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SEBI'S ROLE IN REGULATING FINTECH AND ALGORITHMIC TRADING: LEGAL AND ETHICAL CHALLENGES

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ABSTRACT

In recent times, the fintech industry in India has underwent a significant growth, reshaping how financial services is accessed and delivered. Digital lending, robo-advisory, payment apps, and algorithm-based tradings has now become part of mainstream markets. This rapid evolution poses new kinds of regulatory challenges which the Securities and Exchange Board of India (SEBI) must address effectively. While SEBI is considered as a proactive regulator, the pace of technological innovations often outpaces legal frameworks, causing regulatory gaps especially in context of algorithmic trading and automated systems.

This research paper aims to study how SEBI is handling these issues legally and ethically. It looks into the laws and circulars SEBI has released so far, like the 2021 algo trading guidelines and regulatory sandbox ideas, and tries to see if they are working or just look good on paper. It also talks about ethical problems like lack of transparency in algorithms, data privacy, and how some fintechs may be taking advantage of common investors who don't understand these new techs.

Furthermore, a comparative view is presented by looking into approaches taken by global regulators like the US Securities and Exchange Commission (SEC) and UK's Financial Conduct Authority (FCA), to evaluate whether India's current mechanisms are robust enough or lacking. Based on this, the paper suggests certain reforms such as enhanced compliance checks, mandatory audit of algorithms, transparent disclosures and investor awareness programs.

As fintech continues to expand, the need for dynamic and responsive regulation becomes more crucial. A careful balance must be made where innovation is encouraged but not at cost of investor

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protection or market integrity. This paper tries to contribute to the ongoing dialogue around regulating digital finance in India with SEBI at the centerstage of that conversation.

Keywords*: Fintech, SEBI, Algorithmic Trading, Regulatory Challenges, Ethical Risks, Investor Protection*

1. INTRODUCTION

In the last decade, India has seen a huge jump in the growth of fintech companies. From digital payments to robo advisory apps, from lending platforms to algo-based stock trading, everything has changed very fast. What used to be handled by traditional banks or brokers, now many startups are doing the same through apps and AI. People who never invested or traded before are now entering the financial markets just with a mobile phone in hand. All this sounds good for financial inclusion, but it also brings serious risks if not regulated properly.

This is where SEBI plays a very important role. Being the main regulator of capital markets in India, SEBI is not only responsible for ensuring that companies and investors follow the rules, but also that the markets remains fair and transparent. With the rise of fintech and specially algorithmic trading, SEBI now faces a new set of challenges which are very different from traditional market issues. It has to think about technology, ethics, data, and speed all at once.

Also, in many cases, the laws that exist were made before these technologies even existed, so now there is a gap in how law understands and controls tech-based activities. For example, many fintech startups uses personal data of users, but there's no full clarity on how that data is being protected or used. Similarly, algo trading involves bots executing trades in milliseconds, which can lead to market volatility if not supervised properly.

SEBI has responded with some guidelines, like putting a check on API-based trading or making brokers accountable for client-side algos. But the question remains are these steps really enough, or are they just surface-level reactions? The situation becomes more complex because fintechs are evolving faster than the regulators can respond to[2]. Also, since many fintechs have foreign investors and cross-border operations, it brings up issues of jurisdiction and regulatory arbitrage.[3]

This paper will discuss how SEBI is dealing with these challenges. It will explain the existing legal framework, what SEBI has done so far to regulate fintech and algo trading, and whether those actions are really effective or just partial. It will also cover ethical concerns, recent events, and compare India's position with global trends.

The research method is doctrinal in nature, based on study of SEBI regulations, official circulars, scholarly articles, news reports and legal opinions. Some comparative insights from US and UK systems are also included to see what lessons can be learn. The purpose is to find whether Indian regulatory system is prepared to handle the complexities of fintech and algo trade, or still needs lot of reforms to catch up.

