INDUSLAW
THOUGHT LEADERSHIP ... APPLIED

DISRUPTION OF THE SECURITIES MARKET – TECHNOLOGY THE REASON OR SOLUTION?

Authors: Namita Viswanath | Rashi Saraf | Aditya G | Preetish Agrawal

DECEMBER 2023

INTRODUCTION

The real world use case of technologies such as artificial intelligence ("**AI**"), machine learning ("**ML**"), blockchain and cloud computing has gradually transitioned from *'aspirational'* and *'nice to have'* to *'must have'* and *'right here, right now'*. The Indian financial services sector is in the forefront of integrating these technologies across their product chains to capitalize on the superior security, speed, convenience, and customer value, that the new technology induced experience provides.

The consequent disruption of traditional financial services using these technologies has resulted in mushrooming of new business models and redrawing of the financial services sector landscape. Unregulated, technology focused fintech entities have been enabled to enter regulated businesses. Similarly, traditional securities market intermediaries such as stockbroking, investment advisory services, research analysis services etc. are not only able to integrate new technologies into their primary business (which is regulated by financial sector regulators such as the Reserve Bank of India ("**RBI**") and the Securities and Exchange Board of India ("**SEBI**")), but also use their financial heft and technological prowess to foray into providing unregulated technology focused services to third parties.

End users have lapped up these technology heavy financial services and have made it imperative for financial services intermediaries to keep up with the Joneses. This is evidenced by the commanding market share held by technology-enabled stockbrokers[1] and the exponential growth of assets under management for technology-enabled investment advisers or robo-advisers[2]. Such technology-enabled intermediaries typically tend to have multiple regulated businesses in the same group by building synergies based on common technology within the group.

This has led to interesting questions on the regulatory strategy to be adopted in this rapidly evolving financial services landscape. Under the extant regulatory framework, SEBI requires a principal officer and/or a compliance officer to be appointed by most categories of market intermediaries. But because of these new technologies, capital market intermediation business can be made 'human-free' to a great extent. While such 'human-free' technologies have their advantages, in a regulatory environment which is largely human-centric vis-à-vis accountability and compliance, it also has the potential to blur the line between unregulated technology services and regulated services. In this context, this article outlines the relevant regulatory landscape around the use of such disruptive technologies particularly in the securities market and points out challenges and regulatory ambiguities that stakeholders and investors may face in adoption of such technologies.

1. https://economictimes.indiatimes.com/markets/stocks/news/indias-top-5-stock-brokers-control-about-over-60-of-market/the-leaders/slideshow/96215671.cms
2. https://www.statista.com/outlook/dmo/fintech/digital-investment/robo-advisors/india#assets-under-management

ALGORITHMIC TRADING IN SECURITIES MARKET

SEBI defines algorithmic trading or algo trading as 'any order that is generated using automated execution logic'[3]. In simpler words, algo trading entails the use of pre-programmed trading instructions that uses a computer to place an order for trading, thereby eliminating human intervention. Generally, the features of algorithmic trading include using a defined set of instructions in the form of algorithms to generate trading signals and placing orders, wherein an algorithm automatically monitors the stock prices live and initiates an order when given criteria are met[4].

The entry of technology which enables such algo trading has re-defined the traditional stock-broking business. This is evidenced by the rapidly declining share of non-algorithmic trades executed on India's stock exchanges wherein around 75% *(seventy five percent)* of the total trades on the Bombay Stock Exchange and the National Stock Exchange are trades executed using an algorithm or a computer program[5].

Back in 2012, SEBI had recognised that technological advancement, i.e., the use of algorithms for trading in securities, was bringing a vast array of challenges for effective regulation. Some of the major challenges were (i) system load – i.e., the number of active processes at a time, which needed to be managed; (ii) the order-level risk, like price risks or quantity risks; and (iii) identifying dysfunctional algos i.e., algos leading to loop or runaway situations.

