 3: Quantitative thresholds establishing "Gatekeeper" status.	Section 2: Designation of firms holding "Strategic Market Status" (SMS).	SSDE Designation: Broad qualitative/quantitative thresholds for Systemically Significant Digital Enterprises.
Interface / Ranking Neutrality	Article 6(5): Absolute prohibition on self-preferencing in ranking and indexing interfaces.	Sections 19 & 20: Enforcement of tailored Conduct Requirements to prevent discoverability distortion.	Section 11: Platform Neutrality obligations operationalized via a Parity Slots Mandate.
Layout Integrity & Choice Architecture	Recitals & General Non-Circumvention Rules: Safeguards against manipulative interface configurations.	Sections 19 & 20: Conduct requirements preventing behavioural exploitation and steering.	Section 10: Operationalized via Ad Density Caps and visual layout boundaries.
Transparency & Compliance Audits	Article 11: Mandatory compliance reporting and independent auditing structures.	Section 20 (and overall CMA powers): Ongoing regulatory monitoring and information-	Section 12 (and CCPA alignment): Operationalized via Fold Allocation Audits and automated SERP scraping.

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VI. CHALLENGE OF ENFORCEMENT DESIGN: EX-POST VS. EX-ANTE

The ‘above-the-fold self-preferencing conduct’ by Google is a unique opportunity in the Indian competition landscape, allowing a rethink of the design of the Competition Act, 2002’s⁶³ enforcement regime. The debate over regulation of anti-competitive conduct usually delves down to two models, namely, ex-post regulation (when the anti-competitive conduct has actually taken place) vs ex-ante regulation (a proactive approach which sets rules to prevent anti-competitive conduct from happening in the first place). The ex-post approach adopted by India puts it at loggerheads with the evolving contours of digital competition law, and the current case of prominence foreclosure is a testament to the regulation seeking equity with the evolving world.

India’s current framework is primarily governed by the Competition Act, 2002⁶⁴, which operates on an ex-post regulation framework. When there is suspicion of abuse of dominance under Section 4⁶⁵, the regulatory authorities proceed with a lengthy process of investigation by the Director General, which is then succeeded by an order, which is in the usual framework challenged in multiple rounds of litigation through the National Company Law Appellate Tribunal (“**NCLAT**”) and the Supreme Court, the Apex Court. While this particular model allows for differential treatment on basis of circumstances of each case, it falls short for the dynamic digital sector because firstly, the long investigation process allows for dominant firms to revert their acts and escape liability, secondly, the retrospective nature of ex-post remedies sends regulators into a perpetual game of oversight, since the anti-competitive acts are not difficult for digital firms and thirdly, given how hard is to establish anti-competitive effects of complex conduct like UI manipulation, it places an

⁶³ Competition Act, 2002, No. 12 of 2003 (Ind.).

⁶⁴ *Id.*

⁶⁵ *Id.* § 4.

unreasonable burden on the investigating authority. Due to this, even if there is a remedy for the conduct, it will be rendered infructuous.

On the contrary, an ex-ante model for the fast-evolving digital sector offers significant advantages for all the stakeholders involved.⁶⁶ The identification of ‘Gatekeeper’ platforms in advance, it allows for additional obligations upon larger dominant firms, keeping them under oversight. The advantages which accompany an ex-ante framework are, firstly, speed and certainty, where some acts can be assumed to be anti-competitive, not requiring longer and in-depth investigations, strengthening enforcement. Secondly, the pro-active intervention keeps the markets open, compared to the remedial nature of ex-post systems. Thirdly, the ex-ante regulatory framework introduces the burden of compliance upon the dominant firms, ensuring their acts are not anti-competitive, reducing the overall burden on regulatory authorities.

India’s landscape is actively considering the shift. The Committee on Digital Competition Law released its report in early 2024,⁶⁷ accompanied by a draft of the Digital Competition Bill (“**DCB**”)⁶⁸. Heavily inspired by the EU’s DMA, it could be a paradigm shift in the Indian competition landscape. The draft bill introduced a category similar to ‘Gatekeepers’ under the DMA as Systemically Significant Digital Enterprises (“**SSDEs**”),⁶⁹ which are subject to ex-ante obligations, with an explicit prohibition on self-preferencing and tying of products. Although the Bill has been withdrawn, a revised draft is anticipated and may explore hybrid regulatory options. The enactment of a DCB having ex-ante regulations can provide the CCI with substantive provisions to ensure the

⁶⁶ S. Sundaresan, Ex-Ante Regulation: An Evolving Need in Digital Markets (ResearchGate, Working Paper, 2024), https://www.researchgate.net/publication/387152600_Ex-Ante_Regulation_An_Evolving_Need_in_Digital_Markets.

⁶⁷ COMM. ON DIGITAL COMPETITION LAW, MINISTRY OF CORPORATE AFFAIRS, GOV'T OF IND., REPORT OF THE COMMITTEE ON DIGITAL COMPETITION LAW (2024), <https://www.mca.gov.in/bin/dms/getdocument?Mds=qcquy3qfgz7kdnt6f0%2bldq%3D%3D&type=open>.

⁶⁸ Digital Competition Bill, No. __ of 2024 (Ind.), <https://www.2.itif.org/2024-india-digital-competition-bill.pdf>.

⁶⁹ Digital Competition Bill, No. __ of 2024, §§ 3(2)–(3) (Ind.), <https://www.mca.gov.in/bin/dm/getocument?Mds=qcquy3qfgz7kdnt6f0%2bldq%3D%3D&type=open>.

neutrality of the fold and can be accompanied by a code of conduct for designated search engines.

As the Competition Act, 2002⁷⁰ stands now, it is one step behind the digital markets it is expected to regulate. It could benefit from the creation of soft law or guidelines until the DCB becomes an Act, or the initiative to maintain neutrality of the fold would remain a distant dream. These soft law guidelines, or when they form part of the DCB, cannot be a simple set of regulations, but rather explore the format of a neutrality toolkit, which would enable better regulation and save time as each case of design manipulation need not be considered after a thorough investigation. In the next section, the article shall explore the proposed toolkit.

VII. THE DESIGN NEUTRALITY TOOLKIT

When considering how India may regulate this new-age anti-competitive conduct by Google, it is imperative to understand the unique nature of prominence foreclosure, where the remedies must be as sophisticated as the conduct they address. Even though a simple cease and desist order may be sufficient to penalise Google, the flaw needs redressal at its very foundation. In order to tackle this, this paper proposes the need for a “Design Neutrality Toolkit” which can aid regulators. This toolkit will be a compilation of specific, enforceable and most importantly, auditable remedies that can tackle the manipulation of choice architecture. The following remedies can form part of such a toolkit:

A. PARITY SLOTS MANDATE

The primary remedy for prominence foreclosure would be a parity-slots mandate requiring designated dominant search intermediaries to reserve a minimum portion of above-the-fold visibility for relevance-ranked organic listings. Such obligations may be introduced either through ex-ante digital competition legislation or through sector-specific conduct requirements applicable to designated gatekeeper entities. Enforcement could be supervised

⁷⁰ Competition Act, 2002, No. 12 of 2003 (Ind.).

by the CCI through periodic interface-compliance audits and transparency disclosures submitted on a quarterly basis. While such a framework may attract objections relating to product design autonomy and editorial discretion, the measure remains proportionate because it does not prohibit advertising placement altogether but merely prevents complete monopolisation of premium discoverability space by paid or platform-preferred content. In the Indian context, this framework would specifically manifest under Section 11 of the Draft Digital Competition Bill, 2024, which mandates platform neutrality for designated gatekeepers.⁷¹

B. AD DENSITY CAPS

Another possible remedy is the imposition of ad-density caps limiting the proportion of above-the-fold interface space that may be occupied by sponsored or platform-preferred content. Operationally, these caps can be codified via regulations framed by the CCI pursuant to obligations under Section 10 of the Draft Digital Competition Bill, 2024⁷², with enforcement overseen by its specialized Digital Markets Unit through quarterly automated interface-compliance disclosures and bi-annual technical audits. A flexible percentage-based approach may be preferable to rigid numerical limits because the dimensions of the fold vary across devices and resolutions. Critics may argue that ad-density restrictions interfere with monetisation models and innovation incentives, while presenting a major feasibility challenge because real-time programmatic ad auctions dynamically alter layout configurations across fragmented user device types, making uniform regulatory measurement exceptionally difficult; however, calibrated limits remain justifiable where visibility allocation itself possesses substantial competitive significance.

C. ENHANCED AND STANDARDIZED AD LABELLING

Enhanced and standardised advertising labelling constitutes another

⁷¹ COMM. ON DIGITAL COMPETITION LAW, MINISTRY OF CORPORATE AFFAIRS, GOV'T OF IND., REPORT OF THE COMMITTEE ON DIGITAL COMPETITION LAW AND DRAFT DIGITAL COMPETITION BILL, 2024, § 11 (2024).

⁷² Draft Digital Competition Bill, 2024, § 10 (Ind.).

important safeguard against prominence foreclosure. Dominant search intermediaries may be required to maintain clear visual differentiation between sponsored and organic results through standardised labels, colour contrasts, or interface markers capable of reducing consumer confusion. Such obligations can be jointly enforced through institutional coordination between the CCI and the Central Consumer Protection Authority, establishing a dual legal basis under Section 12 of the Draft Digital Competition Bill, 2024 (governing non-cognitive consumer choices) and the Consumer Protection (Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements) Guidelines, 2022.⁷³ To operationalise this, the monitoring mechanism would rely on automated, crawler-based compliance scraping software deployed by the agencies' technical cells to continuously capture live SERP rendering states, systematically flagging non-standardised ad labels or insufficient luminance contrasts. Although firms may object that mandatory labelling interferes with interface flexibility, transparency obligations remain proportionate where behavioural manipulation risks distorting user choice architecture.

