

## AI in Stock Market: Algorithm Manipulation, Predictions, Legal Regulation & SEBI'S Role

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### Abstract

AI has been transforming stock markets through faster data analysis, large scale market surveillance, market predictions, improved trade execution through data analysis softwares, research tools, broker apps, advisory platforms, quick updates, notifications and automated trading systems. By processing large volumes of prices, share volumes, stock market filings, business innovations, investable entities, market growth news, earnings calls, market sentiments, etc. AI tools predict future directions, volatility, risks & trend strength and ultimately give trade guidance to traders and investors. Though it has a lot of advanced features, it is still not accurate and it possesses the risk of data loss or misuse as well. Due to algorithm manipulation, investors & traders can be forced to make wrong decisions leading to huge losses and gains to some ill minded people. Distorting the market behavior, triggering crowding and instability are also some negative impacts. Yet India has not been able to develop a specific AI law for stock markets and relies solely upon toothless AI guidelines & regulations on this issue. This paper suggests that toothless rules and regulations for AI use disclosure and accountability are not enough and a strong specific law on AI use in stock markets is much needed along with strengthening the powers and role of SEBI in regulating these advanced technologies in the Indian stock markets.

**Key Words:** AI, stock markets, algorithm manipulation, regulation, SEBI, governance

### Introduction

Faster data analysis, quick decision making, efficient execution of trade, regular detailed market updates, market predictions, investment guidance, shifting of burden of manual analysis, performance of multiple tasks in a short span of time, etc. are the notable features of AI's use in stock markets. AI enabled automated trading and market surveillance at a large scale suggest a huge potential of AI based trading in future. AI tools' use in the stock market is rapidly becoming an essential software for traders and investors but it has also raised issues of data protection and market-risk concerns [1][2][3].

The stock market is one of the important economic pillars but quite sensitive & vulnerable as well. It helps in boosting the economy of a country but fake news, manipulation, insider trading, etc. can cause billions of losses within a single day. These days modern technologies have been rapidly replacing manual work in stock-market dealings but which has again enhanced the sensitivity and vulnerability risks. By processing large volumes of prices, share volumes, stock market filings, business innovations, investable entities, market growth news, earnings calls, market sentiments, etc. AI tools predict future directions, volatility, risks & trend strength and ultimately give trade guidance to traders and investors. Though it has a lot of advanced features, it is still not accurate and it possesses the risk of data loss or misuse as well. Due to algorithm manipulation, investors & traders can be forced to make wrong

decisions leading to huge losses and gains to some ill minded people. Distorting the market behavior, triggering crowding and instability are also some negative impacts. Yet India has not been able to develop a specific AI law for stock markets and relies solely upon toothless AI guidelines & regulations on this issue. Toothless rules and regulations for AI use disclosure and accountability are not enough and a strong specific law on AI use in stock markets is much needed along with strengthening the powers and role of SEBI in regulating these advanced technologies in the Indian stock markets. This matter should be resolved quickly and a powerful strong measure should be introduced to promote fairness, transparency, strengthen data protection and to maintain the trust of millions of traders and investors in the Indian stock markets.

### **2- AI Based Stock Market Prediction and Limits**

AI generates probabilities based on past and present data. If it has been trained with wrong and manipulated data then it will generate fake responses which can misguide the traders and investors. It shows that blind trust on AI tools can be highly risky. Even if an AI tool is highly appreciated in that case as well it should be responsibly used to take help in decision-making but not for certainty [4][8]. Hence, blind trust on AI tools is dangerous and they should merely be used as:

- a guide for short-term price direction,
- tools for forecast volatility & updates,
- tools for shifting burdensome manual works,
- supportive tools for portfolio construction, management, rebalancing, and risk control by estimating correlations and regime changes [4][8].
- tools for large scale market surveillance and eliminating unnecessary trade options.

Volatile data, crowd behavior, changing market circumstances everyday, etc. are special features of stock markets. Many times present data can not be useful for future events. A successful running model can miserably fail just the very next day. It shows that the game of stock market can not be solely played based on past and present data. Also, AI generates probabilities based on past and present data. If it has been trained with wrong and manipulated data then it will generate fake responses which can misguide the traders and investors. It shows AI use has a lot of limits and that blind trust on such tools can be highly risky. [4][2].

