LEGAL AMENITY LAW JOURNAL – ISSN 3107-9148

Volume I Issue II November – December 2025

Responsible Use of AI/ML in the Indian Securities Market: A Regulatory and Policy Analysis

By-Aaditya Kumar Mukhija

2nd Year Law Student, Gujarat National Law University, Gujarat

ABSTRACT

This study looks at the governmental reactions and regulatory issues surrounding the use of AI and machine learning in India's stock markets. Drawing from reports from the FSB and OECD, as well as a comparative analysis of international frameworks including the EU AI Act MAS FEAT and IOSCO advice, the study presents a cogent regulatory architecture for India. It highlights six key issues that need regulatory attention, including cybersecurity, algorithmic fairness, investor disclosure testing, model governance, and ongoing monitoring. Considering the domestic legal system and market structure, the article analyses international best practices for each issue and determines if they apply to India. The results indicate that while worldwide tools agree on a risk-based, accountability-centered strategy, India still must deal with issues of supervisory expertise gaps, interagency collaboration, and definitional uncertainty. The study supports a tiered regulatory framework that maintains flexibility for internal tools and low-risk applications while focusing prescriptive requirements on high impact applications. Mandatory model inventories, board-level accountability, pre-deployment validation, shadow testing, standardized disclosures for AI-driven products, periodic fairness audits, privacy by design standards, and focused resilience testing for AI infrastructures are some of the suggested methods. Sandboxes and an ongoing inter-regulator forum for coordination are two examples of implementation proposals. The conclusion asserts that beneficial AI innovation will be made possible while preserving investor protection, market integrity, and trust through a technology neutral principle-based framework operationalized through precise definitions, enforceable standards for high-risk use cases, and ongoing regulatory learning.

KEYWORDS

Artificial Intelligence Regulation, Indian Stock Markets, Algorithmic Fairness, Investor Protection, Comparative Regulatory Frameworks

1. INTRODUCTION

Artificial intelligence (AI) and machine learning (ML) are transforming global capital markets by enabling sophisticated algorithmic trading, robo-advisory services, risk management, and compliance tools. Firms increasingly use AI/ML for tasks ranging from predictive analytics and portfolio optimization to surveillance and fraud detection, drawing on large data sets and powerful computational resources. There are many potential advantages, such as increased decision-making, cost savings, and efficiency, but there are also risks involved. International organizations warn that AI-driven systems may increase financial industry vulnerabilities such as market volatility, cyberthreats, model and data hazards, and third-party service provider concentration. Notably, generative AI raises new concerns about fraud and disinformation in markets. These developments have spurred policymakers worldwide to assess whether existing regulatory frameworks suffice or must be augmented. For example, the Financial Stability Board Artificial intelligence (AI) and machine learning (ML) are transforming global capital markets by enabling sophisticated algorithmic trading, robo-advisory services, risk management, and compliance tools. Firms increasingly use AI/ML for tasks ranging from predictive analytics and portfolio optimization to surveillance and fraud detection, drawing on large data sets and powerful computational resources. There are many potential advantages, such as increased decision-making, cost savings, and efficiency, but there are also risks involved. International organizations warn that AI-driven systems may increase financial industry vulnerabilities such as market volatility, cyberthreats, model and data hazards, and third-party service provider concentration[1]. Notably, generative AI raises new concerns about fraud and disinformation in markets. These developments have spurred policymakers worldwide to assess whether

[1] *Nassira Abbas et al., Artificial Intelligence Can Make Markets More Efficient—and More Volatile, Int'l Monetary Fund (Oct. 15, 2024), https://www.imf.org/en/Blogs/Articles/2024/10/15/artificial-intelligence-can-make-markets-more-efficient-and-more-volatile.*

existing regulatory frameworks suffice or must be augmented. For example, the Financial Stability Board (FSB) urges authorities to enhance monitoring of AI adoption, test current policy adequacy, and build supervisory capacity (even by using AI tools) to keep pace with innovation[2].