D. TRANSPARENCY REPORTS AND FOLD ALLOCATION AUDITS

Transparency-reporting obligations may further strengthen oversight against prominence foreclosure. Designated dominant platforms could be required to periodically disclose metrics concerning fold allocation, advertisement density, ranking-adjustment practices, and traffic-distribution trends between sponsored and organic listings. Such disclosures may enable regulators, competitors, and independent researchers to identify potentially exclusionary visibility patterns before irreversible market tipping occurs. Oversight could be conducted through annual reporting obligations combined with independent technical audits where necessary. Concerns relating to disclosure of commercially sensitive information may be addressed through confidential regulatory submissions and limited-publication mechanisms.

⁷³ Draft Digital Competition Bill of 2024, § 12 (Ind.); Cent. Consumer Prot. Auth., Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022, G.S.R. 437(E) (June 9, 2022).

E. SAFE HARBOURS FOR GENUINE USER BENEFIT

Any design-neutrality framework must also preserve adequate space for genuine innovation and user-welfare improvements. Accordingly, a limited safe-harbour provision may permit interface interventions that are objectively necessary for improving relevance, accessibility, fraud prevention, public safety messaging, or other demonstrable consumer-welfare objectives. However, dominant platforms invoking such justifications should bear the burden of demonstrating that comparable benefits could not reasonably have been achieved through less exclusionary alternatives. Such a framework would allow regulatory flexibility while preventing the use of innovation narratives as blanket defences for anti-competitive visibility manipulation. Procedurally, this safe-harbour framework would be operationalized through the subordinate rule-making powers of the CCI under the Draft Digital Competition Bill, 2024.⁷⁴ The implementation would be managed by the CCI's specialized Digital Markets and Data Unit using a two-tiered review process: first, an ex-ante voluntary pre-clearance window where SSDEs can submit algorithmic impact assessments and user-behaviour telemetry data before deploying interface modifications; and second, an affirmative defence mechanism during routine compliance evaluations where the platform must satisfy a strict 'proportionality and non-severability' test, proving that the stated public or user-welfare benefit could not be decoupled from the restrictive design architecture.

Adoption of the above-mentioned remedies, either as soft law in India's current ex-post regime or as a potential ex-ante regime, will be a welcome step towards regulation of India's digital markets. It will be an addition beyond simply penalising past conduct, but rather a deterrent towards anti-competitive practices.

A limitation of the above-mentioned toolkit is the lack of a proper definition of what the 'fold' entails. What constitutes the 'fold' shall be different depending upon screen resolution, device type and user settings, making a bright-line rule

⁷⁴ COMM. ON DIGITAL COMPETITION LAW, MINISTRY OF CORPORATE AFFAIRS, GOV'T OF IND., REPORT OF THE COMMITTEE ON DIGITAL COMPETITION LAW AND DRAFT DIGITAL COMPETITION BILL, 2024, ch. VIII (2024).

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for the 'fold' redundant. In this scenario, rigid prohibitions hold the potential for both over-regulation, which stifles innovation and under-regulation, which would let anti-competitive conduct pass oversight. A feasible approach in this context can be the use of soft law instruments such as codes of conduct and sectoral guidelines, a good example of which can be the Ministry of Consumer Affairs, Food & Public Distribution's framework on dark pattern advertising.⁷⁵

However, the current question regarding the CCI's powers to issue ex-ante guidelines or even soft-law instruments would find it difficult to withstand scrutiny under the existing statutory framework. With respect to the power of the CCI to issue guidelines under Section 64 of the Competition Act⁷⁶, one may argue that the Commission is empowered to frame regulations. However, there exists no precedent where Section 64 has been used to introduce *substantive* obligations. On the contrary, the Supreme Court has consistently held that provisions granting *procedural* regulation-making powers cannot be employed to create substantive obligations beyond the scope of the parent statute.⁷⁷ Accordingly, this significantly limits the possibility of the CCI issuing any form of ex-ante rulemaking.

Moreover, in the Google Play Store case⁷⁸, Google appealed the CCI's directions that imposed ex-ante obligations. In its judgment, the NCLAT struck down these directions, observing that "*The Commission has issued various directions on the premise that Google is a gatekeeper, which amounts to a form of ex ante regulation for undefined 'gatekeepers', beyond the Commission's powers under Sections 4 and 27 of the Act.*"

⁷⁹ This creates substantial legal hurdles for any soft-law guidelines the CCI may seek to pursue. While the CCI has appealed this finding before the Supreme

⁷⁵ MINISTRY OF CONSUMER AFFAIRS, FOOD & PUB. DISTRIBUTION, GOV'T OF IND., GUIDELINES FOR PREVENTION AND REGULATION OF DARK PATTERNS, 2023 (Nov. 30, 2023), <https://consumeraffairs.nic.in/sites/default/files/file-uploads/latestnews/Gazette%20Notification%20dated%2030th%20November%202023.pdf>.

⁷⁶ Competition Act, 2002, No. 12 of 2003, § 64 (Ind.).

⁷⁷ Global Energy Ltd. v. Central Electricity Regulatory Commission, (2009) INSC 785 (Ind.).

⁷⁸ People Interactive India Pvt. Ltd. v. Alphabet Inc., Case Nos. 37 of 2022, 17 of 2023 & 27 of 2023 (Competition Comm'n of India 2023) (Ind.).

⁷⁹ Alphabet Inc. v. Competition Comm'n of India, Competition Appeal (AT) No. 04 of 2023 (NCLAT Mar. 28, 2025) (Ind.).

Court, the acceptability of ex-ante powers under the current Act remains highly unlikely. This makes a comprehensive digital competition regulation even more imperative, without which regulators remain powerless against fast-paced anti-competitive practices such as Google's fold-hijack.

Even assuming *arguendo* that the Supreme Court interprets the Act to permit limited ex-ante exploration, any guidelines issued by the CCI risk challenge under Article 14 of the Indian Constitution⁸⁰. Google may allege that it is being singled out among a wide variety of platforms. Nevertheless, a narrow, threshold-based, and rebuttable framework may satisfy proportionality. Google's extraordinary dominance in the Indian search market, coupled with a rebuttable standard, could be considered a reasonable and non-excessive intervention to mitigate the risks of anti-competitive effects. For any feasibility of soft-law application, these challenges must be addressed. With the adoption of soft remedies, the institutional capacity of regulators is also of critical importance. The Parliamentary Standing Committee's 2025 Report⁸¹ notes that CCI may fall short of technical expertise in digital markets. The above proposed toolkit would require CCI to analyse design choices in algorithms, user interfaces, etc, which require both legal and technical expertise. This article also proposes a dedicated engineering and data science wing with the CCI, which can be modelled on the basis of regulators such as the U.S. Federal Trade Commission. Without this wing, even the most advanced toolkits would not prove to be adequate.

VIII. CORPORATE GOVERNANCE & COMPLIANCE

While this article acknowledges the essential nature of regulatory intervention for addressing anti-competitive conduct, it advocates a parallel shift in corporate governance for a durable solution. This internal realignment operates not as an alternative to state-driven enforcement, but as an indispensable structural complement; given that external regulatory mechanisms face severe information

⁸⁰ INDIA CONST. art. 14.

⁸¹ STANDING COMM. ON FIN., GOV'T OF IND., EVOLVING ROLE OF COMPETITION COMMISSION OF INDIA IN THE ECONOMY, PARTICULARLY THE DIGITAL LANDSCAPE (2025), https://sansad.in/getfile/lsscommittee/Finance/18_Finance_25.pdf?Source=loksabhadocs.

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asymmetries and cannot police real-time, dynamic interface modifications on a day-to-day basis, external compliance mandates remain functionally toothless unless they are directly institutionalised within the firm's board-level decision-making architecture. The design of Google's SERP must be understood not only as a product design imperative but also as a significant compliance risk that warrants the highest level of oversight from senior management. There must be an oversight that profit motives must not cross the line of anti-competitive conduct, which establishes that antitrust risk assessment integration is no longer an option, but a core element of modern corporate governance. For an entity like Google, whose business model interplays with the design interface, each change may carry significant implications.

To remedy these implications, this article argues for a proactive approach to antitrust compliance. This requires embedding antitrust compliance directly into product development and design processes, achieved through the following checks. Firstly, there must be a pre-launch compliance review, studying the antitrust exposure of major redesigns of UI/UX changes under relevant competition laws. Secondly, internal impact assessments must be carried out to study the potential impacts of design changes on engagement and user traffic. Thirdly, there must be a designated audit or risk committee which shall review antitrust compliance, particularly for bigger entities. Fourthly, with the increasing use of algorithmic changes to design interfaces, such systems must have explicit safeguards to avoid anti-competitive conduct.⁸²

Adoption of such practices does not immunise a firm from regulatory scrutiny, but it may significantly reduce the risk of inadvertent violations, demonstrate good faith in any subsequent investigation, and, in jurisdictions that formally recognise compliance programmes as a mitigating factor, such as the UK under the CMA's penalty guidance, reduce the quantum of any fine imposed.

⁸² Skadden, Arps, Slate, Meagher & Flom LLP, *Evaluation Of Corporate Compliance Programs In Criminal Antitrust Investigations* (2025) <https://www.skadden.com/-/media/files/publications/2025/01/antitrust-division-updates-its-corporate-compliance-guidance/evaluation-of-corporate-compliance-programs-in-criminal-antitrust-investigations.pdf>.

By treating design neutrality as good governance, companies can gain consumer trust and build a more robust business model. Ultimately, embedding these design-neutrality principles into board-level oversight transforms internal corporate governance into the necessary operational bedrock for the success of external frameworks, ensuring that compliance with the ex-ante mandates of the Draft Digital Competition Bill becomes a native feature of platform architecture rather than a reactive defence against antitrust enforcement.