To address such challenges, SEBI issued a circular ("**Circular**") which introduced guidelines which inter alia required stockbrokers to (a) obtain prior approval from the stock exchanges before offering the facility of algo trading; (b) perform risk checks related to price, quantity, order value and automated execution; and (c) submit an undertaking to the stock exchanges stating amongst other things that they have proper procedures, systems, and technical capability to carry out trading through the use of algorithms[6]. These guidelines have been reviewed by SEBI multiple times over the past decade[7], wherein further governance and compliance measures have been introduced for stockbrokers. These measures include, among others, (a) getting trading algorithms certified by a Certified Information Systems Auditor (CISA)/ Diploma in Information System Audit (DISA) auditor; (b) performing risk assessments; and (c) ensuring that no references to the past or expected future return or performance of the algorithm are made in marketing.

While the technology involved in algo trading has mostly been of impact only to stockbrokers, the ability to analyse live market prices at large volumes and at a high velocity can prove invaluable to other securities market intermediaries such as investment advisors, portfolio managers and research analysts. The Circular on algo trading deals exclusively with stockbrokers, and accordingly, there currently is a void in regulation for the usage of such technologies by other securities market intermediaries. Further, while SEBI in 2015 issued guidelines to securities market intermediaries on principles to be adopted by them with regard to outsourced activities, there is currently no guidance on the technological services that can be outsourced to an unregulated entity for enabling algo trading, thereby further blurring the regulatory line.

---

3. Securities and Exchange Board of India, Circular Number SEBI/HO/CDMRD/DMP/CIR/P/2016/97 titled 'Broad Guidelines for Algorithmic Trading for National Commodity Derivative Exchanges' dated September 27, 2016.
4. Securities and Exchange Board of India, Consultation Paper on 'Algorithmic Trading by Retail Investors' dated 09 December, 2021 available at https://www.sebi.gov.in/reports-and-statistics/reports/dec-2021/consultation-paper-on-algorithmic-trading-by-retail-investors_54515.html
5. https://www.businesstoday.in/magazine/30th-anniversary-special/story/how-tech-is-disrupting-the-stock-market-321704-2022-02-15
6. Securities and Exchange Board of India, Circular Number CIR/MRD/DP/09/2012 titled 'Broad Guidelines on Algorithmic Trading' dated March 30, 2012. .
7. Securities and Exchange Board of India, 'Consultation Paper on Algorithmic Trading by Retail Investors', dated December 09, 2021; Securities and Exchange Board of India, Circular Number SEBI/HO/MIRSD/DOP/P/CIR/2022/117 titled 'Performance/return claimed by unregulated platforms offering algorithmic strategies for trading' dated September 02, 2022;

AI AND ML IN SECURITIES INTERMEDIATION BUSINESS

The use of AI and ML over the past few years[8] has been seen as a game-changer not only by industry stakeholders but also by SEBI as the adoption of new technologies can provide fast and better services to consumers while at the same time act as a catalyst in improving ease of doing business in the securities market business[9]. It is no surprise that securities market participants and intermediaries such as investment advisers *(in the form of robo-advisers),* research analysts, portfolio managers and stockbrokers have started to extensively adopt AI and ML over the past few years[10].

Acknowledging the above-mentioned development, SEBI has issued three identical circulars, each being applicable to market intermediaries, market infrastructure institutions and mutual funds respectively, which provide some degree of insight as to what SEBI considers to be the use of AI and ML along with certain disclosure requirements[11]. SEBI, through the aforesaid circulars, has placed a reporting requirement on securities market intermediaries, market infrastructure institutions and mutual funds to make quarterly filings providing details of the AI / ML based application or system used by them. For this purpose, SEBI has stated that *"any set of applications / software / programs / executable / systems (computer systems): (a) that are offered to investors (individuals and institutions) by market intermediaries to facilitate investing and trading; (b) to disseminate investments strategies and advice; or (c) to carry out compliance operations / activities where AI / ML is portrayed as a part of the public product offering or under usage for compliance or management purposes[12]"* would be required to be reported. SEBI has further clarified that the scope of the said reporting requirement also includes *"Fin-Tech and Reg-Tech initiatives undertaken by market participants that involves AI and ML.[13]"*