2. WHAT IS FINTECH & ALGORITHMIC TRADING?

The term "fintech" is actually a short form for financial technology. It covers all kinds of innovations where finance meets technology like digital wallets, online lending apps, insurance platforms, robo-advisors, and more. These tools are now used by both big companies and small users. People no longer has to visit a bank branch, they can just do everything from their phone. This revolution is fast, convinent, and changing the way we think about money. But it's also a space where risks are growing like misuse of data, fraud, and unregulated lending.

Similarly, algorithmic trading or “algo trading” is a method of using computer programs (algorithms) to automatically execute trade orders in the stock market. Instead of a human deciding when to buy or sell, the computer does it based on coded instructions. This can happen in fractions of a second. Big institutions and brokers often use this to gain advantage in timing, speed, and

[2] Upendra Baxi, “On how not to judge the judges: Notes towards evaluation of the Judicial Role” 25 *Journal of Indian Law Institute* 211 (1983)
[3] P.K. Thakur, “Permissibility of Probation in Offences Punishable with Minimum Imprisonment” 2 *SCJ* 26-38 (2002).

volume. But the problem is that sometimes even small code errors or faulty logic can lead to big losses or unfair manipulation in the markets.[4]

2.1 FINTECH IN INDIA: EMPOWERING FINANCE, CHALLENGING REGULATION

Fintech aims to make finance more easy and inclusive. In India, UPI, Paytm, PhonePe, Zerodha, Groww these are now household names. Even small shopkeepers and daily wage workers uses fintech apps. But the problem is not all fintech companies follow same rules like traditional banks. Many of them operates in a legal grey zone, or uses aggressive methods like hidden charges, fake lending recovery agents, or personal data misuse. SEBI don't regulate all fintechs, but for the ones connected with securities market like investment apps, mutual fund platforms, trading brokers on which SEBI has to step in and keep a check.[5]

2.2 ALGORITHMIC TRADING: SPEED, VOLUME, AND MARKET RISK

Algo trading has changed the way stock markets works. A human trader may place 10 orders in a minute, but an algorithm can do 1000 in a second. It can read patterns, news, price trends and then decide to buy/sell shares even before a human reacts. That sounds efficient, but it also gives unfair edge to those with better tech. Retail investors may lose out. There have also been instances where algo errors created huge market volatility or flash crashes. SEBI realised this early and started issuing circulars since 2008-09, but the tech keeps changing faster than rules can.[6]

SEBI needs to regulate this area not just to stop frauds, but also to make sure markets are fair for all not just for few who have money to build complex algos or pay for colocation servers.

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[4] Susan A. Bandes (ed.), *The Passions of Law* 180 (New York University Press, New York, 1999).
[5] S.K. Verma and Raman Mittal (eds.), *Intellectual Property Rights: A Global Vision* 38-42 (ILI, Delhi, 2004).
[6] Dimpal Gulwani, "Algo trades flourishing but SEBI yet to regulate the system", *The Softcopy*, Mar. 17, 2022.

2.3 THE REGULATORY IMPERATIVE: SEBI'S ROLE IN A TECH-DRIVEN MARKET

SEBI is the main body that controls and looks after the securities market in India. When new technologies like fintech and algorithmic trading starts to take over the traditional ways of investing and trading, it's obvious that some kind of regulation is needed. But the reason why SEBI should do it, and not other bodies, is because these techs are directly connected to stock markets, brokers, mutual funds, and investors. So naturally, SEBI becomes the main watchdog.

One of the biggest concerns is investor protection. A normal retail investor might not understand how an algorithm works or what data a fintech platform is collecting. SEBI's job is to make sure that these platforms don't take advantage of common people. With algo trading, some players are getting unfair advantage because they have faster access, co-location servers, or better bots. This creates an uneven playground, which SEBI cannot ignore.[7]

Another reason is that SEBI already has powers under SEBI Act, 1992, and other regulations like SEBI (Investment Advisers) Regulations, 2013, to make rules for market entities. So, when fintech apps or brokers launch algo trading for clients, SEBI has the right to step in, make them register, audit their systems, or even penalise if something goes wrong.