IX. CONCLUSION

The gradual transformation of Google's SERP, done through subtlety, presents a unique challenge and abuse of market power. The analysis undertaken in this article demonstrates that contemporary digital competition concerns increasingly extend beyond traditional pricing conduct or contractual exclusion. In platform-mediated ecosystems, interface architecture itself may influence market structure by determining how visibility, traffic, and consumer attention are distributed among competing firms. The competitive significance of discoverability therefore requires closer doctrinal attention, particularly where dominant digital intermediaries exercise substantial control over gateway infrastructures that shape downstream commercial participation.

This article argues that prominence allocation within dominant digital interfaces possesses independent competition-law significance because discoverability itself functions as a competitive input in contemporary platform markets. Google's above-the-fold self-preferencing practices illustrate how interface architecture may influence downstream visibility, user attention, and effective market access without requiring formal exclusionary restraints. Existing Indian competition jurisprudence already provides partial doctrinal foundations for addressing such conduct through principles relating to leveraging, discriminatory platform design, and constructive foreclosure. However, the structural and evidentiary limitations of purely ex-post enforcement mechanisms suggest that emerging forms of interface-driven exclusion may increasingly require calibrated ex-ante oversight frameworks tailored toward dominant digital gatekeepers. The broader challenge therefore extends beyond search design alone and concerns the evolving role of competition law in governing

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discoverability infrastructures that increasingly shape participation within digital markets.

**A TALE OF THREE REGULATORS: THE JHUNJHUNWALA CASE
AND THE DIVERGENCE OF INSIDER TRADING LAW IN INDIA,
THE US, AND THE UK**

*Sejal & Vishrut Veerendra **

ABSTRACT

When government policymakers have market-moving information, and that information can reach, albeit often via rumour mills, from the seat of power to the trading desk, existing securities legislation in most countries, in any of the forms in which it has been developed, can find itself lacking the degree of sophistication needed to keep up to the speed with the situation. This article considers some of the many legal and regulatory questions that arise from reports that a significant shareholder liquidated all her shares of Nazara Technologies, India's solely traded online gaming company, during the months preceding the laying down of a promotion and regulation bill, 2025, which effectively banned real money online gaming in the country and saw a sudden and sustained decline in the company's market capitalization and value. While the timeline raised both debate and concerns, it eventually led to questions about whether it is time for government policy interventions (otherwise called "political intelligence", but not "inside information") to perhaps find themselves within the purview of an "unpublished price sensitive information"? The article first surveys the actual provisions of the Bill and highlights the devastation that was wrought upon India's digital gaming landscape: the destruction of capital, loss of employment, and impairment of investor confidence. It then proceeds to a comparative study of insider trading law in India, the United States and the United Kingdom tracing how each jurisdiction defines an 'insider', what the criteria are for a regulatory communication to qualify as inside information, what evidence an enforcement body would have to prove, and exploring the distinct conceptual foundations of Indian law (based on possession), US law (on duty and personal benefit), and UK law (based on a criminal offence arising from receiving information from an 'inside source'). The main contention here is that the Indian framework of prohibition on insider trading, though extensive on its face, is seriously hampered by the challenges of information tracing that arise out of state decision-making and is a crucial marker of an ongoing discussion on market integrity, highlighting the necessity for improved regulatory

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and market surveillance tools at the crossroads of state policy and market dynamics.

Keywords: Insider trading, Nazara Technologies, Online Gaming Bill 2025, SEBI, market integrity, political intelligence, United States securities law, UK insider dealing, Unpublished Price Sensitive Information (UPSI), mosaic theory, enforcement challenges, financial markets

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I.	INTRODUCTION: THE CATALYST AND THE CONTROVERSY	

A. THE REGULATORY TSUNAMI

In August 2025, the Indian Parliament passed the Promotion and Regulation of Online Gaming Bill, 2025 (“**the Bill**”), a broad legislative package aimed at reforming India’s burgeoning digital gaming sector. Citing social harms such as financial distress and addictive behaviour arising from real money gaming¹, the bill implemented a

¹ Ashutosh Raina, *Online Gaming Bill Tabled in Lok Sabha: Government Cracks Down on Digital Betting*, TIMES OF INDIA, Aug. 20, 2025 at A1.

bifurcated approach toward regulating the online gaming sector;² banning real money games on the one hand and, conversely, providing an enabling framework for esports and other non-monetary online gaming on the other.³ The sheer scope of the legislation's impact on this multibillion-dollar industry was immediately apparent from the market's reaction to the announcement⁴.

B. THE CONTROVERSIAL DIVESTMENT

One transaction within this market quickly attracted scrutiny. Based on readily available disclosures and news reports, a substantial investor sold her entire stake in Nazara Technologies in June 2025, approximately two months before the bill's passage through Parliament⁵. Reportedly totalling approximately 334 crores, the divestment effectively positioned her to avoid a substantial stock price fall occurring after the law was enacted.⁶ This timing fuelled public commentary, including allegations of insider trading within political circles, and broader questions about the integrity of information flows between government entities and capital market participants. It is crucial to emphasise that these claims remain unsubstantiated and that this paper asserts or implies no finding of factual wrongdoing by any party. The transaction is simply presented here as an exemplary case study to investigate the challenges of analysis and enforcement at the juncture of legislative policymaking and securities regulation.⁷

² Promotion and Regulation of Online Gaming Bill, 2025, Bill No. 110 of 2025 (India); *India Parliament Passes Sweeping Ban on Online Gaming*, INDRASTRA (Aug. 25, 2025) <https://www.indrastra.com/2025/08/indias-parliament-passes-sweeping-ban.html>.

³ *India Online Gaming Bill, 2025: Regulation and Penalties*, LAW.ASIA IBLJ (Aug. 2025) <https://law.asia/india-online-gaming-bill-2025-regulation-and-penalties/>.

⁴ Online Gaming Bill 2025: Gaming Regulation Shake-Up Puts Billions in VC Investment at Risk, TIMES OF INDIA, Aug. 21, 2025 at A6.

⁵ Anubhav Mukherjee, *Rekha Jhunjhunwala's Timely Exit Saved ₹334 Crore*, LIVEMINT, Aug. 23, 2025 at A1.

⁶ Vaibhavi Ranjan, *Nazara Tech Shares Slide on Fears Over Online Gaming Bill*, OUTLOOK BUSINESS, Aug. 20, 2025 at A7.

⁷ Nishtha Awasthi, *Mahua Moitra Raises Insider Trading Allegation After Jhunjhunwala's Exit*, ECONOMIC TIMES (Aug. 21, 2025) at A1.

C. THESIS STATEMENT

This paper argues that the transaction and associated scandal provide a valuable and contemporary opportunity to investigate how modern securities law confronts government policymaking as a form of inside information. Through a comparative study of the Indian, US, and UK legal frameworks, it aims to isolate specific doctrinal distinctions concerning how the concept of market fairness is construed, how the definition of “insider” is articulated, and how evidence of sensitive regulatory information passing between state actors and the capital market is collected. It concludes that this comparison leads to the need for reform in regulatory structure and surveillance methods in India and elsewhere.

II. THE LEGISLATIVE SHOCKWAVE: DECONSTRUCTING THE ONLINE GAMING BILL, 2025

A. KEY PROVISIONS OF THE BILL

The Promotion and Regulation of Online Gaming Bill, 2025 marks a decisive step of the Parliament to enter the online gaming sector in India.⁸ Its provisions can be understood on two main lines: a wholesale ban on real money gaming and the establishment of a new governance structure for the sector.

1. Prohibition on Real Money Gaming (“RMG”):

The bill provided for an all-encompassing ban on ‘online money game’, which was defined as a game where there is “payment of money by a player towards prospect of a return of money or towards winning money whether or not wholly dependent on chance”⁹ irrespective of it being wholly dependent on chance or not. Importantly, this ban wasn’t limited to platform operators, but covered every form of advertising the same, and also the financial intermediaries who would be processing the payments, which include scheduled commercial

⁸ Promotion and Regulation of Online Gaming Bill, 2025, Bill No. 110 of 2025 (India).

⁹ *Id.*; *India Online Gaming Bill, 2025: Regulation and Penalties*, LAW.ASIA IBLJ (Aug. 2025) <https://law.asia/india-online-gaming-bill-2025-regulation-and-penalties/>.

banks and payment aggregators.¹⁰ The bill thus dismantled the entire support system of RMG.

2. **Severe Penalties:**

The bill stipulated different levels of criminal culpability. An operator of a prohibited gaming platform could face imprisonment for up to three years and a fine up to Rs. 1 crore, and for advertising the same, a custodial sentence for two years and a fine of up to Rs. 50 lakhs. Principal offences were made cognizable and non-bailable, empowering enforcement officers with arrest and search powers without a warrant. These harsh provisions allowed for little possibility of gradual compliance or phased transition

3. **Corporate Liability:**

Vicarious corporate liability was brought about through personal responsibility and accountability of the management if an offence was committed with their knowledge, assent, or was a result of their negligence. Independent and nonexecutive directors were exempted only if they had demonstrated due diligence in their affairs. This added personal accountability at the Board level.¹¹

4. **Regulatory Framework:**

Alongside the prohibition, the bill introduced an “Online Gaming Authority” to be established for classifying eligible games and registering legitimate platforms, while also acting as the dispute resolution body for the remaining part of the regulated sector. This dichotomy of banning one part of activity while regulating the other marks the lawmakers’ effort to protect the public while sustaining genuine parts of the industry.¹²

¹⁰ Tanisha Goswami, *Cabinet Okayes Bill That Seeks to Ban Online Money Games*, TIMES OF INDIA, Aug. 19, 2025 at A2.