In India, the application of AI/ML in finance has similarly surged. The government has articulated an overarching AI strategy namely NITI Aayog's "Principles for Responsible AI" and related reports emphasizing constitutional values and data protection[3]. The Reserve Bank of India (RBI) has instituted a high-level committee to draft a "Framework for Responsible and Ethical Enablement of AI" (FREEAI), recommending digital infrastructure and governance mechanisms to foster innovation while mitigating risk. Securities market regulator SEBI has followed suit, first by mandating disclosures on AI/ML usage by exchanges and intermediaries, and more recently by forming a working group and releasing a consultation paper[4] (June 2025) on AI/ML usage in the securities markets. Recognizing that AI/ML can significantly affect market integrity, stability, and investor protection, these actions call for regulatory direction. International best practices and the legal framework of the nation must inform India's regulatory responses. To tie India's developing framework to the global regulatory environment, this paper looks at the AI Act of the EU, the MAS FEAT principles of Singapore, and IOSCO, FSB, and OECD initiatives. The six main regulatory themes; model governance, investor disclosures, algorithmic fairness, data privacy, cybersecurity, and institutional capacity are then examined. Lastly, policy proposals are made to guarantee that AI/ML supports India's securities markets without compromising their soundness and transparency.

2. THE RISE OF AI/ML IN CAPITAL MARKETS

2.1. Use Cases and Benefits

The adoption of AI/ML in finance has escalated rapidly in recent years. Firms use these technologies to enhance decision-making processes in areas such as algorithmic trading, robo-

[2] *Fin. Stability Bd., The Financial Stability Implications of Artificial Intelligence (Nov. 2024), https://www.fsb.org/2024/11/the-financial-stability-implications-of-artificial-intelligence/.*

[3] *NITI Aayog, Responsible AI for All: A Multi-Stakeholder Initiative 1 (Feb. 22, 2021), https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf.*

[4] *Securities & Exch. Bd. of India, Consultation Paper on Guidelines for Responsible Usage of AI/ML in Indian Securities Markets (June 2025), 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.*

advisory, investment research, and sentiment analysis[5]. AI tools also power compliance and surveillance: for example, machine-learning systems now scan large volumes of transactions and communications to detect market abuse or anti-money-laundering issues. In back-office operations, AI-driven automation improves efficiency in tasks like document processing, client support (e.g. chatbots), and trade execution. Even within central banking and financial supervision, AI/ML are used for data analysis, forecasting, and fraud prevention[6]. The EU Commission highlights that AI's chief financial-sector benefits include more accurate forecasting, risk mitigation, automated processes, and fraud detection by rapidly identifying anomalies in large unstructured data sets[7]. To summarise, AI/ML promise higher productivity and new services in capital markets, increasing access and customization of financial products.

2.2. RISKS AND RATIONALE FOR REGULATION

There are serious risks associated with these advancements that call for supervision. Global regulatory bodies emphasize that AI/ML has the potential to both introduce and exacerbate financial system vulnerabilities. For instance, the FSB warns that AI-driven systems may heighten systemic risk through **(i)** concentration of third-party providers (cloud platforms, data vendors) whose disruption would affect many firms, **(ii)** the strengthening of asset correlations (inflating simultaneous sell-offs), **(iii)** elevated cyber threats, and **(iv)** model risk and data quality issues. Generative AI also introduces fresh dangers, such as sophisticated fraud (deepfakes and synthetic identities) and disinformation that could mislead markets. Most importantly, "misaligned" AI systems that are not appropriately restrained by ethical, legal, or regulatory boundaries may behave in ways that compromise the integrity of the market. The FSB warns that AI systems may behave in destabilizing ways on their own if they are allowed to function outside of their intended parameters[8].

The specific problems include lack of explainability (opaque "black-box" models that are hard for clients and regulators to audit), algorithmic bias (when AI decisions inadvertently discriminate against or disadvantage specific groups), and model development errors that cause flash crashes or unusual trading under pressure. The detrimental effects of inappropriate AI use have been reported by prominent authority. For example, unregulated AI advisers may

[5] *Int'l Org. of Sec. Comm'ns, Artificial Intelligence in Capital Markets: Use Cases, Risks, and Challenges 5 (2025), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD788.pdf.*

[6] *Bank for Int'l Settlements, Governance of AI Adoption in Central Banks (CGRM Report, Jan. 29, 2025), https://www.bis.org/publ/othp90.htm.*

[7] *Eur. Comm'n, AI in Finance (EC-DG FISMA) (June 19, 2024), https://finance.ec.europa.eu/news/ai-finance-2024-06-19_en.*

[8] *supra note 2.*

advocate unsuitable retail investments, and coordinated AI trading may increase market volatility. Additionally, AI can create or intensify cyberthreats (e.g., by generating malicious code or manufacturing automated disinformation to facilitate mass phishing). New cybersecurity threats are also brought about by AI, as hostile actors target the data assets and AI systems of financial institutions. The BIS points out that central banks and others face difficult risk management issues when adopting AI, identifying data security, confidentiality, and "hallucinations" in AI outputs as major model hazards[9]. In light of these dangers, which include potential issues with market fairness, operational failures, or destabilizing interactions, regulators agree that AI/ML cannot be fully left unchecked. Financial sector players require governance norms, and regulators require tools to monitor and mitigate AI risks for markets and investors.

