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AI AS A TOOL FOR MARKET SURVEILLNCE IN SECURITIES MARKET AND ENFORCEMENT

~ Ragini Prajapati

In today's rapid world AI is the one who is proceeding faster than human being. In the era of AI, every person is using Al for their work to make tasks easier and more reliable. Now days people are becoming lazy and they want their every work to be done by Al even for small tasks. When students find their examinations are near and they did not study anything at that time, Al works like a blessing for them....so this is how Al works in our day-to-day life. As the use of Al is increasing as so its scope is also being broader than before. Just as Al is spreading its influence in every field, it also plays an important role in market surveillance.

The modern share market is no longer a physical space where people shout orders to buy and sell stocks. It has turned into a digital ocean where billions of trades happen in the blink of an eye. As the world is moving so fast, human eyes cannot keep eye on everything. This is where Artificial Intelligence, or Al, comes into power as a digital detective. Now regulators are using Al as their advance and main tool to keep eye on markets, catch people who try to cheat, and make sure that every investor has a fair chance to succeed. This easy tells you how Al works in share market, how and why it is being priorities by major groups like SEC in the United States and SEBI in India to maintain the financial world's safety and honesty.

"Firms are increasingly using Al systems to support decision making processes in applications and functions such as surveillance, where Al can process vast amounts of data in real time to detect anomalies, patterns of market manipulation, and compliance breaches. For instances, AI- powered tools analyze trade orders, market data, and participant behavior across multiple exchanges to flag suspicious activities like spoofing or layering, enabling regulators and exchanges to act swiftly."[1]

If you catch up with anyone leading the industry in India today, they will likely tell you that the security sector is currently navigating a massive, high-speed pivot. It's a seismic shift. This whole change is fueled by a mix of genuine tech breakthroughs and a landscape of threats that just doesn't

[1] INFOSYS KNOWLEDGE INST., EFFECTIVE TRADE AND MARKET SURVEILLANCE THROUGH ARTIFICIAL INTELLIGENCE 5 (n.d.), https://www.infosys.com/about/knowledge institute/insights/documents/effective-trade-market-surveillance.pdf

stop moving for a second. These experts are noticing that AI-led solutions are basically flipping the script on how we used to handle security frameworks. At the same time, we're seeing these big-ticket strategic partnerships that are really pushing the boundaries in high-stakes fields like cybersecurity and quantum tech. Since every firm Infosys Knowledge Inst., Effective Trade and Market Surveillance Through Artificial Intelligence 5(n.d.), is hunting for better security right now, the local market is essentially exploding. This puts Indian companies in a perfect spot to lead the pack on a global scale - mainly because of their raw technical grit and manufacturing power.

"The integration of Al technologies is revolutionizing the industry. Al enhances the functionality of cameras by offering real-time monitoring, proactive alerts, and data analytics. we are also witnessing how the demand for cameras has expanded beyond traditional security applications. Whether it's in homes, businesses, or even vehicles with the growing popularity of dash cams, security has become a pervasive part of daily life."[2]

A lot of this boom is directly tied to messy global friction, cities growing way too fast, and the non-stop, pounding headache of cybercrime. We also have to think about shielding our digital backbone. These days, "security" isn't just about a guy at a gate or a basic camera stuck on a wall; it is about massive, invisible AI grids that can sniff out a threat the very second, it shows up. Things like drones, facial recognition, and data-heavy biometric tools are slowly but surely changing what "safety" actually means in the 21st century. It is becoming a high-tech, interconnected web.

"The global security industry is valued at $120 billion, growing at 8% CAGR (Compound Annual Growth Rate) annually until 2030. As security becomes an essential focus for governments, institutions, and private sectors alike, the demand is set to increase exponentially in the coming years."[3]

AI isn't just about catching intruders, though. It is actually changing the face of industrial automation by letting cameras spot tiny flaws in products as they fly down the assembly line.

"With the government's policies, we foresee a 40% growth rate for Indian manufacturers in the coming years."[4]

In India, the securities market-which SEBI keeps a very close eye on-is like the primary engine for the country's economic pulse. It's the place where companies go to find the cash they need to grow and where everyday people try to build a little wealth for their future. The recent explosion of "deep learning" has totally changed the DNA of this market. It has handed investors and financial experts a super-specialized toolkit for digging into market data.

The rapid growth in artificial intelligence (AI), particularly the deep learning technologies, has significantly transformed India's securities market. It offers a unique set of tools that assist

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[2] M.A. Johar, President, Strategic Business, CP Plus (quoted in original text).
[3] Shashank Sambyal, Zonal Head, North & East, Godrej Enterprise, Address at the IFSEC India Expo Organized by Informa Markets in India.
[4] Shish P. Dhakan, MD & CEO, Prama Hikvision India Private Ltd. (quoted in original text).

investors and other intermediaries in financial analysis. However, there is a rise in misuse of AI generated deep-fakes and misinformation that impersonate corporate leaders, regulators and financial experts, misleading the retail investors, manipulating the stock prices and undermining market confidence. Relying on real-world incidents across India and globally, the paper demonstrates how deepfakes or AI- generated misinformation (particularly in the securities market) has led to losses to investors and market volatility.

But there is a darker side to all of this. We're seeing a real, scary rise in the misuse of AI-made deepfakes and fake news stories that mimic top CEOs or regulators. Bad actors are using these to trick retail investors and mess with stock prices. If you look at what's been happening in India and abroad lately, it's clear that AI-generated misinformation can lead to massive financial pain and make the whole market incredibly jumpy.[5]

Basically, the world is waking up to the fact that AI is more than just a cool gadget; it is a force that is reshaping our laws, our economy, and even our national defense. In these high-stakes areas, we need rock-solid rules to make sure people aren't just abusing the technology for their own gain.

