

# Technological Innovations and Sebi Act, 1992: Adapting Regulatory Frameworks to Modern Securities Markets

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## 1. INTRODUCTION

India's securities market has been the recipient of numerous technology changes over the last ten years. The entire process from trading, issuance, settlement to supervision has gone digital and has been changing very rapidly. The "SEBI Act, 1992" lays down the legal framework for market regulation. Still, the practicable problem is to convert the broad statutory mandates into detailed rules that regulate the pace of algorithmic trading, platform distribution, data driven advice, cloud infrastructure, and distributed ledger experiments. The main question in this research is how the "SEBI Act, 1992" facilitates the adaptation to these technological conditions that speed up execution, increase data processing, and enlarge the number of actors who can influence market behavior. Apart from formal rulemaking under "Section 30 of the SEBI Act, 1992" and soft law instruments like circulars, master circulars, advisories, and FAQs used as living standards, the analysis is also engaged in these. The paper also covers regulation that closely relates to the market conduct, such as "SEBI (Prohibition of Fraudulent and Unfair Trade Practices) Regulations, 2003" aimed at manipulation control and "Digital Personal Data Protection Act, 2023" concerned with consent, purpose limitation, and data governance since surveillance, onboarding, and robot advisory have become dependent on large scale personal data processing. In addition, the paper illustrates cooperation with other departments. For example, connection with IFSCA is crucial for IFSC market experiments while with MeitY for cybersecurity and cloud requirements as per SEBI's cloud adoption framework and the consolidated "Cybersecurity and Cyber Resilience Framework" that is increasingly determining operational resilience decisions of regulated entities. The purpose is to draw a solid picture of the "SEBI Act, 1992" that is already facilitating quick responses, where subordinate legislation is playing the major role, and where design gaps are left, particularly in terms of cross border platforms, AI accountability, and the risk of off exchange manipulation facilitated by social media. The resultant set includes doctrinally anchored evaluations and a phased roadmap that is attentive to statutory limits but at the same time, employs principles led tools to market integrity and investor protection in India's tech intensive securities ecosystem, thereby future proofing them.<sup>1</sup>

## 2. SEBI ACT, 1992 FRAMEWORK

SEBI is conferred broad powers under the defining law to protect investors, promote market development, and regulate the securities market. Section 11 of the SEBI Act, 1992 embodies these roles and provides

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<sup>1</sup> P. Leelakrishnan, "Procedural Fairness in Administrative Decision-Making", 59 *Journal of the Indian Law Institute* 58 (2017).

for a wide range of measures, from laying down prudential standards to deepening market infrastructure regulation. At the same time, “Section 11B” gives the authority to issue directions that are in the interests of investors and ensure an orderly market. “Section 11C” is the investigative provision that confers on the Board the power to issue summons, gather information, and conduct searches. Penalty provisions are scattered throughout “Chapter VIA”, such as “Section 15HA” and “Section 15HB”, which are heavily relied upon in cases of manipulation and governance failures resulting from technology enabled conduct. The extent of the law offers the possibility of targeted subordinate legislation and circular based supervision that can operate at the speed of technology, even though statutory provisions regarding cross border reach and data intensive practices often need support in the form of specific regulations and coordination arrangements. In reality, SEBI’s resourcefulness is due to the blend of broadly worded statutory functions and the power to issue detailed regulations and circulars that can quickly adjust to the practical side of operations in trading, onboarding, advice, outsourcing, cybersecurity, and disclosure.<sup>2</sup>