There is also a matter of systemic risk. If a buggy algorithm starts behaving abnormally or multiple bots react to a false signal, the entire market can be disturbed in seconds. We have already seen flash crashes and panic selling globally because of algo trades. Without SEBI's intervention, such events can become frequent and dangerous for financial stability.[8]

So overall, it's not just about checking frauds, SEBI's regulation is also important to keep trust and fairness in the market intact.

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[7] Neha Joshi, "Mint Explainer: Understanding SEBI's new rules for retail investors in algo trading", *Mint*, Feb. 5, 2025, available at: https://www.livemint.com/market/stock-market-news/explainer-understanding-sebis-new-rules-for-retail-investors-in-algo-trading-stock-exchange-share-trading-order-11738741592752.html.

[8] Editorial, "When bots go rogue: The threat of unchecked algorithmic trading", *The Economic Times*, Jan. 23, 2024.

3. LEGAL & REGULATORY FRAMEWORK BY SEBI

SEBI has been trying to keep up with the fast changes happening in fintech and algo trading space. Though the regulator is not always fast, it has still taken some steps to create a legal base so that the market doesn't become a free-for-all playground. There are few major laws, regulations and circulars which gives SEBI the power and tools to control this sector.

The most important source of power for SEBI is the SEBI Act, 1992. It gives SEBI the authority to regulate all activities related to the securities market. Under section 11, SEBI can protect investor interest, register and monitor intermediaries, and take preventive steps to stop unfair practices.[9]

This same power is now being used to regulate fintechs who are into investments, and also to control algorithmic trading. SEBI is not saying fintech is bad, but they want that new tech must not be misused. Many fintech apps gives advice, trading services or investment tools, which earlier only certified brokers used to give. So SEBI now expects them to either register as Investment Advisers, or follow the same code of conduct under the SEBI (Investment Advisers) Regulations, 2013.[10]

Instead of letting the entire algo trading system run freely, SEBI has started putting basic checks in place. It is asking brokers and platforms to take more responsibility when they offer algo tools to clients. The idea is that if something goes wrong, there must be a trail to follow and someone to hold accountable. SEBI has also tried to stop unfair advantages like high-speed trading access only to few big players. The regulator wants to ensure that tech doesn't become a way to cheat others in the market.

SEBI is also experimenting with new ideas like the regulatory sandbox, where startups can test their tech under limited rules, and SEBI watches how it behaves. That helps in making better policies.

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[9] The Securities and Exchange Board of India Act, 1992 (Act 15 of 1992), s. 11.
[10] SEBI (Investment Advisers) Regulations, 2013, reg. 3.

3.1 LEGAL & REGULATORY FRAMEWORK BY SEBI

The Securities and Exchange Board of India (SEBI) is the main regulator for India's capital markets, and its powers mostly comes from the SEBI Act, 1992. Under section 11 of the Act, SEBI can make rules, monitor intermediaries, take preventive actions and protect investors from unfair practices. With the rise of fintech and algorithmic trading, SEBI has slowly expanded its focus to cover these new digital systems, since they're now deeply connected to how people invest and trade.

To keep up, SEBI has started applying older rules in new ways and making fresh guidelines where needed. For fintech platforms that give investment advice or offer trading services, SEBI now expects them to follow rules meant for Investment Advisers or registered intermediaries. In case of algo trading, SEBI has asked brokers and platforms to take responsibility for the systems they offer, and to ensure there is transparency and accountability. It has also introduced a regulatory sandbox model, where new fintech innovations can be tested safely before going full-scale. These steps may not be perfect, but they show SEBI's effort to balance innovation with investor safety.

3.2 SEBI (INVESTMENT ADVISERS) REGULATIONS, 2013

When fintech platforms started giving investment advice through apps and websites, SEBI noticed that many of them were not following the same rules that normal human advisers had to follow. This created a loophole where people were getting advice from robo-advisors or online tools without knowing who was responsible if something goes wrong. To stop this confusion, SEBI brought these platforms under the Investment Advisers Regulations. So now, if a fintech gives any kind of advice on which stocks to buy or sell, or where to invest money, they either need to register themselves or work with someone who is already registered.