¹¹ *Id.*

¹² India Online Gaming Bill, 2025: Regulation and Penalties, *supra* note 9.

B. THE ECONOMIC FALLOUT: A SECTOR DECIMATED

The market had an immediate, sharp negative reaction to the legislation's passing. Stakeholders across the industry, many of whom spent three+ years collaborating with the government in anticipation of a formal licensing structure, reportedly did not anticipate the depth of the ban.¹³

The expected economic ramifications of this measure were enormous: "VC majors such as Tiger Global, Peak XV Partners and Accel partner had deployed over USD 2 billion in the sector, while the business of their portfolio companies such as Dream Sports, Mobile Premier League and Dream11 now face existential regulatory risks.¹⁴ The entire real money gaming segment, the largest contributor of the estimated ₹31,000 crore (\$3.8 billion) of the Indian gaming market (roughly 86% of total industry revenue), now stands shut down as a legal business category; over 400 gaming companies set to be shut, over 200,000 jobs loss, ₹25,000 crore investment capital erosion and loss of annual tax revenue of ₹20,000 crore by Industry Associations projections."¹⁵

Business-critical ancillary operations such as advertising contracts saw consequences, with major platform players compelled to abandon significant commercial commitments such as a \$44 million sponsorship deal with the Board of Control for Cricket in India.¹⁶ Broader analysis reveals that an abrupt U-turn by the government from a protracted consultation period to near-complete prohibition injects a considerable amount of regulatory risk into the Indian economy.¹⁷ This sudden shift against industry players will likely resonate strongly among foreign investors who place significant emphasis on policy stability, creating a powerful cautionary example for the wider Indian startup and

¹³ Bhanu Devas, *Gaming Regulation Shake-Up Puts Billions in VC Investment at Risk*, TIMES OF INDIA, Aug. 21, 2025 at A1.

¹⁴ *Id*

¹⁵ *Id*.

¹⁶ Rajesh Shankar, *Online Gaming Bill 2025: How Many Crores Will BCCI Lose After Dream11 Exit ?*, TIMES OF INDIA, Aug. 21, 2025 at A5.

¹⁷ Pankaj Doval, *Ban on Money-Based Online Games Will Sound Death Knell for Us, Says Industry*, TIMES OF INDIA, Aug. 20, 2025 at A4.

technology sector.¹⁸

III. A CASE STUDY IN SCRUTINY: THE JHUNJHUNWALA DIVESTMENT FROM NAZARA TECHNOLOGIES – THE TRANSACTION DETAILS

The factual predicate for the insider trading claims stems from a documented sequence of events in the market.

- (i) As per the publicly available shareholding disclosures and bulk deal data reported on Indian exchanges, an important investor, through the estate of a deceased illustrious market professional, held around 7.06 per cent of the issued equity share capital (61.8 lakh shares) of Nazara Technologies as of the March 2025 quarter end.
- (ii) The same was thereafter pared down over the weeks. Bulk deal data on the Bombay Stock Exchange on June 13, 2025, appears to have documented the sale of 13,00,000 shares, while that on the National Stock Exchange on June 13, 2025, appears to have documented the sale of 14,23,620 shares of Nazara Technologies.
- (iii) The weighted average price appears to have been in the vicinity of 1,225. This sale took place in the month of June 2025, which was approximately two months before the Gaming Bill obtained parliament's approval in August 2025. Total sale proceeds amount to about 334 crores.

It needs to be highlighted that this information is based on media reports and exchange disclosures and can only be substantiated by looking at the primary filings, including the particular bulk deal submission, form SH-13 filings, shareholding pattern filing to SEBI, etc. And no allegation of wrongdoing is being imputed or made.

A. NAZARA'S EXPOSURE AND THE MARKET'S REACTION

In its formal exchange disclosure about the exchange, management stated

¹⁸ Disha Acharya & Tanishka Dubey, *What Happens After Lok Sabha Clears Online Gaming Bill*, ECONOMIC TIMES, Aug. 21, 2025 at A1.

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that the bill would have no direct impact on revenue or EBITDA based upon the company's contribution of NIL from its real money gaming business in Q1 FY2026. While technically accurate according to the applicable accounting rules, which do not require consolidation of financial information for minority investments below the required ownership threshold, that characterisation did not capture the full extent of the company's economic exposure.

The market's principal concern relates to the company's 46.07% stake in Moonshine Technologies, the business that runs PokerBaazi, a major Indian real money gaming poker platform. The investment is worth in excess of 1000 crore and comprises a significant portion of the company's market capitalisation. Brokerage research immediately seized on this interpretation of the bill's implications. ICICI Securities downgraded its recommendation to "Reduce," and gave a value of "Nil" to its PokerBaazi stake in its sum-of-the-parts calculation; Prabhudas Lilladher argued that a complete closure of PokerBaazi would reduce Nazara's fair value by some 35%, from 1,345 to around 917. Since the bill's passage, the company's share price has fallen by over 26% in the past eight trading days.

The discrepancy between the company's limited accounting disclosure and the market's wide valuation of the implications is directly relevant to the question of materiality under the law. From the investors' viewpoint, the forthcoming ban on real money gaming was a "probable future event" that could cause a "material impairment" of a significant balance sheet asset.

The potential for that impairment, as opposed to its impact on the profit and loss account, accounts for the sharpness of the market's reaction, and this is precisely the sort of consideration that is required to make the alleged information price sensitive for insider trading purposes:

Table 1: Timeline of Legislative Events, Share Sales, and Market Impact

Date	Event	Nazara Tech Closing Price (₹)	Daily Change	Cumulative Fall from Aug 19 Peak (%)

June 2–6	Stake reduced to 5.07% via incremental sales	~1,250–1,300 (range)	N/A	N/A
June 13	Bulk deal transactions complete the divestment	~1,225 (avg. sale price)	N/A	N/A
Aug 19 (Tue)	Cabinet approves Online Gaming Bill	1,401.35	+0.85%	0%
Aug 20 (Wed)	Bill tabled in Lok Sabha; Nazara shares fall	1,314.25	-6.2%	-6.21%
Aug 21 (Thu)	Bill passed in Lok Sabha; Nazara shares continue to fall	1,085.00	-11%	-22.56%
Aug 22 (Fri)	Bill passed in Rajya Sabha; Nazara closes lower	1,155.75	-4.13%	-17.53%
Aug 25 (Mon)	Presidential assent given; stock hits 3-month low	1,026.70	-11.17%	-26.74%

Nazara Tech Share Price Movements incriminating circumstantial evidence 2025

B. THE INDIAN LEGAL FRAMEWORK: ANALYSIS UNDER SEBI'S PIT REGULATIONS

It is appropriate to consider the provisions of the SEBI (Prohibition of Insider Trading) Regulations, 2015 (the “**PIT Regulations**”), which govern and establish whether or not the sale discussed above may have regulatory consequences. An analysis can be made in 3 parts:¹⁹

- (i) whether the investor concerned constitutes an insider under the PIT Regulations;
- (ii) whether the information concerning the proposed bill could constitute an Unpublished Price Sensitive Information (“**UPSI**”) within the meaning of the PIT Regulations and
- (iii) And what SEBI would have to show to demonstrate that such an insider trading claim holds good. It will be necessary to demonstrate the following to initiate a claim under the PIT Regulations:
 - a) The concerned piece of information was UPSI, namely, information which was not available to the public at large, and which could have materially impacted the market price of such security.
 - b) The trading was done by a person who had access to such UPSI or possessed the same at the time when the trades were placed in Nazara Technologies Limited.
 - c) The trades were executed in securities of Nazara Technologies while the trading person was in possession of such UPSI.
 - d) There was an inferential link established between the source of such UPSI from a governmental entity, to enable an inference that the same is not the result of some other analysis by the person of the publicly available information.

¹⁹ See Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015, <https://www.scconline.com/blog/post/2023/09/14/sebi-prohibition-of-insider-trading-regulations-2015-major-obstacles-implementation/>

Each of the requirements is individually going to be difficult to establish.

1. Who Qualifies as an ‘Insider’?”:

The definition of an insider under the PIT Regulations is quite broad, extending not just to a ‘connected person’ but any person who is ‘in possession of or having access to UPSI’. A connected person, on the other hand, is broadly defined to mean any person who is associated with the company in the six months prior to the relevant act, “through employment, or by provision of services, or by contract or otherwise, or being in regular communication with its officers” or for the benefit of directors, whose interest exceeds 10%.

For an investor such as the present one to come within the purview of the PIT Regulations, therefore, it would be a question of whether such investor would fall within the broad definition of connected persons. Investigators would undoubtedly probe for links between this major investor and governmental sources to demonstrate a chain of communication beyond that of a mere retail investor based on public sources. It appears to be an assumption inherent in the accusation that these links are, in fact, the basis for access to non-public information.

2. Was the Pending Legislation UPSI?

The PIT Regulations, at regulation 2(1)(n), define UPSI to include information that is not publicly available that would be likely to materially affect the price of the securities when published. It is clear that the provision is to be interpreted on a non-exhaustive basis and that the provision uses illustrative rather than definitive language in order to allow room for regulators to bring new types of price-sensitive information within the ambit of UPSI in response to changing market developments.

Critically, the scope for such interpretation was greatly enhanced by a 2018 SEBI amendment to the PIT Regulations: it extended the scope of UPSI to include certain types of externally generated information typically unrelated to a company’s insiders. A key aspect of the amendment was that government action, specifically, the grant, revocation, suspension or cancellation of crucial licences or other regulatory approvals could be considered UPSI if the relevant

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conditions were satisfied. The impact of this amendment is crucial to this case: an impending piece of legislation which is capable of fundamentally undermining the commerciality of a listed entity's principal asset is, when interpreted in light of the provision's purpose, precisely the type of government determination the 2018 amendment sought to accommodate. Such government action would be deemed to constitute UPSI if two criteria were met:

- (i) The information was not published (which it appears likely to be, based on information concerning the ban); and
- (ii) Its publication would have had a material price impact (which would certainly be the case given the price implications for Moonshine Technologies' balance sheet valuation).