- **Statutory Powers and Functions**

“Section 11” specifies the investor protection and market regulation objectives of SEBI; among other things, it allows the authority to inspect stock exchanges and intermediaries, to issue prescriptions for intermediaries, and to take steps to prohibit fraudulent and unfair trade practices. “Section 11B” gives SEBI the power to issue binding directions to persons or classes of persons to remove the sources of risk, which is very relevant in the case of new trading technologies that create new ways of harm. “Section 11C” equips the authority with a complete investigative kit, including the power to demand information, records, and evidence from the entities whose works are inquiries, thus enabling data driven supervision and forensic reconstruction of algorithmic activity. The penalty provisions under “Chapter VIA” offer deterrents of various degrees, aimed at various types of misconduct, including technology amplified manipulation, while criminal liability under “Section 24” maintains the escalation route for the most serious violations. These measures engage with the specialized rules that determine manipulation components in the algorithmic era; for instance, the “SEBI (Prohibition of Fraudulent and Unfair Trade Practices) Regulations, 2003” specify the conduct rules which apply whether humans or machines are the ones placing the orders, thus allowing to prove the deceptive practices by the usage of evidence from order book patterns, connectivity logs, and API behavior.<sup>3</sup>

- **Subordinate Legislation and Circulars**

SEBI changes its statutory goals into operational duties through regulations, circulars, and master circulars that govern technology touchpoints in trading and distribution. Initial circulars dealt with “algorithmic trading” at exchanges and brokers in 2012 and had detailed co location and latency linked activities in 2015, then added order to trade controls in 2020 and a retail safety overlay in 2025. Similarly, soft law instruments define cybersecurity, cloud adoption, advertisement controls for investment advisers and research analysts, and product labelling in mutual funds. SEBI’s layered approach allows SEBI to keep the requirements up to date without heavily depending on slow statutory amendments, whereas master circulars consolidate the scattered obligations to lessen the interpretive ambiguities. As a result, there is a living rulebook that is capable of adjusting to new APIs, outsourcing models, and data pipelines that come into the market lifecycle. The success of the method depends on the fact that there is clarity, public

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<sup>2</sup> What Registration Do You Require to Start a Stock Broker in India, *available at*: <https://blog.ipleaders.in/how-to-be-a-stock-broker/> (last visited on October 20, 2025).

<sup>3</sup> Anil Choudhary, Rajneesh Deka, *Securities Regulation: Primary Market Offerings in India* 86 (CCH India, New Delhi, 1st edn., 2014).

consultation, and that the enforcement is done consistently so that technology suppliers and intermediaries are able to develop systems that are in compliance without being paralyzed by the shifting standards.

- **Institutional Interfaces**

Regulatory changes in technology driven markets require carefully planned collaboration with other authorities. IFSCA operates a sandbox and a FinTech entity regime within the IFSC, thus requiring coordination when innovations in the capital market intersect with the area of SEBI's jurisdiction. The MeitY policies and empanelment conditions have an effect on SEBI's cloud adoption framework, whereas the national cybersecurity apparatus is the source of the consolidated "Cybersecurity and Cyber Resilience Framework" for the regulated entities. Coordination between different regulatory bodies on issues of financial stability and risks that cross sectors is being improved through such forums as the FSDC. These points of contact are not merely abstract concepts: they are mechanisms for sharing data and supervisory insights, for bringing into line cloud and cyber standards, and for making it clear which regulatory bodies have oversight when entities are domiciled in GIFT City or are shifting their workloads to the public cloud. Formal memoranda and published frameworks make a record of this collaboration and serve as foreseeable signals to market participants who are constructing technology stacks that span different regulators.<sup>4</sup>

### 3. TECHNOLOGY TRENDS IN INDIAN SECURITIES MARKETS

Market structure has digitized in every stage of the lifecycle. Where exchanges offer co location and low latency connectivity; brokers expose APIs that enable algorithmic and retail automation; intermediaries deploy AI for surveillance and advisory; depositories and market infrastructure experiment with distributed ledgers; onboarding and suitability rely on e KYC repositories; and social media platforms influence information flows and conduct risks. SEBI's regulatory instruments are in line with these realities. The algorithmic trading circulars and co-location guidance are still the main references for latency and fairness debates. The advertisement code for investment advisers and research analysts is a response to social media driven distribution and potential mis selling. Cybersecurity and cloud frameworks determine infrastructure choices, thus requiring MeitY empaneled resources and resilience playbooks. KRA regulations are moving e KYC towards continuous validation. Consultation papers on AI accountability are a sign of delegation of responsibility for AI assisted decisions in the future. These trends, in fact, create a dense compliance surface which is heavily reliant on data governance, API hygiene, and automated controls while taking into account the need for innovation via consultation, sandboxes, and iterative rulemaking.