3. GLOBAL FINANCIAL AI REGULATORY FRAMEWORKS

Global regulators are creating financial-specific AI oversight protocols. Important global strategies are described in this section along with how they connect to India's framework.

3.1. European Union: The AI Act and Financial AI

The European Union’s AI Act adopts a risk-based approach. It categorizes AI systems by risk level as high-risk, limited risk, and prohibited usage (such subliminal manipulation). The Act explicitly identifies certain financial-sector AI as high-risk. In particular, AI systems used for creditworthiness evaluation and for risk assessment and pricing in life/health insurance are listed as high-risk categories[10]. AI systems with a high risk will be subjected to stringent regulations, including exact data governance standards, human monitoring, obligatory risk management, and transparency (including documentation and pre-market conformance checks). Regulators' recommendations for optimal practices are reflected in those duties. Ongoing initiatives are also highlighted by the European Commission, which is holding seminars with supervisors to learn how AI tools are used in asset management, banking, and securities and gathering feedback from stakeholders on all applications of AI in finance.

In addition to the AI Act, AI supervision is implied by current EU financial legislation. The Market Abuse Regulation and MiFID II, for example, already require businesses to keep an eye out for market abuse through algorithmic trading, and the Digital Operational Resilience Act, a new cybersecurity law from the EU, will apply to crucial financial technology. But the

[9] *supra note 6.*

[10] *supra note 7.*

AI Act offers a unifying framework: it requires AI suppliers and deployers (wherever situated) to provide strong control and transparency by classifying some financial AI as high-risk. Key issues have been highlighted by EU regulators, including algorithmic bias and the difficulty of determining AI's "trustworthiness" in the presence of low data quality[11]. To put it briefly, the EU is moving toward broad regulation of AI across industries, indicating that financial AI would not be exempt from supervision but will instead be subject to sector-specific compliance as necessary.

3.2. Singapore: MAS FEAT Principles

The Monetary Authority of Singapore (MAS) has long used a framework based on principles to address AI in finance. MAS published the FEAT Principles which stand for Fairness, Ethics, Accountability, and Transparency for the application of AI and data analytics in financial services in 2018[12]. These principles instruct firms to ensure that AI-driven outcomes do not systematically disadvantage any group (Fairness), align with the firm's ethical standards (Ethics), assign clear responsibility for AI decision-making both internally and for affected customers (Accountability), and proactively disclose the use of AI to regulators and stakeholders (Transparency)[13]. For instance, MAS mandates that financial firms maintain audit trails and explainable AI when practical and appoint senior personnel to approve major AI deployments. While MAS has not passed any AI-specific regulations, it has issued model risk guidelines and carried out theme assessments that call for thorough model validation and supervision. Financial institutions must, for instance, assign senior personnel to approve major AI implementations, maintain audit trails, and, when practical, use explainable AI, according to MAS. MAS has carried out theme evaluations and released model risk guidelines that demand strong model validation and oversight, even though it has not passed strict regulations specifically related to AI.

3.3. IOSCO and Global Standards.

The International Organization of Securities Commissions (IOSCO) has taken the lead in developing AI/ML regulations for securities markets on a global scale. The 2021 and 2024 reports from IOSCO, "Use of AI/ML by market intermediaries and asset managers" and "Use

[11] *Id.*

[12] *Monetary Auth. of Sing., FEAT Principles: Fairness, Ethics, Accountability and Transparency (Nov. 12, 2018), https://www.mas.gov.sg/~/media/MAS/News%20and%20Publications/Monographs%20and%20Information%20Papers/FEAT%20Principles%20Final.pdf.*

[13] *Id.*

Cases, Risks, and Challenges," respectively, describe the spread of AI in finance and highlight best practices. In addition to improving surveillance and AML procedures, IOSCO discovered that businesses are "increasingly using AI systems to support decision-making" in robo-advising, algorithmic trading, investment research, sentiment analysis, and back-office tasks. At the same time, IOSCO highlighted the following major risk categories: problems with human-AI interaction, model and data issues, concentration of AI services, and harmful applications of AI[14].