### **3- Algorithm manipulation in markets**

The stock market is one of the important economic pillars but quite sensitive & vulnerable as well. It helps in boosting the economy of a country but fake news, manipulation, insider trading, etc. can cause billions of losses within a single day. These days modern technologies have been rapidly replacing manual work in stock-market dealings but which has again enhanced the sensitivity and vulnerability risks. Faster data analysis, quick decision making, efficient execution of trade, regular detailed market updates, market predictions, investment guidance, shifting of burden of manual analysis, performance of multiple tasks in a short span of time, etc. are the notable features of AI's use in stock markets. AI enabled automated trading and market surveillance at a large scale suggest a huge potential of AI based trading in future. AI tools' use in the stock market is rapidly becoming an essential software for traders and investors but it has also raised issues of data protection and market-risk concerns. This matter should be resolved quickly and a powerful strong measure should be introduced to

promote fairness, transparency, strengthen data protection and to maintain the trust of millions of traders and investors in the Indian stock markets.

AI tools can be highly biased and be manipulated easily. Relying on similar data can generate the same response every time without taking into account the changing circumstances and recent updates & trends. Creating artificial signals through manipulated algorithms to mislead investors, to generate false impressions of demand or supply, to influence sentiments, to exploit retail behavior, etc. are the biggest risks. It is necessary to implement a strong legal mechanism to maintain efficiency and impose responsibility on the person who approved an AI tool, who controls it, and who audits it.

#### **4- Indian law in 2026**

There is a layered framework rather than a single specific law. AI systems in securities markets must comply with SEBI regulations, data-protection obligations, cybersecurity measures along with general legal principles covering fraud, disclosure, contracts and fiduciary responsibility [1][3][11]. One significant development has happened through the introduction of the Digital Personal Data Protection Act, 2023, with DPDP Rules 2025 which can be applied to secure personal data from investors, clients, and employees, along with lawful data processing and security safeguards, but still a huge legal regulatory gap persists[3][12][13].

A strict law on AI use is much needed to regulate, prohibit, govern and impose penalties for AI-based products that are marketed as more accurate but in reality they are not. To transform the culture of Poor AI model training, reliance on past data, slow updates. To prohibit Bad AI responses leading to investor losses, operational disruptions, uncertainty. To eliminate biasedness, discrimination or unfair treatment. To strictly penalise inaccurate tests, hasty approvals, or noncompliance with disclosures required by SEBI or data-protection law. To impose strict responsibility on the person who approved an inaccurate AI tool, who controls it, and who audits it.[2][3][16].

#### **5- SEBI's Role**

As the key regulator for AI in securities markets, SEBI'S role becomes important to safeguard investors' interests, to maintain integrity of the market, to boost market development and promote innovation while preventing harm. Here SEBI's role in AI regulation is expected to be both supervisory and enabling.

SEBI has to identify abnormal or fraudulent behavior aided by AI tools. It has to stop front running & insider trading; and enable ethical use of AI through reliable data analytics and pattern recognition. To regulate the use of AI in stock markets, SEBI has introduced some measures to impose accountability and secure transparency. Balancing innovation with investor protection has become a tough challenge in the modern technologically advanced world. Use of AI tools is rapidly becoming a necessary feature for investors to do research, analysis and predictions. It has made their job easy and saves a lot of time for them but this facility comes with a lot of risks as well. Due to this, intervention of SEBI was much needed to guide about risk management and to organise the unregulated activities.[1][2][5]

In cases of use of AI tools, mandatory disclosure and responsibility is a key regulatory development from the side of SEBI which says that regulated entities like Market Infrastructure Institutions, investment advisers, brokers & mutual funds will be solely

responsible for the AI output. It also makes the above entities solely responsible for data security and asks them to comply with all applicable laws. This has become a mandatory responsibility which does not depend on the scale of AI use. During the agreement making process with clients, it is now necessary for investment advisers and research analysts to disclose the extent of use of AI.

To promote responsible usage of AI/ML in Indian securities markets, SEBI intended to bring relevant guidelines as well. This process started with the release of a consultation paper on June 20, 2025. Through this release, SEBI aimed to receive public comments and stakeholder's feedback on guiding principles and risk mitigation measures for market participants. This consultation paper titled "*Guidelines for Responsible Usage of AI/ML in Indian Securities Markets*" proposed frameworks like Model Governance, Investor Protection and Disclosure, a robust Testing Framework, Fairness and Bias mitigation; and Data Privacy and Cybersecurity. The intention of SEBI was to check the sentiments of the public but actually it has taken a lot of time and till June 2026 a strong conclusion has not been reached which has made the introduction of real guidelines quite delayed.

One of the most significant 2026 developments from SEBI's side is the *Retail algo framework* for safer participation in retail algorithmic and API-based trading. It allows algorithmic trading only through regulated broker and exchange structures with tagging, testing, registration & auditability. [9][10].