While this provides some clarity on what SEBI considers to be the usage of AI and ML in the securities market, there is currently no clarity on how SEBI intends to regulate such usage of AI and ML. In fact, the current regime, apart from the foregoing reporting requirement does not answer critical questions with regard to the usage of AI and ML by securities market intermediaries. SEBI has remained silent on which entities *(whether regulated by it or otherwise)* can employ AI or ML technology that has or may have an impact on the securities market and has not prescribed any minimum standards to be complied by entities that adopt such technologies in the securities market. In the absence of any regulatory regime that effectively regulates the adoption of AI and ML in the securities market coupled with mushrooming growth of AI enabled robo-advisers, stockbrokers and other market intermediaries, crucial elements with respect to the fiduciary obligations of such intermediaries and the attribution of liability caused by its breach thereof have remained unregulated. Such a situation has led to uncertainty on the part of stakeholders with regard to the level of care to be exercised and the compliance requirements to be followed. This has consequently become a concern for investors whose ability to adequately assess risks has been hampered by this lack of regulation.

8. https://www2.deloitte.com/in/en/pages/about-deloitte/articles/State-of-AI-in-India.html
9. https://www.sebi.gov.in/media/press-releases/nov-2019/-technology-a-key-game-changer-in-financial-services-shri-ajay-tyagi_45010.html
10. https://economictimes.indiatimes.com/markets/stocks/news/want-to-be-a-smart-investor-go-for-smart-technologies/articleshow/82242265.cms?from=mdr; https://www2.deloitte.com/content/dam/Deloitte/de/Documents/financial-services/Deloitte-Robo-safe.pdf
11. Securities and Exchange Board of India, Circular Numbers (i) SEBI/HO/MIRSD/DOS2/CIR/P/2019/10 titled 'Reporting for Artificial Intelligence (AI) and Machine Learning (ML) applications and systems offered and used by market intermediaries' dated January 04, 2019; (ii)
12. SEBI/HO/MRD/DOP1/CIR/P/2019/24 titled 'Reporting for Artificial Intelligence (AI) and Machine Learning (ML) applications and systems offered and used by Market Infrastructure Institutions (MIIs)' dated January 31, 2019; and (iii) SEBI/HO/IMD/DF5/CIR/P/2019/63 titled 'Reporting for Artificial Intelligence (AI) and Machine Learning (ML) applications and systems offered and used by Mutual Funds' dated May 09, 2019.
13. ibid
14. ibid

CONCERNS OF INVESTOR'S LOOKING TO INVEST IN SECURITIES MARKET INTERMEDIARIES

Over the last few years, securities market intermediation business, aided by the impetus provided by the advent of digitisation and the emergence of new technologies *(and its tactful leveraging as outlined above)*, has become one of the most lucrative businesses in India especially with increasing numbers of retail investors who have entered the market[14]. While the sector has seen unprecedented growth in investments over the past few years[15], the sector still remains plagued with regulatory ambiguities *(as outlined above in the context of the adoption of new technologies)* and stringent regulatory controls and concerns which investors in this sector have to be cognizant of. Some of these regulatory controls include stringent eligibility criteria and compliance requirement net worth, capital adequacy, margins, exposure norms etc. In such a context, specific regulatory concerns among others which prevent synergizing the full potential of the technological prowess of such entities would have to be factored in by the investors. Some of these concerns include the prohibitions placed on stockbrokers from undertaking any business outside the securities market within the same group, the prohibition on stockbrokers from undertaking any business where personal financial liability may be passed on to the stockbroking entity, or the prohibition on investment advisers from having advisory and distribution services in the same group, restrictions on change in control, difficulties in complying with data protection obligations *(given that the nature of such technology is to harvest and process data autonomously)* etc.