IOSCO's 2021 final report outlines six measures as expected norms for AI/ML-using intermediaries in order to solve these issues (summarized below): defined senior management responsibility for AI governance; stringent testing and continuous observation of AI algorithms in isolated settings; adequate staff knowledge of model creation and adherence; supervision of external AI service providers through transparent contracts and performance monitoring; suitable client disclosure regarding AI-driven results; and measures to guarantee data quality and reduce bias. AI integration into current compliance frameworks is the goal of these actions. In Measure 1, for instance, companies are advised to provide high-level approval power for AI installations and to define internal governance frameworks. Measure 6 emphasizes the necessity of bias prevention and high-quality data in order to create trustworthy AI applications. According to IOSCO, industry guidelines that are generally in line with these principles have been released by authorities such as MAS and ASIC, as well as self-regulatory bodies like FINRA (US).

Additionally, IOSCO's recent actions indicate continued support for its members. The organization organizes information exchange, coordination, and technical assistance with entities such as the FSB to aid national regulators in developing their ability to oversee AI. According to IOSCO, authorities should continue to support best practices including internal audits and human-in-the-loop evaluations, and they should enforce current financial legislation in the context of AI[15]. Overall, IOSCO's framework is very similar to what India's securities regulator is thinking about, which is the need for robust model governance and accountability that complies with international standards.

[14] *supra note 5*

[15] *Id*

3.4. International Organisations: OECD and FSB

In a similar vein, other international organizations have addressed AI in finance. 49 jurisdictions' AI regulatory frameworks were reviewed in a report released by the Organization for Economic Cooperation and Development (OECD), noting the trade-off between innovation and risk[16]. The OECD urges for cross-border cooperation and the exchange of best practices, pointing out similarities such the risk-based categorization of AI applications.

The Financial Stability Board (FSB) published a paper on the effects of AI on financial stability. It acknowledges the advantages of AI adoption, like "operational efficiency, regulatory compliance, product customization, and advanced analytics," but it also suggests that it could increase sector vulnerabilities[17]. Systemic risk channels are particularly identified by the FSB as cyber risks, higher market correlations, third-party concentration, and "model risk, data quality, and governance" problems. It notes that mis-specified AI could undermine stability and cautions that generative AI increases the dangers of fraud and misinformation. Crucially, the FSB concludes that even though many AI dangers are covered by present frameworks, authorities should nonetheless improve their capability for monitoring and regulation. This entails gathering information on AI usage, testing AI systems under stress, and potentially employing AI tools for supervision.

Along with the OECD, the FSB also highlights international uniformity, its press materials highlight the significance of authorities taking a risk-based approach and filling up knowledge gaps on the use of AI. These papers basically reaffirm the necessity for proportionate regulation, high-impact AI like automated trading systems requires more stringent regulation, whereas low-risk AI can be lightly touched. Additionally, they suggest broader collaboration such as global discussions, regulatory sandboxes to harmonize AI policy.

3.5. United States

In the US, authorities have integrated AI monitoring into pre-existing frameworks but have not yet produced legislation specifically addressing AI in banking. AI-powered operations are subject to ordinary securities regulations enforced by the Commodity Futures Trading Commission, the U.S. Securities and Exchange Commission (SEC), and self-regulatory agencies such as the CFTC and FINRA. Robo-advisors are subject to current fiduciary norms,

[16] *Org. for Econ. Co-op. & Dev., Regulatory Approaches to Artificial Intelligence in Finance (2023), https://www.oecd.org/en/publications/regulatory-approaches-to-artificial-intelligence-in-finance_f1498c02-en.html.*

[17] *supra note 2.*

although algorithmic trading in stocks is already governed by Regulation SCI[18] and market abuse laws.

US regulators do, however, keep a close eye on advancements in AI. Roundtables on artificial intelligence in financial services have been a part of the SEC's fintech outreach, and its strategic centre, Fin Hub, keeps investors informed about fraud involving AI. Companies that make false or misleading claims about artificial intelligence in investment services have been the target of enforcement actions brought by the SEC. For example, in 2023–2024 the SEC charged investment advisers for fraudulently touting AI-driven strategies and technology that did not perform as advertised[19]. These instances show that AI claims are subject to fraud and misleading laws. Additionally, U.S. authorities have issued lectures and guidelines urging businesses to make sure AI algorithms are properly managed for risk.