These regulations also talks about important things like qualification of advisers, fair conduct, avoiding conflict of interest, and transparent fee structure. For fintech players, this means they can't just create an app and start giving random suggestions to users. They need to follow a framework and act in the best interest of the investor. It also helps SEBI to keep a track on who is giving advice and whether it is being done ethically or not. With more and more users depending on digital platforms for financial decisions, these rules have become even more important now.

3.3 REGULATORY SANDBOX CONCEPT

SEBI introduced the idea of a regulatory sandbox to handle the growing number of fintech startups with new ideas and experimental technologies. A sandbox is basically a test zone where companies can try their product or service with fewer rules but under SEBI's close observation. This helps both the startups and the regulator. The startup gets to test the model in the real world without breaking any law, and SEBI gets to see how the tech works before making a rule around it. This is important because it lets regulation catch up with innovation instead of blocking it completely.[11]

The sandbox is also useful for SEBI to identify possible risks early. For example, if a new trading app is handling customer funds or offering automated advice, SEBI can watch how the system performs before it becomes available to everyone. If it looks safe and useful, SEBI can allow it fully. If not, the regulator can block or modify its use. This reduces the chances of fraud or market abuse. It also sends a positive message that India is open to innovation, but not at the cost of investor safety.

3.4 OTHER GUIDELINES ON ALGO TRADING

Apart from broad laws, SEBI has been releasing multiple circulars and notices to keep algo trading in control. Over the years, it has told brokers that they must approve all algorithmic strategies before they're used in the market. Also, SEBI has said that once an algo order is placed, it should not be modified or cancelled easily, to avoid abuse. These small rules may not seem big at first, but they are actually meant to stop manipulation and make the system more transparent.

SEBI also raised concerns about a few brokers giving co-location access to clients, which gives them faster order execution compared to others. This creates unfair advantage and is against the idea of equal opportunity for all investors. So SEBI keeps warning about such practices and has

[11] SEBI, Circular No. SEBI/HO/MRD-1/CIR/P/2020/95 "Framework for Regulatory Sandbox", June 05, 2020, available at: https://www.sebi.gov.in/legal/circulars/jun-2020/framework-for-regulatory-sandbox_46778.html

asked exchanges to monitor it more strictly. Although it is not a full law or Act, these guidelines and circulars have become an important part of how algo trading is regulated in India today.

3.5 SEBI'S APPROACH: ISSUES IN IMPLEMENTATION

Even though SEBI has introduced many guidelines and rules to control fintech and algo trading activities, there are still some challenges in how these rules are applied in real life. Sometimes the rules are too general, and fintech companies find ways to go around them. Also, many of the platforms are operating online without any physical office or clear jurisdiction, which makes it tough for SEBI to track everything. So even if the law is strong on paper, its actual implementation becomes difficult in practice.

Another issue is that SEBI doesn't always act fast. By the time it studies a new fintech model and brings a rule for it, the technology might have already changed or a new loophole may come up. This delay gives space for unethical players to take advantage. SEBI also lacks a strong monitoring mechanism for smaller firms and retail-level algo tools. Big institutions are easier to track, but individual users using APIs for trading are harder to control. So the intention of SEBI is in the right direction, but the ground-level execution still needs more work and upgradation.

4. ETHICAL AND LEGAL CHALLENGES

The growing use of algorithms and fintech apps in the securities market is creating new types of ethical and legal problems. These are not always direct violations of law, but they affect investor trust and fairness in a big way. One of the major issues is that these algorithms are not very transparent. The code that runs these trading strategies is usually known only to the developers or firms, and not shared with the public or even the regulators in full detail. This lack of clarity opens doors for manipulation like sending fake orders, creating false volume, or triggering price moves by automated signals, all without any human decision involved. This gives an unfair advantage to a few market players, especially those who can afford fast systems or co-location access, leaving retail investors behind.