Based on the present facts, either or both of these criteria could plausibly be met due to the direct price effect on Moonshine Technologies' valuation as a material asset. The PIT amendment thus broadens the definition of UPSI, but this also raises the question, as detailed below, of whether a governmental leak would attract penalties

3. The Evidentiary Hurdle:

The primary obstacle that SEBI faces would be of an evidentiary nature, regardless of the timing of the trades and the accumulation of the circumstantial evidence; SEBI would still have to establish by showing beyond all doubt that the investor knew about the contents of the bill and that the said bill was about to become law in parliament.²⁰ One would have to ascertain how this information originated from the government official and ended up in the hands of an investor, a feat that is very hard to pull off²¹. Companies are required to maintain a Structured Digital database (“**SDD**”) to record who had access to UPSI in their organisation, whereas PIT regulations do not apply to government

²⁰ See Chetan Kulsari, *Overview of SEBI's Prohibition of Insider Trading Regulations*, TAXMANN (Sept. 2023), <https://www.taxmann.com/post/blog/overview-of-sebis-prohibition-of-insider-trading-regulations>

²¹ See *FAQs on Prohibition of Insider Trading Regulations*, PROBE42 (2023), <https://resources.probe42.in/regulatory-updates/sebi-updates/faqs-on-prohibition-of-insider-trading-regulations-2015/>.

leakages.²²

C. A POTENTIAL DEFENCE: THE MOSAIC THEORY APPLIED TO THE FACTS

A sophisticated defence against an insider trading allegation in this case could invoke the “mosaic theory.”²³ This theory holds that an investor may legally arrive at a material conclusion about a security’s value by synthesizing a collection of individually nonmaterial items of public information and non-material non-public information into a “mosaic.”²⁴ The defence would argue that the decision to sell was not based on a single, definitive piece of UPSI, but rather on a holistic analysis of publicly available signals and disparate, individually insignificant data points.²⁵

Applied to the present facts, a plausible mosaic-based defence would proceed as follows. Substantial public information existed by mid-2025 that could, in principle, have supported a prudent decision to exit the real money gaming sector entirely. The Indian government had, since at least 2022, signalled regulatory concerns about online money-based games, and the Supreme Court and various High Courts had periodically adjudicated the skill versus chance distinction.²⁶ Proposed legislative frameworks had been publicly discussed in parliamentary committees. The Ministry of Electronics and Information Technology had, at various points, issued notifications indicating its intention to regulate the sector. A skilled analyst, attentive to these developments and to the trajectory of government communications, could construct a reasoned case for heightened regulatory risk without possessing any specific legislative detail.²⁹

There is, nevertheless, a powerful analytical problem relating to the specific nature of the trading under consideration in applying the mosaic theory. Most compelling is a trading response that is, in some sense, proportionate to the amount of risk of regulation that could have been derived solely from non-

²² *Id.*

²³ See *Insider Trading: Practical Law Guide*, WESTLAW (2023), <https://content.next.westlaw.com/practicallaw/document/I7d6efbda840711e598dc8b09b4f043e0>.

²⁴ *Id.*

²⁵ *Id.*

²⁶ See India Online Gaming Bill 2025: Regulation and Penalties, LAW.ASIA (Aug. 2025), <https://law.asia/india-online-gaming-bill-2025-regulation-and-penalties/>

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material public information; an argument for reduction in the position would arguably have been more in tune with the mosaic approach, whereas complete liquidation of the shareholding was rather a more definitive action. If the only indication on the publicly available evidence was that the prospect was regulated in some form, then an inference of uncertainty about the position that an intelligent investor would adopt might, with some degree of hedging at best, lead to a reduction of, say, 10 per cent.

However, a move entirely out of a position, within a limited space of two months, with the Bill poised to enter Parliament, seems to suggest a level of certainty, more likely derived from information outside that which the mosaic theory would cover, rather than inference. Such evidence, since even if the mosaic theory is accepted, there remains an area, and this argument falls outside it, in which a total divestment, timed so perfectly with the imminent entry of the bill into parliament does appear suggestive that certainty as to the severity and extent of the forthcoming legislation might indeed have been established, and would not therefore seem to fall outside the exceptions to the mosaic theory

The defence, however, is subject to a precise legal limitation. If SEBI were to obtain evidence that the investor possessed a specific, concrete piece of non-public information, for instance, advance knowledge of the cabinet's approval of a draft bill prescribing a complete ban, that piece of information would be material on its own, and the mosaic theory would not be available.²⁷ The theory shields the inference drawn from an assembly of innocuous inputs; it does not immunise a trade premised on a single, decisive tip.²⁸ Accordingly, the viability of this defence depends entirely on what SEBI can establish about the specific informational basis on which the investment decision was made.²⁹

²⁷ *Id.*

²⁸ *Id.*

²⁹ See Rule 10b-5, Legal Information Institute, CORNELL LAW SCHOOL, https://www.law.cornell.edu/wex/rule_10b-5

IV. A COMPARATIVE JURISPRUDENCE: THE UNITED STATES AND THE UNITED KINGDOM

A comparative analysis of insider trading law across India, the United States, and the United Kingdom reveals not merely doctrinal variation but three substantively distinct theories of why trading on non-public information is prohibited, which would likely result in different analytical paths and conclusions.

A. THE UNITED STATES: THE PRIMACY OF “DUTY” AND THE “PERSONAL BENEFIT” TEST:

The US legal approach to insider trading is not derived from a single statute but has been grounded in the general antifraud provisions of Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder.³⁰ The animating principle is not informational inequality per se, but the misuse of information in violation of a duty owed to another.

1. Theories of Liability:

US law operates on two main theories. The **Classical Theory** pertains to corporate insiders who violate a fiduciary duty owed to their company’s shareholders. The more applicable doctrine here is the **Misappropriation Theory**, which assigns liability when an individual trades on confidential information, breaching a duty of trust owed to the *source* of that information.³¹

2. The “Personal Benefit” Hurdle:

A critical element in US tipper-tippee cases is the “personal benefit” test, established in *Dirks v. SEC*. To prove a breach of duty, prosecutors must show the tipper (the insider who leaked the information) received a personal benefit for the tip. This benefit does not have to be purely financial³². In *Salman v. United States*, the Supreme Court reaffirmed that making a “gift” of confidential information to a trading relative or friend is sufficient to meet the test, as it is analogous to

³⁰ *Id.*

³¹ Oberheiden, *The Ultimate Guide to the Federal Insider Trading Statute*, FEDERAL LAWYER, <https://federal-lawyer.com/the-ultimate-guide-to-the-federal-insider-trading-statute/>.

³² *Dirks v. SEC*, 463 U.S. 646, 664 (1983).

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trading on the information oneself and then gifting the proceeds.³³

3. Application and Hurdles:

To bring this case in the US, the SEC or the DOJ would face a difficult burden of proof. They would need to establish that:

- (i) A government official with a duty of confidentiality disclosed the legislative content;
- (ii) This disclosure was made in exchange for a “personal benefit”, in a broad sense endorsed by Salman
- (iii) The investor, as “tippee,” knew or ought to have known the information was confidential and had been improperly obtained for a personal benefit; and
- (iv) Here, the investor acted with *scienter* (intent to deceive). Proving the whole string, from the original breach to the tipper’s own personal gain, presents a very difficult evidentiary problem.³⁴

B. THE UNITED KINGDOM: A CRIMINAL OFFENSE:

There is a fundamentally different route taken under Part V of the CJA 1993. The emphasis in legal proceedings is on the information and the source of that information, and not on a breach of a fiduciary duty.

1. Elements of the Offense:

An individual is guilty if they possess information they know is “inside information” (specific, non-public, and price sensitive) and obtained it from an “inside source”.³⁵

2. Defining the “Inside Source”:

An inside source is someone who has access to information through their

³³ *Salman v. United States*, 580 U.S. 39, 48–49 (2016) (reaffirming that a gift of inside information to a trading relative satisfies the personal benefit requirement).

³⁴ Insider Trading – Practical Law Guide, THOMSON REUTERS WESTLAW, <https://content.next.westlaw.com/practicallaw/document/I7d6efbda840711e598dc8b09b4f043e0>.

³⁵ *Id.*

employment, office, or profession (such as a company director or a civil servant), or someone whose information comes directly or indirectly from such a person.³⁶

3. Application and Hurdles:

The UK is more straightforward: it would not be necessary to show that there was a breach of duty or that there was any personal gain. The critical question for the prosecution would be to show beyond a reasonable doubt that Jhunjhunwala obtained the information from someone who fell within the description of an inside source. Although the legal framework is arguably more straightforward than the US's, it remains subject to the strict criminal burden of proof as compared to the “preponderance of the evidence” burden imposed on the SEC in civil enforcement.