Still, a strict law on AI use is much needed to regulate, prohibit, govern and impose penalties for issues like:

- AI-based products that are marketed as more accurate but in reality they are not,
- Poor AI model training, reliance on past data, slow updates,
- Bad AI responses produce investor losses, operational disruptions, uncertainty
- Biasedness, discrimination or unfair treatment,
- Cybersecurity risks and data theft
- Inaccurate tests, hasty approvals, or noncompliance with disclosures required by SEBI or data-protection law
- No strict responsibility on the person who approved an inaccurate AI tool, who controls it, and who audits it.[2][3][16].

This matter should be resolved quickly and a powerful strong measure should be introduced to promote fairness, transparency, strengthen data protection and to maintain the trust of millions of traders and investors in the Indian stock markets. The focus should shift from "Can AI be used?" to "How must AI be governed?" AI tools really can improve stock market efficiency but their accuracy and efficiency have to be improved. A powerful and strong legal mechanism for AI regulation and responsibility can only bring solid improvements and ensure trustworthiness. To mitigate blind trust on AI in the stock market, they should be presented as a decision-support tool instead of some guaranteed profit making software. Compliance with Indian privacy laws and data protection measures should be made a strict norm if AI is used in stock markets. To reduce risks, advanced model testing and human review of AI tools should be done before releasing it for public use.

SEBI must ensure that all the relevant laws and in its rules & regulations are strictly followed along with proper AI use related required disclosures and audits. SEBI must start giving ratings

and approve several AI apps & softwares to ensure trustworthiness. It is necessary to enhance the powers and role of SEBI in regulating emerging advanced technologies in the Indian stock markets. Updating regulations are must to maintain market integrity and to support innovation.-

## **6- Conclusion**

The stock market is one of the important economic pillars but quite sensitive & vulnerable as well. It helps in boosting the economy of a country but fake news, manipulation, insider trading, etc. can cause billions of losses within a single day. These days modern technologies have been rapidly replacing manual work in stock-market dealings but which has again enhanced the sensitivity and vulnerability risks. AI has been transforming stock markets through faster data analysis, large scale market surveillance, market predictions, improved trade execution through data analysis softwares, research tools, broker apps, advisory platforms, quick updates, notifications and automated trading systems. By processing large volumes of prices, share volumes, stock market filings, business innovations, investable entities, market growth news, earnings calls, market sentiments, etc. AI tools predict future directions, volatility, risks & trend strength and ultimately give trade guidance to traders and investors. Though it has a lot of advanced features, it is still not accurate and it possesses the risk of data loss or misuse as well. Due to algorithm manipulation, investors & traders can be forced to make wrong decisions leading to huge losses and gains to some ill minded people. Distorting the market behavior, triggering crowding and instability are also some negative impacts. Yet India has not been able to develop a specific AI law for stock markets and relies solely upon toothless AI guidelines & regulations on this issue. This paper through a short and crisp analysis indicates that toothless rules and regulations for AI use disclosure and accountability are not enough and introduction of a strong specific law on AI use in stock markets is much needed along with strengthening the powers and role of SEBI in regulating these advanced technologies in the Indian stock markets. Key suggestions are as follows:

- This matter should be resolved quickly and a powerful strong measure should be introduced to promote fairness, transparency, strengthen data protection and to maintain the trust of millions of traders and investors in the Indian stock markets.
- The focus should shift from “Can AI be used?” to “How must AI be governed?”
- AI tools really can improve stock market efficiency but their accuracy and efficiency have to be improved
- A powerful and strong legal mechanism for AI regulation and responsibility can only bring solid improvements and ensure trustworthiness.
- To mitigate blind trust on AI in the stock market, they should be presented as a decision-support tool instead of some guaranteed profit making software.
- Compliance with Indian privacy laws and data protection measures should be made a strict norm if AI is used in stock markets.
- To reduce risks, advanced model testing and human review of AI tools should be done before releasing it for public use.
- SEBI must ensure that all the relevant laws and in its rules & regulations are strictly followed along with proper AI use related required disclosures and audits.
- SEBI must start giving ratings and approve several AI apps & softwares to ensure trustworthiness.
- It is necessary to enhance the powers and role of SEBI in regulating emerging advanced technologies in the Indian stock markets.



- It is necessary to implement a strong legal mechanism to maintain efficiency and impose responsibility on the person who approved an AI tool, who controls it, and who audits it.
- Updating regulations are must to maintain market integrity and to support innovation.-

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