In conclusion, while U.S. regulators emphasize innovation, they also ensure that AI systems adhere to duty-of-care, anti-fraud, and risk control criteria. Their stance is comparable to that of IOSCO: utilize existing regulations while fortifying them using AI-specific supervisory attention. This multilayered global environment, which includes the FSB's systemic focus, IOSCO's international recommendations, MAS's guiding principles, and the EU's official AI Act, offers a wide range of approaches. India may draw inspiration from all of these as it creates its own regulatory framework for AI/ML in securities markets.

4. DEVELOPMENTS IN INDIA’S REGULATORY APPROACH.

India is still in the early stages of its financial markets' adoption of AI. India's policy think tank, NITI Aayog, has established the foundation for responsible AI. In accordance with India's constitutional ideals, NITI listed general ethical guidelines for AI in its 2021 strategy paper[20]. Significantly, NITI Aayog highlighted the critical importance of accountability, emphasizing that stakeholders are required to assume responsibility and conduct thorough risk assessments. Additionally, it underscored the necessity for safety and reliability, asserting that AI must operate as designed while incorporating safeguards and remedies to address potential harm. Along with other things, it demanded transparency, equality, and non-discrimination. These ideas now guide government, including financial, thinking on AI.

[18] *17 C.F.R. §§ 242.1000–.1007 (Revised as of Apr. 1, 2024)*

[19] *Sec. & Exch. Comm’n, Artificial Intelligence/Machine Learning, Office of the Strategic Hub for Innovation & Financial Technology (FinHub) (Apr. 8, 2025), https://www.sec.gov/about/divisions-offices/office-strategic-hub-innovation-financial-technology-finhub/artificial-intelligencemachine-learning*

[20] *supra note 3.*

The Framework for Responsible and Ethical Enablement of AI (FREEAI) in finance was proposed by a Reserve Bank of India (RBI) committee in mid-2025. A professor from IIT Bombay served as the committee's chair, and it suggested setting up standing committees to assess AI dangers as well as local AI infrastructure. It made 26 recommendations under the six pillars of "infrastructure, capacity, policy, governance, protection, and assurance" with the goal of promoting domestic AI innovation while reducing risks. Key suggestions included building homegrown AI models, integrating AI with public digital platforms (e.g. UPI), and establishing audit frameworks for AI systems. The RBI report explicitly acknowledges the “challenge with regulating AI is in striking the right balance” between innovation and safeguarding financial stability[21].

The use of AI/ML in the securities markets has started to cause SEBI some concern. In order to create an initial inventory, SEBI issued circulars asking stock exchanges, depositories, brokers, and funds to declare their AI/ML systems even before new regulations were in place. SEBI established an AI working group in 2025 and released a consultation paper asking for feedback from interested parties on "guiding principles for responsible usage of AI/ML" in securities markets. International concerns are directly reflected in the draft paper, which is based on the working group's recommendations. It identifies risks in "Fairness and Bias, Accountability and Governance, Transparency and Explainability, Monitoring and Operational Resilience, Third-party Oversight, Cyber and Data Security," and it requests feedback on how to mitigate them[22]. This consultation document demonstrates SEBI's intention to modify international standards to fit India's situation, even though it is not legally binding for our purposes.

When considered collectively, responsiveness and cross-sector awareness define India's regulatory posture. International best practices are generally in line with the main topics of discussion, which include model governance, testing, disclosure, fairness, privacy, etc[23]. It is noteworthy that Indian authorities have shown a preference for tiered, risk-based regulation over universally applicable laws. Like the EU and IOSCO strategies, this would impose stringent controls on high-impact applications of AI like trading algorithms that impact markets while providing little oversight for low-impact uses like internal efficiency tools. In its

[21] *Reserve Bank of India, Free AIR (Aug. 13, 2025), https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/FREEAIR130820250A24FF2D4578453F824C72ED9F5D5851.PDF*

[22] *supra note 4*

[23] *supra note 3.*

consultation, SEBI even considers classifying AI systems according to their risk profiles, which could lead to mandatory reporting or approval thresholds for uses deemed more dangerous. This keeps marginal innovation unhindered while concentrating supervisory resources where they can avoid upsetting the market.

Even with these advancements, difficulties still exist. Coordinating a cohesive AI strategy is challenging because India's financial sector is governed by several agencies, including SEBI, RBI, IRDA, and others. Market players will need clarification on how the new data protection regime's general AI duties relate to sector-specific rules such as banking, payment, and securities laws. Furthermore, regulators' own AI literacy and data-gathering skills will be necessary for strong enforcement; policymakers need to close this capability gap. Based on the global observations, the next section examines key regulatory themes and their consequences for India.