Table 2: Comparative Analysis of Insider Trading Regulations

Parameter	India (SEBI PIT Regs, 2015)	United States (Exchange Act, 1934)	United Kingdom (CJA 1993)
Legal basis	Civil/Administrative regulation	General anti-fraud statute	Specific criminal statute
Parameter	India (SEBI pit regs, 2015)	United States (Exchange Act, 1934)	United Kingdom (CJA 1993)
Primary enforcement body	SEBI	Sec,(Civil), DOJ (Criminal)	FCA (Civil), NCA/SFO (Criminal)
Core prohibition	Trading while in possession of	Trading in breach of a duty of trust	Dealing in securities based on information

³⁶ *Id.*

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	UPSI		from an inside source
Definition of “Insider”	Broad “connected person” or any person in possession of UPSI	Person who owes a fiduciary duty or misappropriates information in breach of a duty	Person who obtains information from an “inside source”
Definition of “inside Information”	Unpublished Price sensitive information (UPSI)	Material non-public information (MNPI)	Inside information (specific, non-public, price-sensitive)
Requirement of personal benefit/intent	Not explicitly Required; possession is key	Required for tipper-tippee liability; scienter (intent) required	Not required; knowledge that it is inside information is key

V. THE GREY ZONE OF POLITICAL INTELLIGENCE

This case throws the spotlight on one of the significant and growing grey areas of international securities law, the grey area between legitimate “political intelligence” and illegal insider trading.³⁷ As governments become more active and interventionist in their economic policies worldwide, foreknowledge of changes in policy will become an increasingly valuable (and therefore market-moving) asset. There will be an increasing incentive for the illegal transmission of information, and a tremendous burden will fall upon the shoulders of regulators to police the halls of power.

“Political intelligence” firms draw upon their connections with legislators and policymakers to offer insights into anticipated legislation or regulatory developments for clients, most frequently hedge funds. Such activities have come under close

³⁷ See Congressional Research Serv., *The STOCK Act: Ethics, Transparency, and Insider Trading* (2022), <https://www.congress.gov/bill/117th-congress/house-bill/2655/text>.

scrutiny in the United States, resulting in the passage of the Stop Trading on Congressional Knowledge (“**STOCK**”) Act of 2012. The STOCK Act provided that insider trading laws apply to members of Congress and staff, as the same are under a duty of trust and confidence to the U.S. and its people and not to utilise any non-public information acquired in their capacity for their personal benefit.³⁸

Similar questions arise in India. While the laws in India are wide and may well be sufficient, they were not crafted specifically to regulate the flow of information from government sources in quite the same way as the STOCK Act.³⁹ We are forced to confront one tough question: does a well-connected investor deserve to be punished for utilizing an opportunity that arose on account of non-public information accessed through connections of this nature, which did not rise to the level of a quid pro quo tip? That, of course, is the dilemma that political intelligence regulation faces: drawing the line between insightful observation gained through access and the exploitation of government non-public information.⁴³

VI. CONCLUSION

A. TRI-JURISDICTIONAL ASSESSMENT OF ENFORCEMENT PROSPECT

Viewed through the lens of each jurisdiction’s legal framework, the prospects for a successful prosecution present a differentiated picture.⁴⁰

1. India:

A prosecution is conceivable, but its success would depend entirely on SEBI’s ability to overcome the evidentiary challenge of tracing the information leak. The expansive definitions of “insider” and “UPSI” in the PIT Regulations offer a strong legal basis for a case.⁴¹

2. United States:

A prosecution is highly improbable. The need to prove a breach of a specific

³⁸ *Id.*

³⁹ See Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015, Gazette of India, pt. III sec. 4 (Jan. 15, 2015).

⁴⁰ See generally U.S. Sec. & Exch. Comm’n, Rule 10b-5, 17 C.F.R. S.240.10b-5 (2024).

⁴¹ *Id.*

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duty by a government source, a “personal benefit” for that breach, and the tippee’s awareness of it creates a chain of proof that would be exceedingly difficult to forge without direct evidence like a confession or wiretap.⁴²

3. United Kingdom:

A prosecution would also be challenging, mainly because of the high criminal standard of proof (“beyond a reasonable doubt”). However, the legal theory is more direct than in the US, as it centres on identifying an “inside source” rather than proving a complex breach of duty.⁴³

B. DIRECTIONS FOR REFORM: THE FUTURE OF ENFORCEMENT AND INVESTOR CONFIDENCE

This case highlights a suite of discrete reforms worth careful consideration, and which this paper frames not merely in opposition, but in contribution to current thinking.⁴⁴ The practical challenges of enforcing the PIT Regulations highlighted here, especially with information originating outside the firm and entering through informal governmental channels, point to several specific reforms that this paper advances.

To begin, SEBI should consider making targeted amendments to the PIT Regulations to create a specific provision for information leaks of governmental origin, modelled on the framework introduced in the United States through the STOCK Act of 2012, which places statutory duties of confidentiality upon legislators, ministers, and public servants who possess non-public information concerning proposed legislation or policy that could potentially influence the securities markets. The introduction of such a provision would close a notable gap in the current regulatory scheme, which, although expansive in its definition of an insider, extends little traction to state actors themselves as sources of price-sensitive information.

Second, SEBI should take steps to enhance interagency confidentiality between it and relevant ministries, including but not limited to the Ministry of Electronics and

⁴² *Dirks v. SEC*, 463 U.S. 646, 662 (1983); *Salman v. United States*, 580 U.S. 39, 48 (2016).

⁴³ See Criminal Justice Act 1993, c. 36 Part V (U.K.), <https://www.legislation.gov.uk/ukpga/1993/36/part/V>

⁴⁴ See IndraStra Global, *India’s Parliament Passes Sweeping Ban on Online Money Games*, <https://www.indrastra.com/2025/08/indias-parliament-passes-sweeping-ban.html>

Information Technology and the Ministry of Finance, by establishing more formal protocols around information sharing and pre-clearance of securities trading by persons suspected to be close to significant upcoming legislation.

Thirdly, and complementary to these first two measures, SEBI should consider enhancing its technology-driven surveillance capacity, in a manner similar to what has been done by the US Securities and Exchange Commission through its Market Abuse Unit, by implementing AI systems that monitor trading activity for patterns that are statistically atypical around the announcement of regulatory action. These technologies would complement – rather than supplant – the substantive reforms in this realm but could aid SEBI significantly in identifying trading activity warranting follow-up investigation. Taken together, legislative amendments on governmental tippers, heightened interagency confidentiality, and improved technology-driven market monitoring could present a coherent and proportionate response to the enforcement gaps exposed in this case.

All this apart, it turns out to be a truly global case, transcending national boundaries and showing that even though the ideal of “clean markets” is almost universal, approaches to achieving the same vary greatly, along with diverse philosophies and practical obstacles. What this case has underscored is that the state seeks to clamp down on insider trading stemming from illegal informational advantage, while at the same time a massive, if not entirely impossible, challenge remains for the authorities in ascertaining the actual origins of this information; in other words, whether the source of such price-sensitive information is not the boardroom, but instead the very system of the state. In developing markets, such as India, where the sanctity of markets relies profoundly on transparency and a level playing field, this would continue to be an enduring example to emulate when making further strides in defining the regulation of markets at their confluence with state power.⁴⁵

⁴⁵ *Id.*

BEYOND THE BLACK BOX: PROPOSING A FRAMEWORK FOR ALGORITHMIC DUE DILIGENCE IN INDIAN CORPORATE LAW

*Purwesh Prabhakar Sabare & Janhvi Ashok Dhanvijay**

ABSTRACT

The integration of Artificial Intelligence into corporate boardrooms represents a paradigm shift in decision-making, introduces significant efficiencies, but poses critical normative challenges to the framework governing director accountability in India. This paper argues that the traditional duties of care, skill, and diligence, as codified in the Companies Act, 2013, are fundamentally ill-equipped to address the unique challenges posed by AI. The reliance on opaque “black box” algorithms, the persistent risk of inherent data bias, and a growing void have created a significant governance gap, leaving directors unable to exercise the meaningful oversight that the law requires. To bridge this gap, this paper rejects a passive, wait-and-see approach and instead proposes a proactive, robust framework of Algorithmic Due Diligence. Drawing lessons from international regulatory responses in the EU, US, and UK, our model is built on three core pillars. First, it calls for mandating technological expertise at the board level to ensure directors can ask the right questions. Second, it advocates for the institutionalization of independent algorithmic audits to verify that AI systems are fair, transparent, and reliable. Third, it recommends enhancing disclosure norms to provide investors with clear, context-rich information on corporate AI usage and its associated risks. By adopting this framework, Indian corporate law can move beyond its analogue-era limitations and create a modern standard of governance that fosters responsible innovation while reinforcing director accountability for the twenty-first century.

Keywords: Artificial Intelligence, corporate governance, Algorithmic Due Diligence, Indian corporate law, black box algorithms, algorithmic bias.

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I.	THE BEDROCK OF ACCOUNTABILITY: DIRECTOR'S DUTIES IN THE PRE-AI ERA	

The foundation of corporate governance and a director's accountability in India is codified within the Companies Act, 2013. This legislation moves beyond a purely profit-centric view, establishing a comprehensive framework of duties to ensure that directors act as responsible fiduciaries. The most crucial of these provisions is Section 166, which statutorily defines the duties directors owe to their company and its stakeholders¹.

A. THE STATUTORY FRAMEWORK OF DUTIES

Section 166 of the Companies Act, 2013, outlines several critical duties that form the legal and ethical core of a director's role. A director must always work according to the company's rule book, known as the Articles of Association. They are mandated to act honestly and in good faith, not just for the company or its members, but also for its employees, the community, and the environment at large. This duty is complemented by a strict requirement to avoid situations where personal interests could clash with the company's interests. Furthermore, a director is prohibited from misusing their powerful position for personal gain for themselves or anyone else; any such gain must be returned to the company. The position of a director is one of trust and cannot simply be assigned or transferred to another person.

¹ Companies Act, No. 18 of 2013, § 166 (Ind.).

Most importantly for our analysis, the Act requires that when making any decision, a director must exercise reasonable care, skill, and diligence. This standard of care is the cornerstone of a director's functional responsibility, and any violation of these duties can result in significant fines ranging from one to five lakh rupees.