- **Algorithmic and High Frequency Trading**

SEBI's initial "Broad Guidelines on Algorithmic Trading" outlined the principles for exchange hosted infrastructure, order to trade ratios, and exchange side risk controls. The subsequent circulars dealt with co-location access, network segregation, and auditability to lessen unfair latency advantages. The instructions on high order to trade activity-imposed limits and penalties to discourage quote stuffing and to quiet the market. The latest "safer participation" provisions are intended for retail facing automated strategies and require brokers to implement pre trade risk checks, algorithm validation, and disclosure of strategy execution features. Meanwhile, exchanges are still handling co location policies to balance innovation and fairness. The regulatory arc is depicting a gradual change from infrastructure hygiene to detailed controls over APIs, throttling, and kill switch capabilities at the broker front end, thus supporting

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<sup>4</sup> Kriti, "SEBI Modifies Cyber Security and Cyber Resilience Framework", available at: <https://www.sconline.com/blog/post/2023/08/28/modification-in-cyber-security-and-cyber-resilience-framework-legal-news/> (last visited on October 19, 2025).

market integrity without prohibiting automation. This change is in line with the Board's power to give directions to individuals and classes of individuals for the protection of investors and markets, thus ensuring that speed does not compromise fairness or auditability.<sup>5</sup>

- **AI and Data Analytics**

Artificial intelligence is being utilized to support surveillance, suitability, portfolio construction, and client interactions. The policy direction of SEBI is characterized by two complementary streams. Firstly, investment adviser and research analyst frameworks focus on aspects like suitability, management of conflicts, and providing truthful advertisements, which limit the deployment of AI driven robot advice and content distribution that could artificially enhance a performance or disguise risk. Secondly, the public consultations on responsible AI are aimed at identifying the source of accountability for the AI tools that are used by market infrastructure institutions and intermediaries. They also indicate that regulated entities are the ones responsible for the results even if they depend on third party models or vendors. Such a position facilitates the regulator's supotech integration while at the same time intermediaries are compelled to upgrade their governance in model inventory, testing, explainability, and incident handling. Their approach recognizes the benefit of AI for detection and service delivery. However, they still have human in the loop controls, documentation, and audit trails that facilitate supervisory review when models influence trading, advice, or risk management decisions.

- **DLT, Tokenisation, and Smart Contracts**

The Indian public capital market has been cautious in proceeding with tokenization, however, there are some experiments that are visible in functions of market infrastructure. Depositories have put into place a "DLT based" system for tracking security covenants and related events, thus giving an example of how distributed ledgers can be used to support auditability without the need for listed securities to be converted into crypto tokens. This gradual adoption enables compliance critical registries to have shared source integrity and time stamped proofs while at the same time they maintain the legal status of securities in the existing demat framework. The strategic issues regarding broader token representation, on chain settlement, and smart contract driven corporate actions under Indian property and securities law, in particular, are still there. At present, the covenant monitoring initiative offers a real example where ledger technology not only makes it easier for the regulator to have access to the information but also signals that subsequent DLT implementations will be more likely to focus on back-office efficiency and supervisory visibility rather than the immediate tokenization of financial instruments under Indian law.<sup>6</sup>

- **Digital Onboarding and KYC**

Onboarding is based on a network of KYC registration agencies that are regulated by "SEBI KRA Regulations, 2011". These regulations have been made more stringent to require the validation of client attributes as well as continuous record hygiene. This centralization facilitates frictionless account opening, remote verification, and portability across intermediaries, at the same time it enables surveillance that is based on reliable client data. KRAs have been urged by circulars to validate data against authoritative sources and to share status with intermediaries consistently, which has led to the raising of the standard of e KYC at scale. The operational impact is to link front end onboarding with back-end registries, thus lessening repeated checks and closing openings that sophisticated actors exploited in the previous cycles.