At the same time, the use of massive user data by fintech platforms is also becoming a concern. Most apps collect personal info like banking details, spending patterns, location, and even social media behaviour. While this data helps in giving "personalized" investment advice, it can also be used to push risky products or mislead users. A user may think the platform is neutral, but it might actually be recommending products that give it more commission. This raises serious conflict of interest issues. SEBI has started asking platforms to disclose their compensation model, but there's still a gap in enforcing accountability, especially when AI-based decisions are involved.

Another challenge is the question of who is responsible when an algorithm goes wrong. Is it the broker, the fintech company, or the coder who made the algorithm? So far, Indian regulations haven't made this clear. This confusion can delay justice and weaken investor protection, especially in cases where algo trades cause sudden crashes or user losses due to automated decisions. Until clear liability is defined in such situations, the problem will keep growing.

4.1 LACK OF TRANSPARENCY & MARKET MANIPULATION

One of the main ethical concerns with algorithmic trading is that it operates like a black box. The logic behind how an algo takes decisions is often not shared publicly or even with the exchanges. Most of the time, the strategy is written in complex code and only the firm that created it understands how it works. This makes it difficult for regulators or even brokers to know whether the algorithm is following fair trading practices or trying to manipulate the market.[12] For example, some bots are programmed to place and cancel thousands of orders in a short time just to create fake demand or confuse other traders.

Such actions can disturb the market without breaking any specific law, but they clearly affect fairness. It becomes a kind of silent manipulation where regular investors don't even realise what's happening. Because the trades are executed in milliseconds, human oversight becomes impossible in real-time. This kind of activity is called quote stuffing, or layering, and can be used to push prices in a certain direction or to trigger stop-losses of retail traders. SEBI has issued multiple circulars to keep algo practices under control, but unless there is full transparency in how these systems work, such misuse can continue in the background.

12 SEBI, "Discussion Paper on Algorithmic Trading and Co-location", Aug. 5, 2016, available at: https://www.sebi.gov.in/reports/reports/aug-2016/discussion-paper-on-strengthening-of-the-regulatory-framework-for-algorithmic-trading-and-co-location-_32940.html

4.2 DATA PRIVACY, CONFLICT OF INTEREST & ACCOUNTABILITY

Fintech platforms today collect huge amount of personal data from users like income details, bank account info, spending habits, trading patterns, and even social media activity. Many users agree to share this data without knowing exactly how it will be used. This creates a risk where companies can use that data not only to "help" the user but also to influence their decisions in a way that benefits the company. For example, a platform might suggest high-risk products just because they bring more commission. In such cases, the advice may look neutral on screen, but it is actually biased by hidden business interests.

Another big concern is accountability, especially when artificial intelligence or algorithms are used to take decisions. If a customer loses money or gets misled due to an automated system, it is not clear who is responsible. Is it the fintech company, the developer of the algorithm, or the broker that offered the service? This confusion is dangerous because it gives firms an easy way to avoid blame. SEBI has started working on rules to bring more clarity, but right now there is no strong legal framework to fix accountability in such cases. This loophole makes it hard for affected investors to seek justice when things go wrong due to automated actions.

The situation becomes more tricky when these platforms use AI to personalise advice or portfolio options. The user doesn't really know what logic the AI is using, and there is no legal rule that says the company must explain it clearly. This makes the system feel like a black box the user just sees suggestions on screen but not the reason behind them. If something goes wrong, there is no legal tool to trace how the decision was made. Also, there is no official audit process for such algorithms in India yet. Until SEBI or some central authority makes it mandatory to explain the working of these models or to conduct algorithm audits, investors will keep facing the risk of biased or unaccountable decisions being passed off as "smart advice".