The "Black Box" Problem and the Path Forward:

Like anything else in life, AI has a double edge. If a tool is working in your favor, there is always a chance it could also do some damage. That's why rolling out AI without any guardrails is creating huge worries about privacy, bias, and who actually takes the fall when things go wrong. One of the biggest hurdles is the "Black Box" issue-it is incredibly hard to hold someone accountable when nobody can actually explain the algorithm's logic. It's a mystery.

Looking at the big picture, India's recent moves show a clear shift from just reacting to problems to actively trying to govern them before they start. We see similar efforts happening internationally, like the EU's risk-based model. But India's focus on digital infrastructure and making sure the growth is inclusive gives its plan a very different feel. At the end of the day, whether AI adoption actually works depends more on public trust than on the tech itself. It's about confidence.

By looking at the massive potential and the built-in risks-everything from deepfakes to national security threats-the India AI Governance Guidelines try to balance progress with accountability. It is a strategic, team-based approach. The IndiaAI Mission is trying to solve these issues by making sure the benefits of AI reach everyone, while also pushing India toward global leadership in ethical tech. Without safety measures, the whole system might stall because people are too afraid of the risks. That's why the AI Safety Institute (AISI) was set up to provide the technical muscle.

[5] Deepfakes and AI-Generated Misinformation in the Securities Market, https://lawjournals.celnet.in/index.php/jcmsl/article/view/1958.

"The India AI Governance Guidelines lay the foundation for Safe & Trusted AI through an agile and flexible policy architecture with technical support from AISI."[6]

SEBI has also stepped up, putting forward some core principles for using AI responsibly to keep investors and market integrity safe.

SEBI has proposed guiding principles for responsible usage of Artificial Intelligence (AI) to safeguard investors and market integrity. The proposed "guiding principles are intended to optimize benefits and minimize potential risks associated with integration of AI-based applications in securities markets to safeguard investor protection, market integrity, and financial stability," said SEBI.

Part of this plan involves making sure firms have internal teams who actually have the skills to watch over these algorithms. They need to make sure the models can be audited and that their decisions can be explained.[7]

Beyond India's rules, if we look at other regions, the EU Artificial Intelligence Act (July 2024) handles a lot of the challenges regarding privacy and human rights. It is the first big, binding law for AI in the world and it is now the global benchmark for how to handle this tech.

"As regards high-risk Al systems which are safety components of products, this proposal will be integrated into the existing sectoral safety legislation to ensure consistency, avoid duplications and minimize additional burdens."[8]

The EU is also cracking down on "AI Washing"-where companies lie about how much AI they actually use to look more advanced than they are. "AI washing describes the embellishment of AI-related facts." It is basically the tech version of greenwashing.

"Further on the micro level, if a public company is using Al, that company has to be honest about the role Al plays in its business and not exaggerate it to the point of Al washing". [9] This kind of lying tricks everyone-consumers, investors, and the people making the rules. It creates legal nightmares under consumer protection and corporate disclosure laws. On a global scale, the U.S. SEC is leading the pack with ARTEMIS, a system that uses machine learning to scan trades in real-time and catch manipulators way faster than any human ever could.

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[6] MINISTRY OF ELECS. & INFO. TECH. (MEITY), GOV'T OF INDIA, INDIA AI GOVERNANCE GUIDELINES: ENABLING SAFE AND TRUSTED AI INNOVATION 1–2 (2025).

[7] 7Sebi Mulls Guiding Principle for Responsible Usage of AI, ML in Securities Markets, ETCIO (Oct. 21, 2024), https://economictimes.indiatimes.com/tech/ites/sebi-mulls-guiding-principles-for-usage-of-ai-ml-in-securities markets/articleshow/114421115.cms.

[8] Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonized Rules on Artificial Intelligence (Artificial Intelligence Act), at 5/3, COM (2021) 206 final (Apr. 21, 2021).

[9] Gary Gensler, Office Hours with Gary Gensler: AI, Investors, Issuers & the Markets, YOUTUBE (Feb. 14, 2024), at 3:25, https://www.youtube.com/watch?v=qVqZ_YxNsEl.

"This mirrors global precedents like the SEC's ARTEMIS, which integrates Al oversight into existing securities regulation without duplication."[10]

Closing Thoughts In the end,

weaving AI into the securities market is both a giant leap forward and a major regulatory headache. It makes catching fraud more efficient, but it raises tough questions about bias and transparency. "Artificial intelligence is already being used broadly across the financial sector."[11] As Gary Gensler has pointed out, AI is already baked into the way markets work. That means we need very careful oversight. The future isn't just about using the coolest tech; it is about making sure that tech follows the rules of fairness and protecting investors. Our laws have to keep up with our inventions to make sure AI builds the market up instead of tearing it down.[12] "I believe artificial intelligence is the most transformative technology of our times. "[13]

[10] U.S. SEC. & EXCH. COMM'N, Use of Artificial Intelligence by SEC Staff (Dec. 28, 2020), https://www.sec.gov/news/statement/artificial-intelligence-sec.
[11] Gary Gensler, Interview on Artificial Intelligence and Financial Markets, BLOOMBERG TECH. (Oct. 25, 2023), https://www.youtube.com/watch?v=oUOFPT26Rgs.
[12] Id.
[13] Gary Gensler, Remarks before the Financial Stability Oversight Council: 2023 Annual Report (Dec. 14, 2023).