5. **POLICY RECOMMENDATIONS**

The lessons learned from these themes should now be incorporated into an integrated framework for AI/ML in securities markets by Indian regulators and policymakers. First, it is recommended to have a regulatory structure based on risk. While high-impact applications like AI driving trading or consumer advice might demand more stringent monitoring, low-risk apps like back-office analytics only could just need to follow current governance standards. This would be like IOSCO's goal of matching the level of oversight to the risk and the EU's tiered approach. By classifying AI applications and mandating more examination such as pre-approval or improved reporting for those deemed significant, SEBI might institutionalize this.

Second, SEBI ought to mandate that regulated businesses follow a thorough model of governance. Either guidelines or changes to current regulations could be used to do this. Businesses should create continuous monitoring and incident response protocols, document the development of AI systems, and validate them before deployment in separate test settings. Importantly, IOSCO recommends that senior management be held directly responsible for AI risk, for instance, by designating a Chief AI Officer or a position akin to it[24]. Compliance can be strengthened by sanctions for governance failures such as neglecting to audit a flawed model.

[24] *supra note 5.*

Third, rules for disclosure and transparency need to be reinforced. Regulators have the authority to require clients to disclose material AI usage that impacts investments; for example, they can require fund prospectuses or advisory disclosures to state whether AI algorithms are utilized in trading or portfolio selection. To enhance systemic effect monitoring, SEBI may mandate regular reporting on market-level AI/ML adoption for example the proportion of orders or trades that are carried out by algorithms. Using the EU model as a guide, mandatory explainability standards might be explored for high-risk AI. Businesses would have to make sure their models preserve interpretable alternatives or offer adequate justification for judgments.

Fourth, SEBI should provide a framework for algorithmic fairness auditing in order to address ethics and fairness. This could entail establishing rules or employing outside auditors to check AI models for prejudice, in line with NITI's non-discrimination principles. If biases are found, businesses would have to change the models or limit their use. One way to implement such a system would be to incorporate fairness checks into SEBI's inspection process or to mandate that businesses certify regular fairness reviews.

Fifth, to protect data privacy, regulators must ensure that AI practices are fully compliant with the new Data Protection Act[25]. AI and ML should be specifically covered by SEBI and other organizations in their data governance guidelines for financial institutions. This entails utilizing the DPDP Act's mechanisms such as audit trails for data use and deletion upon request[26], requiring robust data security measures such as encryption and access controls, and implementing consent requirements for personal data used in model training[27]. AI should be required to protect privacy by design; Companies should attest that they have reduced the use of personal data and put protections in place before implementing any systems.

Sixth, in order to accommodate AI, cybersecurity protocols need to be improved. Regulators might require AI systems to undergo cyber resilience testing, which would be comparable to evaluating trading platforms' vulnerabilities. Rules for breach notification should specifically address compromises in AI/ML systems. Given the dual nature of AI, SEBI may promote its use for security for example intrusion detection while making sure that these technologies are

[25] *Digital Personal Data Protection Act, No. 22 of 2023, INDIA CODE (2023).*

[26] *Digital Personal Data Protection Act, No. 22 of 2023, §§ 10(2)(b)–(c) (India).*

[27] *Digital Personal Data Protection Act, No. 22 of 2023, § 6(1) (India).*

auditable and secure. On AI-specific cyber scenarios phishing via deepfakes, model extraction attacks, etc. cooperation with CERT-In and banking regulators will be crucial.

Lastly, it is critical to develop institutional capability. To direct the creation of the measures and organize analyses of AI use in markets, SEBI should set up an AI cell or unit manned by data scientists and AI specialists. Given that fintech fields overlap, collaborative efforts with the RBI can help close regulatory gaps. To exchange ideas and obtain technical support, India may choose to take part in international supervisory forums on AI, such IOSCO's AI Working Group[28].

The regulation of AI/ML in India's securities markets should, in conclusion, neither heedlessly adopt any one foreign model nor ignore regional context. It ought to blend specific regulations suited to India's legal and economic context with the principle-based knowledge of frameworks such as MAS's FEAT and IOSCO's laws. Investing in human capital, protecting investors through disclosure and fairness rules, protecting privacy under the new DPDP Act, ensuring cyber-robust AI deployment, and codifying the roles of top management and firms are all necessary. India may take advantage of AI's advantages in finance by taking a measured, tech-neutral approach, which would increase efficiency and inclusivity while preventing systemic and societal downsides.

[28] *Int'l Org. of Sec. Comm'ns, IOSCO 2025 Work Programme (Apr. 2024), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD789.pdf.grm*