5. ASSESSING SEBI'S REGULATORY APPROACH

SEBI has definitely made progress in recognising and responding to the rise of fintech and algorithmic trading. Over the years, it has issued multiple circulars, consultation papers, and guidelines that target both institutional and retail-level algo usage. It has also tried to keep fintech under some form of control by extending the Investment Advisers Regulations and launching initiatives like the regulatory sandbox.[13] These are signs that SEBI is aware of the risks and is not ignoring them. But the real question is are these steps strong and fast enough to actually match the speed at which fintech is evolving?

One of the biggest limitations is in enforcement. While the rules may look good on paper, their actual monitoring and implementation is still weak. SEBI doesn't have the same level of technological infrastructure as large financial institutions or big fintech firms. Also, many of the rules are principle-based or general in nature, which leaves room for different interpretations. Smaller brokers or retail-level platforms often slip under the radar. And by the time SEBI reacts or begins investigation, the damage is already done. This delay and lack of real-time enforcement is something that needs urgent attention.

In terms of judicial perspective, there hasn't yet been any major landmark case law in India specifically dealing with algorithmic trading or AI-led fintech advice. Most legal action so far has been based on existing securities law, and courts haven't clearly ruled on issues like liability of AI or ethical misuse of investor data. That leaves a grey area in legal interpretation. However, as more users get affected or if a major fintech-related scam occurs, we may soon see more judicial intervention in this space.

Compared to global regulators, SEBI still has some catching up to do. The US SEC has stricter disclosure requirements for algorithmic systems and takes enforcement very seriously, even filing lawsuits when needed.[14] The UK's Financial Conduct Authority (FCA) follows a more flexible model but still demands accountability and fairness in all fintech-led activities. Both of these regulators have better infrastructure, and they actively monitor algo activity. SEBI is taking steps in that direction, but without real-time tech tools, trained officers, and legal clarity, India might struggle to manage the fast-growing fintech environment effectively.[15]So overall, while SEBI's

13 SEBI, "Framework for Regulatory Sandbox", June 05, 2020, available at: https://www.sebi.gov.in/legal/circulars/jun-2020/framework-for-regulatory-sandbox_46778.html

[14] U.S. Securities and Exchange Commission, "SEC Charges High-Frequency Trading Firm with Fraudulent Trading Strategy", March 18, 2021, available at: https://www.sec.gov/news/press-release/2021-44

[15] FCA, "Algorithmic Trading Compliance in Wholesale Markets", Feb. 12, 2018, available at: https://www.fca.org.uk/publications/multi-firm-reviews/algorithmic-trading-compliance-wholesale-markets

efforts are honest, they are still not fully adequate to deal with the size and speed of today's digital finance market.

6. CASE STUDIES

India has witnessed several notable cases in recent years that highlight the risks and misuse in fintech and algorithmic trading. One example is SEBI's action against the National Stock Exchange (NSE) in connection with the co-location and algorithmic trading software scandal. Between 2011 and 2014, certain brokers allegedly gained unfair advantage through preferential access to trading servers, leading to SEBI imposing ₹1,000 crore disgorgement and barring NSE from raising capital for six months. The regulator also fined and banned several senior officials for conflict of interest and misuse of data.[16]

Another major case was SEBI's ban on the US-based high-frequency trading firm Jane Street. The regulator accused the firm of manipulating India's Bank Nifty and Nifty50 indices to generate illicit gains. As a result, SEBI impounded over $550-570 million and blocked Jane Street from trading in India pending investigation. The move triggered a 20% drop in options trading volumes, and both NSE and BSE stock prices fell.[17] SEBI has since urged structural reforms in the derivatives market to better protect retail investors.[18]

SEBI has also targeted broker-level misconduct. In early 2025, more than 110 brokers, including platforms like Zerodha, 5Paisa, and Motilal Oswal, received show-cause notices for partnering with unregulated algo platforms that promised assured returns. SEBI proposed a settlement scheme where brokers can settle for ₹1-2 lakh to close out the matter.[19] In another instance, fintech arm Paytm Money settled a case with SEBI for ₹45.5 lakh, due to technical violations under SEBI's glitch framework.[20]