B. THE JUDICIAL SAFEGUARD: THE BUSINESS JUDGMENT RULE

To balance stringent fiduciary standards with the commercial necessity of risk-taking, Indian jurisprudence recognizes principles analogous to the common law Business Judgment Rule (“BJR”). The BJR operates as a rebuttable presumption that, when making commercial decisions, directors acted on an informed basis, in good faith, and in the honest belief that the action taken was in the best interests of the company. While the statutory text of the Companies Act, 2013 does not explicitly formulate the BJR, the Supreme Court of India conclusively embedded its underlying philosophy in the landmark decision of *Miheer H. Mafatlal v. Mafatlal Industries Ltd.*² The Court established that judicial intervention is unwarranted where corporate decisions represent the “commercial wisdom” of the board and shareholders, provided the decision-making process is untainted by fraud, unreasonableness, or bad faith. Consequently, Indian courts focus their scrutiny on the procedural integrity of the decision-making process rather than reviewing the substantive merits of the ultimate business outcome.

This established framework, combining statutory duties with judicial protection, has long been the standard for governing human-led corporate decisions. However, the integration of Artificial Intelligence introduces a fundamental doctrinal challenge to this safeguard. To access the protective safe harbour of the BJR, directors must satisfy the threshold requirement of being “reasonably informed.” When boards rely on opaque algorithmic systems where the internal logic cannot be deciphered, a critical question arises as to whether directors can legally claim to have made an informed decision. Total algorithmic opacity threatens to strip directors of BJR protections, as courts cannot verify

²*Miheer H. Mafatlal v. Mafatlal Industries Ltd.*, (1997) 1 SCC 57 (Ind.).

the procedural rationality of a decision if the underlying analytical pathway remains entirely obscured.

II. THE GOVERNANCE GAP: WHY TRADITIONAL DUTIES FAIL IN THE AI ERA

While the framework in the Companies Act, 2013 provides a solid foundation for human governance, it is being tested to its limits by the integration of Artificial Intelligence in corporate decision-making. Furthermore, resolving this tension requires analysing whether the deployment of AI is characterised as reliance on an expert tool or as an unauthorised sub-delegation of fiduciary power. Under general corporate law principles, directors are entitled to rely on reports, opinions, or data prepared by professional experts or corporate officers, provided such reliance is maintained in good faith and accompanied by a reasonable degree of inquiry.

Treating AI as a decision-support tool allows the standard of ‘reasonable care’ under Section 166(3) to evolve naturally to encompass ‘algorithmic due diligence’ requiring directors to verify the system’s testing protocols, error rates, and pre-deployment audits. Conversely, if an automated system executes final decisions autonomously without human supervision (e.g., automated execution of high-frequency trades or automated contract terminations), it crosses the threshold into delegated decision-making. Given that Section 166(6) prohibits the assignment of office, an unmonitored delegation of core discretionary powers to an algorithmic system lacks statutory cover, exposing the board to liability for failure to supervise.” Three core challenges emerge: the black box dilemma, inherent algorithmic discrimination, and a dangerous liability void that the current legal framework is ill-equipped to handle.

A. THE ‘BLACK BOX’ DILEMMA VS. INDEPENDENT JUDGMENT

A key challenge stems from the nature of complex AI itself. A black box AI system is one where the internal decision-making process is opaque. While data can be fed into the system and a clear output is produced, the reasoning process in between often remains hidden, even from the system’s creators. This lack of transparency makes it incredibly difficult to understand or explain why a

particular outcome was reached. This poses a direct conflict with a director's duty to exercise "independent judgment." If a board relies on a recommendation from a black box system, they are fundamentally unable to scrutinise the logic behind it, turning its judgment from "independent" into an act of faith in the algorithm.

B. ALGORITHMIC BIAS AND THE SECTION 166(2) STAKEHOLDER MANDATE

The statutory duty under Section 166(2) obligates directors to act in good faith to promote the best interests of employees, shareholders, and the broader community. This duty is directly compromised when machine learning models perpetuate systemic algorithmic bias. Algorithms optimise for patterns found within historical training sets; consequently, if the underlying data reflects historical prejudices, the software replicates and scales these systemic flaws. A prominent empirical demonstration of this risk is the Correctional Offender Management Profiling for Alternative Sanctions ("COMPAS") algorithm utilised within the United States judicial system to assess recidivism risk. Independent investigations revealed that the model exhibited substantial racial disparities, erroneously labelling Black defendants as high-risk at nearly twice the rate of White defendants, while disproportionately misclassifying White recidivists as low risk.³

Transposing this risk to the Indian corporate framework highlights severe compliance liabilities under Section 166(2). If an Indian corporation deploys an automated screening system for employment recruitment, internal promotions, or consumer retail lending, and that system incorporates skewed historical data resulting in discriminatory outcomes against protected classes or marginalised communities, the board faces statutory exposure. Facilitating systemic Disparities, even inadvertently through software tools, directly contravenes the fiduciary mandate to promote employee welfare and community interests in

³ Martin Petrin, *Corporate Management in the Age of AI*, 2019 COLUM. BUS. L. REV. 965, 992–95 (2019) (discussing how algorithmic bias and unmonitored reliance on flawed artificial intelligence systems expose directors to liability for failing their fiduciary duty of good faith).

good faith, providing grounds for actionable breaches under Indian company law.⁴

C. EXAMINING THE BOUNDARIES OF THE OVERSIGHT GAP

When algorithmic outputs result in financial loss, corporate harm, or stakeholder injury, identifying the precise locus of legal liability under existing frameworks proves challenging. Examining established legal doctrines demonstrates that current remedies provide incomplete coverage for AI-driven corporate failures. For instance, establishing traditional tortious or managerial negligence requires proving a breach of the applicable standard of care, direct causation, and reasonable foreseeability of harm. Because machine learning models evolve dynamically and generate non-linear outcomes beyond their initial programming parameters, proving that a specific corporate injury was a direct, foreseeable consequence of a director's oversight failure becomes highly problematic.⁵

Furthermore, principles of vicarious liability operate exclusively between recognised legal entities, such as master-servant or principal-agent relationships. Since algorithms lack separate legal personality, corporations cannot be held vicariously liable for the standalone “acts” of software; legal responsibility must instead be attached directly to human or corporate actors through primary fault.⁶

This systemic gap extends to statutory regimes as well. Under the Consumer Protection Act, 2019, product liability frameworks govern defective software or commercial tools.⁷ However, these remedies typically protect downstream end-consumers rather than addressing internal governance failures or allocating responsibility among corporate directors, software developers, and third-party vendors.

⁴ Companies Act, No. 18 of 2013, § 166(2) (Ind.).

⁵ Yavar Bathaee, *The Artificial Intelligence Black Box and the Failure of Intent and Causation*, 31 HARV. J.L. & TECH. 889, 905–08 (2018) (discussing how the opaque and dynamic nature of machine learning algorithms fundamentally disrupts traditional legal doctrines of negligence, foreseeability, and proximate cause).

⁶ Mihailis E. Diamantis, *The Extended Corporate Mind: When Corporations Use AI to Break the Law*, 98 N.C. L. REV. 893, 915–18 (2020) (discussing corporate liability arising from AI systems).

⁷ Consumer Protection Act, No. 35 of 2019, § 82 (Ind.).

Finally, while corporations frequently seek contractual indemnities from software developers to mitigate dynamic operational risks, such commercial risk-allocation mechanisms do not absolve directors of their statutory public law duties under Section 166. A board cannot contractually outsource its fiduciary oversight. Consequently, a distinct regulatory gap exists traditional doctrines remain misaligned with autonomous software dynamics, leaving directors exposed to statutory liabilities without clear compliance guidelines defining what constitutes adequate oversight.

III.THE GLOBAL CONTEXT: INTERNATIONAL RESPONSES TO AI GOVERNANCE

The challenges posed by Artificial Intelligence are not unique to India. As AI is implemented across diverse sectors, business leaders and regulators worldwide are grappling with the associated risks. Poor-quality AI systems can present numerous threats, including privacy invasions and data misuse, which have prompted international regulatory bodies to take action. Examining the approaches taken by the European Union, the United States, and the United Kingdom provides valuable insight into potential pathways for developing a robust governance framework.

A. THE EUROPEAN UNION’S COMPREHENSIVE APPROACH: THE EU AI ACT

The European Union has taken a pioneering step with the EU AI Act, a landmark piece of legislation designed to regulate AI use and foster trust and safety in the technology. The Act’s goal is to ensure AI remains under human control, keeps data safe, and mandates transparency in its use. Central to the Act is a risk-based categorisation of AI systems, which groups them into four key tiers. First, unacceptable-risk systems are considered a threat to individuals and are banned. This includes AI used for social scoring or manipulating vulnerable groups, as well as most real-time biometric identification. Second, high-risk systems must be designed with transparency to allow users to correctly interpret their outputs and understand their limitations and risks. Third, for limited-risk AI systems that interact directly with people, like chatbots, users must be

informed that they are engaging with an AI. Content generated by AI, such as deepfakes, must also be clearly labelled. Finally, the minimal-risk category covers everyday tools like spam filters and AI-enabled video games, which face no binding legal obligations. A core principle of the Act is transparency, defined as ensuring AI systems are traceable, explainable, and understandable by humans.⁸

B. THE US AND UK'S SECTOR-SPECIFIC MODELS

In contrast to the EU's single, comprehensive law, both the United States and the United Kingdom have opted for more flexible, sector-specific regulation. The United States does not have one overarching AI law. Instead, it follows a model where existing regulators oversee AI in their own domains, such as the FDA in healthcare and the FTC in consumer protection. Governance is guided by executive orders and voluntary frameworks, an approach that aims to encourage innovation while managing risks through specialised agencies.⁹

Similarly, the United Kingdom also avoids a single AI law, following a decentralised model guided by five principles: safety, transparency, fairness, responsibility, and contestability. Responsibility is given to existing regulators like the ICO for data and the FCA for financial services. The UK's goal is to keep regulation flexible and innovation friendly as AI technology evolves.¹⁰

C. COMPARATIVE ANALYSIS AND REGULATORY IMPLICATIONS FOR INDIA

Evaluating these international models provides clear policy direction for India's corporate regulatory framework. The European Union's highly prescriptive, horizontal model introduces rigid statutory definitions and heavy *ex-ante* compliance burdens. While protective, this approach may inadvertently impede domestic technological development and stifle innovation within India's rapidly growing digital market. Therefore, India should reject the adoption of a

⁸ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), COM (2021) 206 final, arts 13-14 (Apr. 21, 2021).