Another important aspect from an investment standpoint for non-resident investors is the compliance requirements under the Foreign Exchange Management Act, 1999 and rules made thereunder ("**FEMA**"). Under FEMA, foreign investors looking to invest in Indian companies are required to comply with certain sectoral caps on investment prescribed by the Government of India. Such foreign investment may be through the automatic route *(i.e., without requiring any government approval)* or through the approval route *(i.e., with the prior approval of the government)* depending on the sector in which the investment is sought to be made. The Foreign Exchange Management (Non-Debt Instruments) Rules, 2019, ("**NDI Rules**") prescribed under FEMA read with the consolidated Foreign Direct Investment Policy issued by the Government of India state that entities undertaking financial services that are regulated by financial sector regulators like SEBI or RBI are allowed to receive investments up to 100% *(one hundred percent)* through the automatic route. However, for financial services that are not regulated by a financial sector regulator, 100% *(one hundred percent)* investment is allowed only through the government route unless specifically mentioned under permitted "financial services" under the NDI Rules. Given the advent of technology and the innovative business models enabled by the use of such technologies, several businesses have started delivering forms of financial services *(including in the securities market such as for example - AI only robo-adviser)* that do not necessarily fall under the ambit of existing regulations by a financial regulator. In these circumstances, a foreign entity looking to invest in an Indian entity which undertakes such businesses must conduct a comprehensive analysis to ascertain whether the activities being performed by these entities indeed fall under financial sector regulators or not; and hence, whether an investment under an automatic route is permitted or not.

14. https://www.icicidirect.com/mailimages/IDirect_Brokerage_SectorUpdate_Mar23.pdf
15. https://www.investindia.gov.in/sector/bfsi-FinTech-financial-services#:~:text=Industry%20Scenario&text=Indian%20fintechs%20were%20the%202nd,from%20535%20to%201019%20respectively.

CONCLUSION

We believe that the titular question of this article is best answered by evaluating the concerns and ambiguities traced in the foregoing paragraphs. While the introduction and adoption of new technologies in the securities market would undoubtedly cause a net-positive effect, this positive effect can be magnified with an intricate understanding of the regulatory environment that surrounds these disruptive technologies. Navigating the line between regulated and unregulated businesses, and understanding their interplay, is of imperative importance, not only to conduct business in this sector, but also to attract investment. SEBI has its hands full in trying to play a balancing act between the three stakeholders - financial services firms, their investors and end-users to effectively promote technological innovation and flexibility in regulations for the benefit of the industry while also providing necessary protection and safety nets, where needed.

INDUSLAW
THOUGHT LEADERSHIP ... APPLIED

www.induslaw.com

OUR OFFICES

BENGALURU
101, 1st Floor, "Embassy Classic"# 11
Vittal Mallya Road
Bengaluru 560 001
T: +91 80 4072 6600
F: +91 80 4072 6666
E: bangalore@induslaw.com

HYDERABAD
204, Ashoka Capitol, Road No. 2
Banjarahills
Hyderabad 500 034
T: +91 40 4026 4624
F: +91 40 4004 0979
E: hyderabad@induslaw.com

CHENNAI
#11, Venkatraman Street, T Nagar,
Chennai - 600017 India
T: +91 44 4354 6600
F: +91 44 4354 6600
E: chennai@induslaw.com

DELHI & NCR
2nd Floor, Block D
The MIRA, Mathura Road, Ishwar Nagar
New Delhi 110 065
T: +91 11 4782 1000
F: +91 11 4782 1097
E: delhi@induslaw.com

9th Floor, Block-B
DLF Cyber Park
Udyog Vihar Phase - 3
Sector - 20
Gurugram 122 008
T: +91 12 4673 1000
E: gurugram@induslaw.com

MUMBAI
1502B, 15th Floor
Tower – 1C, One Indiabulls Centre
Senapati Bapat Marg, Lower Parel
Mumbai – 400013
T: +91 22 4920 7200
F: +91 22 4920 7299
E: mumbai@induslaw.com

#81-83, 8th Floor
A Wing, Mittal Court
Jamnalal Bajaj Marg
Nariman Point
Mumbai – 400021
T: +91 22 4007 4400
E: mumbai@induslaw.com