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<sup>5</sup> Gayatri Puthran, "Litigating Insider Trading: Decoding Evidences in Cases Under SEBI (Prohibition of Insider Trading) Regulations, 2015", 14 *NUJS Law Review* 1 (2021).

<sup>6</sup> F.I. Lessambo, *Fintech Regulation and Supervision Challenges within the Banking Industry* 176 (Palgrave Macmillan, Cham, 1st edn., 2023).

Moreover, these requirements interact with cybersecurity and cloud obligations since KYC datasets are sensitive and access controlled. They also interact with the DPD Act, which is changing the way consent, purpose specification, and retention policies have to be created for digital onboarding flows in brokers and depository participants.

- **Online Platforms and Social Media Signals**

Distribution is no longer confined to traditional channels and has thus changed significantly to be carried out through apps, messengers, and short video formats. To keep the content in check, SEBI's advertisement code for investment advisers and research analysts acts as a beacon by requiring communication that is fair, clear, and non-misleading. The 2023 consultation paper sheds light on the relationships between registered intermediaries and unregistered entities like influencers, and the enforcement experience that has been gained in pump and dump campaigns and off platform solicitation. The exchanges and intermediaries are being advised to take necessary steps for registration and to be vigilant about digital advertisements and social content. At the same time, risk o meter labels in mutual funds help retail investors to better understand the level of risk. Overall, these changes have resulted in a multi layered conduct regime which is aimed at addressing the issues of mis selling, conflicts, and undisclosed compensation models which have been the social media platforms most commonly used for spreading such activities. With these measures, there is still a place left for digital investor education and low-cost execution channels. However, at the same time, the measures are putting an end to inducements, unrecoverable past performance claims, and undisclosed affiliate marketing which, although are very common, erode suitability and trust, by drawing bright lines against them.<sup>7</sup>

#### 4. REGULATORY CHALLENGES UNDER THE SEBI ACT

Technology makes processes faster and larger in scale, which is difficult for traditional supervision to handle. Algorithmic order placement can cause quickly changing but significant harms, social media facilitating manipulation across platforms beyond the control of exchange rooms, and data centric business models leading to intermediaries being the most vulnerable nodes for privacy and cyber risks. While cloud adoption makes organizations more resilient and agile, it still raises issues of jurisdiction and oversight for the audit and incident response. AI assistance in advice and surveillance brings accountability and bias related questions that traditional conduct rules have not anticipated. Some challenges are fully covered by existing statutory tools, while others need collaboration with MeitY or IFSCA and new regulatory guidance that helps in translating principles into testable obligations for code, APIs, and data pipelines. Market integrity, investor protection, cyber operational resilience, data governance, and jurisdictional reach are the different aspects under which this section arranges those pressures to indicate the areas where the "SEBI Act, 1992" and the related regulations already cover the ground and where the targeted refinements are appropriate.

- **Market Integrity and Manipulation**

The PFUTP framework sets out the rules that foul play and deceitful tactics are not acceptable in any case, no matter which instrument or means are used. One can use algorithmic methods to spoof, layer, or create a misleading appearance of liquidity, while social and chat channels can help coordinate pump and dump runs across platforms. PFUTP's definitions and prohibitions are not dependent on the technology used,

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<sup>7</sup> Varun Sen Bahl, "Submission on SEBI's Draft Consolidated Cybersecurity and Cyber Resilience Framework", *available at*: <https://community.nasscom.in/communities/public-policy/submission-sebis-draft-consolidated-cybersecurity-and-cyber-resilience> (last visited on October 17, 2025).