⁹ Exec. Order No. 14,110, 88 Fed. Reg. 75,191 (Nov. 1, 2023).

¹⁰ DEPT FOR SCI., INNOVATION & TECH., A PRO-INNOVATION APPROACH TO AI REGULATION, 2022-23, CP 815, at 14 (UK).

rigid, cross-sectoral AI statute.¹¹ Conversely, the decentralised, principles-based approach utilised by the United Kingdom, and the United States aligns closely with India's existing administrative architecture. Rather than creating a new monolithic AI regulator, India can achieve effective governance by empowering existing statutory bodies.¹²

In the corporate context, the Ministry of Corporate Affairs (“**MCA**”) and the Securities and Exchange Board of India (“**SEBI**”) are best positioned to issue targeted operational guidelines. Integrating algorithmic oversight directly into specialised company law and securities frameworks ensures that compliance remains context-specific, legally enforceable, and responsive to commercial realities without curbing technological progress.

IV. THE PATH FORWARD: A FRAMEWORK FOR ALGORITHMIC DUE DILIGENCE

Artificial intelligence has moved beyond being a futuristic idea and is now an everyday presence in corporate governance. From recruitment to strategic forecasting, AI systems are shaping critical corporate decisions. As the previous chapters have shown, the traditional directors' duties under Indian law were drafted for an era of human management, not for overseeing machines with hidden “black box” algorithms. This mismatch creates a dangerous liability gap, hindering their capacity to execute fiduciary duties effectively. To restore meaningful oversight, the governance framework must be updated. We propose a new standard of Algorithmic Due Diligence built on three pillars: mandating board-level expertise, institutionalising algorithmic audits, and enhancing investor disclosures.

¹¹Michael Guihot et al., *Nudging Robots: Innovative Solutions to Regulate Artificial Intelligence*, 20 VAND. J. ENT. & TECH. L. 385, 402–05 (2017) (arguing that comprehensive, horizontal AI legislation is often too rigid to keep pace with technological advancements and advocating for decentralized, domain-specific regulation to prevent stifling innovation).

¹²Umakanth Varottil, *The Evolution of Corporate Law in Post-Colonial India: From Dictat to Nuance*, 31 AM. U. INT'L L. REV. 253, 288–92 (2016) (highlighting the success of the Securities and Exchange Board of India and the Ministry of Corporate Affairs in utilizing delegated legislation and sector-specific guidelines to dynamically regulate complex corporate governance frameworks).

A. MANDATING TECHNOLOGY EXPERTISE ON BOARDS

Perhaps the most urgent reform is the inclusion of technological expertise at the board level. Corporate boards have long been dominated by directors with finance or legal backgrounds, but today's risks are increasingly digital, from algorithmic prejudice to cybersecurity breaches. When directors lack the literacy to question these technologies, they cannot effectively discharge their fiduciary duties. A 2024 Harvard Business Review article notes that many boards are “downright timid” regarding technology, taking a defensive posture that overlooks bigger opportunities.¹³ As the Harvard Law School Corporate Governance Blog warns, it is no longer enough for directors to passively rely on simplified reports from management; they must actively commit to learning and gaining insight. Some jurisdictions are already moving in this direction, with companies appointing “digital directors” or establishing specialised technology committees.¹⁴ For India, these recommendations should be directly linked to existing board composition frameworks. Adding a requirement for a specialised technology committee or mandating the inclusion of digital expertise by the Nomination and Remuneration Committee under Section 178 of the Companies Act, 2013, and Regulation 19 of the SEBI LODR, would align Indian governance with global best practices.¹⁵

B. INSTITUTIONALISING ALGORITHMIC AUDITS

Even with an expert on the board, directors cannot personally inspect every algorithm, especially those from third-party vendors. Therefore, it is imperative to institutionalise algorithmic audits as a core part of corporate governance.

¹³ Thomas H. Davenport & Vikram Mahidhar, *The Digital Imperative for Today's Boardroom*, HARV. BUS. REV. (Mar.-Apr. 2024).

¹⁴ John C. Coates, *Governing AI: The Board's Role in a New Era*, HARV. L. SCH. F. ON CORP. GOV. (Oct. 11, 2023). <https://corpgov.law.harvard.edu/>

¹⁵ The Companies Act, No. 18 of 2013, § 178 (Ind.); Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, The Gazette of India, pt. III sec. 4, Reg. 19 (Sept. 2, 2015).

Much like financial audits provide assurance of accuracy, algorithmic audits ensure that AI systems are fair, transparent, and reliable.¹⁶

These audits serve several key functions. First, they can detect and mitigate the discrimination that AI systems often learn from historical data, protecting companies from legal and reputational damage. Second, independent audits build trust with stakeholders and help directors demonstrate they have exercised due diligence. Third, with regulations like the EU's AI Act mandating compliance for high-risk systems, regular audits are essential for managing risk in global markets. Finally, audits enhance internal oversight by creating a systematic process for governance that directors can rely on. Crucially, this practice should be formally institutionalised by linking algorithmic audits to the board's statutory duty to ensure robust internal financial controls under Section 134(5)(e) of the Companies Act, 2013, with continuous monitoring delegated to the Audit Committee under Section 177.¹⁷

C. ENHANCING AI DISCLOSURE TO INVESTORS

Transparency is a cornerstone of good governance, and it takes on new urgency in the AI era to protect investors from hype. Many companies engage in "AI-washing," filling annual reports with buzzwords that create an illusion of innovation while concealing the true limitations of their AI integration. Regulators are starting to act. The U.S. Securities and Exchange Commission ("**SEC**") is scrutinising AI-related disclosures, warning companies against exaggerating their capabilities and demanding "context-rich disclosure" that explains how AI is used and what risks it entails.¹⁸ For India, expanding existing obligations to cover AI usage is a necessary next step. By classifying enterprise AI adoption as a reportable material risk under Regulation 30 (Schedule III) of the SEBI LODR, and integrating algorithmic fairness metrics into the Business Responsibility and Sustainability Reporting ("**BRSR**") framework, regulators can

¹⁶ The Inst. Of Internal Auditors, *Artificial Intelligence Auditing Framework* (2024), <https://www.theiia.org/globalassets/site/content/tools/professional/aiframework-sept-2024-update2.pdf>

¹⁷ Companies Act, No. 18 of 2013, §§ 134(5)(e), 177 (Ind.).

¹⁸ Alisa L. Chestler & T. O. Meg He-Eun, *AI Disclosures Under the Spotlight: SEC Expectations for Year-End Filings*, BAKER DONELSON (Jan. 10, 2025) <https://www.bakerdonelson.com/ai-disclosures-under-the-spotlight-sec-expectations-for-year-end-filings>.

enforce context-rich transparency.¹⁹ Requiring companies to define their AI use, explain its strategic relevance, and identify material risks within these existing structures would protect investors, discourage AI-washing, and align Indian practices with emerging global standards.²⁰

V. CONCLUSION

Corporate governance in India stands at a critical juncture, caught between the established legal traditions of the 20th century and the disruptive technological realities of the 21st. As this paper has argued, the foundational duties of care, skill, and diligence codified under Section 166 of the Companies Act, 2013, designed to ensure director accountability in a human-led world, are proving dangerously inadequate in the age of Artificial Intelligence. When faced with opaque “black box” algorithms, inherent data disparities, and a growing oversight void, traditional oversight mechanisms risk becoming misaligned. Specifically, algorithmic opacity undermines the “reasonably informed” standard required for Business Judgment Rule protections, while unmonitored software reliance threatens affirmative stakeholder duties. Director’s risk becoming legally responsible for decisions they can neither fully understand nor meaningfully control.

To bridge this governance gap, a passive, wait-and-see approach is not an option. We have proposed a proactive and robust framework of Algorithmic Due Diligence, anchored directly in the existing legal framework through three essential pillars: (1) integrating technological expertise into board composition mandates under Section 178 of the Act and SEBI LODR frameworks; (2) interpreting statutory internal controls under Section 134(5)(e) and Audit Committee functions to require independent algorithmic audits; and (3) expanding investor transparency through SEBI LODR Regulation 30 and BRSR disclosure obligations. This framework is not a call to stifle innovation but to

¹⁹ Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, The Gazette of India, pt. III sec. 4, Reg. 30, sched. III (Sept. 2, 2015).

²⁰ Securities and Exchange Board of India, *Business Responsibility And Sustainability Reporting By Listed Entities*, Circular No. SEBI/HO/CFD/CMD-2/P/CIR/2021/562 (May 10, 2021) https://www.sebi.gov.in/legal/circulars/may-2021/business-responsibility-and-sustainability-reporting-by-listed-entities_50096.html.

channel it responsibly. It seeks to replace blind faith in technology with a new standard of informed, critical oversight. Ultimately, updating India's corporate governance is not merely a matter of legal housekeeping. It is a strategic imperative for securing the nation's economic future. In a world where investor confidence and global competitiveness are increasingly tied to responsible technological adoption, a governance model that embraces transparency and accountability is not just an advantage; it is the only sustainable path forward. The time to act is now.

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Published By:
The Registrar,
National Law University Jodhpur,
NH-65, Mandore,
Jodhpur 3424304
Rajasthan, India