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[16] Wikipedia contributors, "NSE co-location scam"
[17] LiveMint, "NSE co-location case: NSE to pay ₹100 crore in penalties to SEBI for lapses", Jan. 23, 2023
[18] Reuters, "India regulator seeks trading data from exchanges in wider Jane Street probe", Jul. 30, 2025; Reuters, "Jane Street deposits $567 million so it can resume India trading", Jul. 14, 2025.
[19] Reuters, "India's tax department investigating Jane Street over possible tax treaty misuse",Aug. 5, 2025.
[20] Reuters / Financial Times reports on SEBI pushing for structural reform post Jane Street probe (Aug. 4 2025)

These cases show that SEBI is increasingly active against fintech and algo abuses. Public and industry backlash has been strong users demand more transparency, while market commentators say that SEBI must develop real-time oversight, stronger enforcement powers, and clear liability frameworks especially for AI-led trading.

7. REINFORCING THE FRAMEWORK: POLICY RECOMMENDATIONS AND FUTURE PATH

While SEBI has already taken few important steps to regulate fintech and algo trading, the current system still has many gaps. With technology growing so fast, the rules also need to evolve quickly. It's not just about stopping fraud or manipulation ;it's also about building a fair and trustworthy system where innovation can happen without hurting investors. Below are some practical suggestions that can help SEBI move in the right direction.

Suggested Measures:

- SEBI should make clear and detailed rules for algorithmic trading instead of just circulars or broad guidelines.
- Only SEBI-registered entities should be allowed to offer algo-based advisory or auto-trading APIs.
- All algorithms should go through pre-launch risk classification and approval, with an option for SEBI to suspend if needed.
- Mandatory technology audits should be done regularly to check if algo codes are safe and free from misuse.
- SEBI should launch investor awareness drives to explain how fintech platforms work and what risks are involved.
- Use tiered regulation which give newer or small fintechs some flexibility, while putting tight rules on big-volume or institutional players.
- Continue using regulatory sandbox, but also set up post-sandbox tracking to monitor the firm's actual practices later.
- SEBI must improve its own tech capacity with AI-based real-time surveillance systems and faster investigation tools.

- Fintech apps and robo-advisors should be required to explain their decision-making logic in a simple and transparent way.
- The focus should be on responsible innovation support growth but make sure investors and markets are not harmed.

8. CONCLUSION

The rise of fintech and algorithmic trading has completely changed how Indian markets function. From digital investment platforms to AI-powered trade execution, technology is now deeply involved in every part of the financial ecosystem. While this growth has opened up new opportunities for investors and startups, it has also created serious risks like lack of transparency, data misuse, unfair trading advantages, and low accountability when things go wrong.

SEBI has taken some good steps like issuing circulars, using a regulatory sandbox, and trying to monitor risky platforms. But with the pace of tech growing so fast, regulation also needs to speed up. There are few urgent areas where action is required:

1. Mandatory tech audits for all algorithm-based trading platforms, to make sure codes are safe and can't be used for manipulation.
2. Graded regulation, where smaller or low-risk firms get some flexibility but bigger players with high trading volumes must follow stricter norms.
3. Investor education programs, to help regular users understand how fintech tools work and what risks are involved.

Just writing rules on paper is not going to be enough anymore. In the coming years, SEBI must act like a digital gatekeeper using smart tools and strong legal backup. But beyond the law, ethics should also become a part of fintech design. Systems should be fair, transparent and accountable by default. If India wants to lead in this space, it must make sure that law and ethics grow together only then can the market stay modern, safe, and inclusive.

The world is watching how India handles this shift toward AI and fintech in finance. If SEBI can balance innovation with safety, then the country can become a global model for ethical and smart regulation. But if the loopholes are ignored, the same tech that helps investors today can become a risk for the whole market tomorrow. So, this is the right moment to act. The law must keep up, ethics must guide, and regulators must lead with both caution and vision. Only then fintech will not just be fast it will also be fair.