thus SEBI can use order book analytics, message timestamps, IP logs, and execution patterns as evidence to support its claim. Instructions on algorithmic trading provide the necessary controls that limit the possibilities of abuse, e.g. OTR caps and validations of automated strategies. What is left as a challenge is to combine the evidence of multi venue, cross platform to identify control persons and beneficiaries in near real time. For that, they need to get more data from exchanges and intermediaries, consistently use anomaly detection models, and cooperate with social platforms for fast attribution, all within the law set by the statute and privacy law. The record of enforcement in illiquid options and mid cap scrips, where the patterns have been engineered, indicates that such patterns are prosecutable when the evidence architecture is solid.<sup>8</sup>

- **Investor Protection and Suitability**

Automated advice and execution are changing the standards of suitability and disclosure. Investment adviser and research analyst regimes, as part of their operations, require appropriate risk profiling, conflict disclosure, and advertisement discipline, which are applicable in case the content is delivered by a human adviser or a robo advisory interface. Execution only models in mutual funds and online bond platforms have led to the necessity of certain rules being established to ensure that platforms do not give advice without registration and controls. Suitability in an AI environment means testing model behavior across client archetypes, recognizing limitations, and ensuring that the model is not optimized for engagement rather than client interest. It also means communicating strategy risks and the operation of automated triggers in a clear manner, as well as having the logs which allow the review to be done after the fact. These measures extend traditional fiduciary expectations to digital environments, provide retail investors with clearer signals, and are in line with the Board's direction powers to ensure the proper management of intermediaries when distribution and advice are combined in code.

- **Cybersecurity and Operational Resilience**

SEBI has merged the cyber requirements into a single cross sector "Cybersecurity and Cyber Resilience Framework" and has also issued a detailed "Framework for Adoption of Cloud Services" for the regulated entities to comply with the same. These tools call for governance structures to be in place, require incident reporting, vulnerability management, and resilience testing, and also require that workloads that are put on the cloud should meet MeitY empanelment standards and that the regulated entity should maintain the accountability. FAQs and extensions have staged adoption across categories, reflecting scale differences. The frameworks understand that the failure of brokers' electronic trading systems can lead to disastrous effects on the market; hence, they have exchange level and broker level continuity plans, kill switches, and capacity stress testing as the most crucial elements. Encryption, key management, and data localization parameters that assist forensics and supervisory access are also subject to the same level of expectation. Thus, there is an operational layer that supports integrity and availability and at the same time, allows modern architectures that involve containerized services, APIs, and analytics pipelines.<sup>9</sup>

- **Data Governance and Privacy**

Digital onboarding, surveillance, and advisory workflows are heavily reliant on the use of personal data. The "Digital Personal Data Protection Act 2023" mandates that any processing of data must be for a lawful purpose and require the data subject's consent or deemed consent in specified situations. Other principles such as data minimization and providing security safeguards that can be verified are also included in the

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<sup>8</sup> Ankit Gupta, Shubhanshi Mangal, "The Domino Effect of Adani-Hindenburg Saga", 16 *NUJS Law Review* 1 (2023).

<sup>9</sup> Alan R. Kanuk, *Capital Markets in India: An Investor's Guide* 94 (Wiley, Hoboken, 1st edn., 2011).

act and these all impact how intermediaries feature KYC, analytics, and marketing. Data Fiduciaries who are significant may be subject to more onerous obligations. For the securities markets, ensuring that PFUTP based surveillance is in line with the DPDP Act entails, among other things, setting retention in accordance with the regulatory requirements rather than allowing for open ended storage. It also necessitates being exact about which data is shared from KRAs to brokers, depositories, and exchanges as well as being clear about cross border transfers if cloud regions or analytics vendors are involved. The statutory definition as well as the extraterritorial application, account for processing that takes place outside India but is related to goods or services offered to Data Principals in India and this, in turn, includes common platform architectures. A logical compliance story thus links SEBI circulars, service providers' contractual clauses, and DPDP Act artifacts such as consent and grievance mechanisms.

- **Jurisdiction and Cross Border Issues**

Cloud and SaaS dependencies cause multi-jurisdictional footprints. The cloud framework of SEBI sets the expectations that the regulated workloads should run on MeitY empaneled infrastructure and the regulated entity should be accountable for security, audit, and lawful access to data and logs. Thus, it reduces the risk of foreign data host locations that may anger supervision. IFSC operations bring IFSCA into the supervisory frame, with MoU based data sharing becoming a new norm for areas like fund participation and intermediary oversight. Cross border platforms that attract Indian users become registrants and are bound by conduct rules if the activities fall within the statutory definition of dealing in securities, whereas DPDP's extraterritorial clause is there to ensure that offshore processors offering services to Data Principals in India remain within the privacy law's scope. The net result links technology architecture with regulatory reach through cloud conditions, data sharing protocols, and the explicit obligations of regulated entities regarding vendor conduct, which together close the gaps that purely territorial concepts used to leave.<sup>10</sup>

## 5. SEBI'S EVOLVING RESPONSES

SEBI's response toolkit is a blend of principles led rules, sandboxes and consultations, suptech adoption, and targeted conduct interventions. Principles led rules essentially sketch the outcomes and leave the implementation to the intermediaries, which is quite appropriate for rapidly evolving technologies. Sandboxes and innovation hubs offer controlled spaces for testing and learning, usually in partnership with IFSCA for cross border features or new business models. Suptech initiatives extend surveillance and enforcement through data lakes, anomaly detection, and integrated pipelines. Conduct tools enhance labelling, advertisement content, and influencer associations. Iterative policymaking that involves public comment, issuing master circulars for clarity, and using enforcement to set behavioral baselines while explicitly dealing with cloud, AI, and social media aspects that were not there when the core statute was drafted is the common thread.

- **Risk Based, Principles Led Rules**

Principles led standards can be found in areas such as algorithmic trading, outsourcing, and API controls. The 2012 and 2015 circulars established risk controls for exchange infrastructure and market access. The 2020 guidance on order to trade ratios and validations was a step towards more quantifiable triggers. The 2025 retail safety overlay is a risk-based calibration that acknowledges the benefits of retail automation

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<sup>10</sup> Jayshree Navin Chandra, "GIFT City IFSC Platform for Fintech Startups & Sandbox Initiatives & Relaxation Under Companies Act", available at: <https://www.livelaw.in/law-firms/law-firm-articles-/gift-city-ifsc-fintech-startups-companies-act-zeus-law-associates-249209> (last visited on October 15, 2025).

while still requiring ex ante guardrails and disclosures. Similarly, cloud adoption and the CSCRF are outcome focused obligations that require boards, CISOs, and auditors to maintain governance, test resilience, and assure data access, while implementation decisions are left to each entity's risk assessment within MeitY constraints. This mix respects technological diversity among brokers and platforms, at the same time, it raises a common security and fairness floor that is auditable and enforceable under the direction and penalty provisions of the Act.

- **Sandbox and Innovation Facilitation**

Regulatory experimentation is visible through consultations and sandbox mechanisms. Although SEBI's domain is gradually utilizing more issue specific sandboxes or controlled pilots, the IFSC has a published sandbox framework and a FinTech entity regime that can facilitate cross border tests which are relevant to the capital markets and their service layers. These controlled environments enable supervisors and firms to gauge real world risks in a limited setting before the rules are scaled. Innovation hubs, through this learning, can capture more operational details of APIs, identity management, smart contracts, or risk engines which might have been otherwise invisible. The model provides insight at a lower systemic risk level and thus, it is directly connected to principle setting and circular drafting, thereby shortening the feedback loop between practice and policy.<sup>11</sup>

- **Regtech and Suptech Adoption**

Regulatory technology has changed considerably and is now largely based on integrated data lakes and analytics rather than being discrete reporting systems. SEBI's surveillance is reliant on very frequent data feeds from exchanges, depositories, and intermediaries; anomaly detection PFUTP enforcement supports by detecting peculiar clusters, quote stuffing, or circular trading patterns. Tender notices and policy materials concerning data pipelines, market surveillance, and bank statement or fund trail analysis are examples of the operationalization of structured analytics in investigations. Suptech has the potential to lessen the burden as well by means of standardized schemas and APIs that are free from manual submissions and allow for earlier detection. These decisions, when taken together, create a greater likelihood of timely interventions and thus, change the supervision model to continuous risk monitoring from ex post casework, which is very important when algorithms change behavior in milliseconds and social channels coordinate at internet scale.

- **Disclosure and Conduct Interventions**

Market tools that focus on the environment of the market's information are the main conduct tools. Advertisement codes for investment advisers and research analysts indicate that the content should be fair, clear, and non-misleading. Mutual fund risk of meters is adding a visual label that links the risk disclosure to the product so that the retail investors understand better. Consultations on influencer associations and intermediary responsibilities are regulating the ecosystem around social media distribution; thus, it is aimed at the disappearance of the shadow compensation structures and the undisclosed inducements. SEBI has also asked the regulated entities to register and store digital advertisements and to maintain auditable trails for supervisory review. These interventions are placed beside disclosure reforms in issuer regulations and master circulars, but the main difference in this case is their technology sensitivity: they are created with online formats, behavioral nudges, and virality in mind, and they need operational controls in marketing pipelines, not just legal review.<sup>12</sup>

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<sup>11</sup> Automated and Electronic Trading Market in India, *available at*: <https://blog.ipleaders.in/automated-and-electronic-trading-market-in-india/> (last visited on October 14, 2025).

<sup>12</sup> N.L. Mitra, "Corporate Governance: A Sojourn to Find a Model", 56 *Journal of the Indian Law Institute* 438 (2014).

## 6. CASE LAW AND ENFORCEMENT TRENDS

The different phases of the local market regulations department (SEBI), along with decisions made by the appellate tribunals (SAT), show three major recurring themes which are closely associated with technology. Firstly, the use of evidence and the technology neutral drafting of PFUTP, as well as the reconstruction of the order book, the analysis of the timings and the metadata of the communications can be used to determine manipulation. Secondly, platform governance responsibilities for intermediaries have become very significant, with boards and senior management being expected to supervise the controls around APIs, cyber hygiene, and audit trails, especially when client facing automation is being marketed at a large scale. Thirdly, adjudicatory bodies are still looking into penalty proportionality and process fairness issues, thus requiring them to issue reasoned decisions that link facts, rules, and sanctions. The electronic records presumption under the “Bharatiya Sakshya Adhiniyam, 2023” bolsters the dependence on official digital artifacts and properly kept electronic logs, thus consolidating the evidentiary basis for technology mediated misconduct cases. These issues are in line with a scenario where code and data not only remain as business tools but also become the primary evidence.

### • Manipulative and Fraudulent Trade Cases

Judicial decisions in spoofing, layering, and circular trading have used the general prohibitions of PFUTP to impose penalties on algorithm enabled patterns. The illiquid options case orders demonstrate the use of synchronized order placement, rapid reversal, and artificial volume generation to deduce the intention, with detailed references to “Regulation 3” and “Regulation 4” of the PFUTP Regulations. The major breakthrough is in the device of reconstructing trading intent from the sequences of orders and cancellations, with the help of surveillance tools. In cases where social media tipping coincides with trading spikes, regulators link communication footprints with market behavior. These instances indicate that the statute and regulations are able to reach manipulative schemes that are executed through code, only if the data and analytical narrative reveal deception and its impact on the market. Consequently, the case law is in favor of the traditional anti-fraud standards being applicable to machine assisted strategies without the need for technology specific prohibitions for each new tactic.<sup>13</sup>

### • Intermediary Duty and Governance Cases

Platform level responsibilities have changed from simply complying with the regulations to actually showing control over the technology risk. The enforcement materials indicate that regulators expect audit trails for client onboarding, strategy validation, and order routing logs; for the board being documented as overseeing cyber and cloud risk; and for incident reporting that is responsive and remediation. In a case where brokers or advisers fail to supervise code that is outsourced or they neglect to implement pre trade controls for retail automation, the orders link those lapses to statutory functions and direction powers, as well as to circular level obligations on algorithm handling, advertisements, and KYC hygiene. Governance is considered a living system: policy, implementation, monitoring, and attestation. It is consistent with the risk based, principles led approach in cyber and cloud frameworks that assigns the responsibility for vendor behavior to the regulated entity and considers technology decisions as governance decisions that have direct implications for investor protection and market integrity.

### • Due Process and Proportionality

Penalty calibration and fairness in the process have been, and still are, the main focus of a close scrutiny.

<sup>13</sup> Rajnish Kumar, *Capital Market & Securities Laws for CS Executive* 156 (Commercial Law Publishers (India) Pvt. Ltd., New Delhi, 1st edn., 2017).

It is expected that orders will clearly show the connection between the evidence, the regulatory text, and the sanction chosen, especially when it is difficult to understand the intention due to algorithms. The evidence framework is taken advantage of by the “Bharatiya Sakshya Adhiniyam, 2023” for electronic records, which is in support of officially kept digital artifacts, system logs, and audit records when the proper custody and integrity are demonstrated. The proportionality consideration depends on the scale of the harm, the recurrence, the cooperation, and the remediation, including the improvement of the control after the incident. It is part of natural justice that the disclosure is made in time, the opportunity to respond is given, and reasoned findings, which are all very important in complex technology cases where large datasets and model behavior are involved. The growing case record indicates that process safeguards and calibrated penalties can be implemented together with strong deterrence in tech mediated misconduct.<sup>14</sup>

## 7. CONCLUSION

“SEBI Act, 1992” is like the legal framework that supports market changes, and the provisional laws and circulars are like the operational layer that talk about the details of APIs, models, clouds, and data flows. It shows how principles led rules can maintain fairness, transparency, and resilience, as algorithmic trading controls, advertisement discipline, and cyber cloud frameworks do, without stopping innovation. KRA based onboarding and DPDP aligned data governance are now the core of compliant digital distribution. By implementing DLT at the depository level, a way to shared integrity without immediate tokenization is being opened, while AI consultations show a trend of explicitly assigning responsibility for model driven outcomes. The rest of the agenda is cross border enforcement leverage, social media manipulation control, and AI assurance standards that convert good practice into auditable obligations. Therefore, a phased roadmap should be building on the existing statutory tools, expanding data sharing and supervisory analytics, and tightening responsibilities at vendor and affiliate interfaces. The statute’s direction powers, investigation powers, and penalty architecture are enough to serve as a base for this programme when they are combined with measured, consultative rulemaking that changes along with the technology stack of India’s securities market.

## 8. SUGGESTIONS

An adaptation by a phased plan would be more effective. The first phase should accomplish the consolidation of all existing circulars into technology specific master frameworks that are interlinked across domains: algorithms, outsourcing and APIs, cyber and cloud, onboarding and data governance, and conduct and disclosure. A framework for each should communicate the accountability of the boards, controls that are risk based, and define the artefacts of evidence that the intermediaries are to keep for audits and investigations, among them order reconstruction, model inventories, data processing registers, and cloud service logs. Phase two should bring AI accountability into practice by completing the guidance that makes the regulated entity accountable for AI outcomes, stipulates pre deployment testing and change controls, and traceable explanations for advisory and surveillance models. The third phase should extend the borderless interaction by increasing MoUs for data sharing, vendor contracts embedding cloud region commitments, and DPDP compliant transfer mechanisms being in sync with supervisory access. Meanwhile, the investment in supotech should enhance capabilities in anomaly detection, social signal ingestion, and near real time risk dashboards, and the depository DLT initiative can move towards

<sup>14</sup> Aadhaar Enabled Payment System (AePS), available at: <https://www.digitalindia.gov.in/initiative/aeaps/> (last visited on October 12, 2025).

corporate action audit trails. This plan of action is in line with the statutory purposes, it is clear in using existing directions and powers of investigation, and it converts principles into lasting, verifiable obligations that are spread over the modern market technology stack.

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