



215 Pennsylvania Avenue, SE • Washington, D.C. 20003 • 202/546-4996 • www.citizen.org

October 10, 2023

Securities and Exchange Commission
c/o Vanessa A. Countryman, Secretary,
100 F Street, NE Washington, DC 20549-1090

Submitted via email to: rule-comments@sec.gov

RIN 3235–AN00; 3235–AN14, File Number S7–12–23: Conflicts of Interest Associated With the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers

Dear Chairman Gensler and Honorable Commissioners,

On behalf of more than 500,000 members and supporters of Public Citizen, we offer the following comment on the proposed *Conflicts of Interest Associated With the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers* rule.¹ The stated intention of this rule is to “eliminate or neutralize” conflicts of interest from broker-dealers and investment advisers during investor interactions caused by the use of predictive data analytics (PDA) technology, which is driven in large part by artificial intelligence (AI).

Public Citizen believes AI is one of the more momentous dangers to society as it advances into the economy, health care, education and more. To that end, we have published a number of reports such as on the [dangers](#) of AI being anthropomorphized² and released [generative AI](#) policy recommendations³.

We now offer commentary on the proposed rule’s technology coverage scope and requirement to eliminate/neutralize conflicts of interest.

¹ This notice was published in the Federal Register on August 9, 2023 (Vol. 88, No. 152 Fed.Reg.) and is available at <https://www.govinfo.gov/content/pkg/FR-2023-08-09/pdf/2023-16377.pdf>.

² Rick Claypool, *Chatbots Are Not People*, PUBLIC CITIZEN (Sept. 26, 2023)

<https://www.citizen.org/article/chatbots-are-not-people-dangerous-human-like-anthropomorphic-ai-report/>

³ Staff of Public Citizen, *Public Citizen’s Recommendations for Regulating Generative AI*, PUBLIC CITIZEN (Sept. 8, 2023) <https://www.citizen.org/article/public-citizens-recommendations-for-regulating-generative-ai/>



In brief, we strongly support the proposed rule for its attempt to provide much needed and appropriate guardrails for AI-driven PDA technology use by the securities industry. Wall Street is not a philanthropic enterprise; its goal is to maximize profits. When its customers are American investors, without appropriate guardrails that can mean extracting the biggest commissions and promoting the greatest number of transactions from these clients, whether these fees and this churning is in their clients' best interest or not. The Securities and Exchange Commission (SEC) responsibly attempts to bridle this behavior. With the potential misuse of AI-driven PDA technology threatening to supercharge this dynamic, we welcome the agency's rulemaking in this space.

We also believe the SEC should consider an important addition to its proposed rule, namely prominent disclosure to customers when AI-driven PDA technology is in use by broker-dealers and investment advisors.

A. PDA systems' conflicts of interests must be eliminated or neutralized because PDA investment systems are unfairly persuasive at marketing and convincing individuals to invest, and guardrails are needed to eliminate these conflicts.

Public Citizen supports the SEC's proposed rule to eliminate or neutralize conflicts of interest because PDA technology can be unfairly persuasive at convincing investors to invest. Because of the advantage that its targeted marketing material can create, AI-driven PDA technologies may inadvertently or purposefully put the interests of its creators or users ahead of the interest of investors, violating investor brokers and analysts' fiduciary duty to their clients. It is already apparent that AI marketing is boosting firm revenues, raising concerns that AI marketing may be used to encourage excessive trading or undue risk taking. McKinsey has found that companies that are currently utilizing AI for marketing purposes are already seeing "a revenue uplift of 3 to 15 percent and a sales ROI uplift of 10 to 20 percent"⁴. These stats show how even early AI marketing strategies are succeeding in ways that may be troublesome, and should be seen by regulators as having the inherent potential to improperly advantage the securities industry.

⁴ Richelle Deveau, Sonia Joseph Griffin, and Steve Reis, *AI-powered marketing and sales reach new heights with generative AI*, MCKINSEY AND COMPANY (May 11, 2023) <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/ai-powered-marketing-and-sales-reach-new-heights-with-generative-ai>



Broadly speaking, PDA-like technologies introduce a range of possible conflicts of interest that may be especially difficult for investors to identify or mitigate – underscoring the need for rules requiring broker-dealers and investment advisors to take affirmative measures to prevent such conflicts. These sources of conflict include:

- The possibility of intentional incorporation of a firm's profit interests in investment advice and marketing material generated or delivered by AI and PDA-like technologies. This may include encouraging investors to take excessive risk, engage in more frequent trading, or make high-expense investments
- Overconfidence in advice based on claims that is generated by artificial intelligence
- The use of advanced, machine-driven marketing techniques, including individualized and customized marketing strategies
- Fooling investors into believing they are engaging with a human when in fact they are engaging with AI technologies
- Customized design elements that encourage excessive risk taking, higher volume trading or other investment strategies that may be contrary to investors' best interests

In addition, we are concerned that AI algorithms are a black box⁵, all but invisible from oversight. Simply put, consider the black box as being a secret recipe (or algorithm(s)) known only to the baker (technology company). Because the consumer or regulator can't currently see into the black box, there is often no practical way to know whether the AI has been designed to favor a broker or advisor over the customer, or whether it does so in practice. Public Citizen believes that a strict requirement to eliminate conflicts of interest appropriately places the burden on the investment firm/advisor, instead of the investor, to identify and root out conflicts.

B. The proposed technology scope in this proposal is necessary and proper

Public Citizen applauds the SEC for its covered technology definition. Especially, we support the part of the definition that covers: “design elements, features, or communications that nudge, prompt, cue, solicit, or influence investment-related behaviors or outcomes from investors”.⁶

⁵ Stephen Bush, *Beware the rise of the black box algorithm*, FINANCIAL TIMES (Sept. 20, 2022) <https://www.ft.com/content/3d5556c5-520e-497a-aa5e-2546c5bc50cf>

⁶ United States Securities and Exchange Commission, *Conflicts of Interest Associated With*



The communications, advertising, and user experience infrastructure that AI threatens to supercharge in the securities investing industry could lead many vulnerable investors to make dangerous investments and go beyond their internal risk appetites.

Gamification is one important example of this risk. According to Dr Zachary Fitz Walter: “Gamification is the application of game-design elements and game principles in non-game contexts”.⁷

One example of gamification is when Robinhood used to have confetti bursts in their apps when users accomplished a task for the first time, like when a user invested for the first time.⁸ A study found that these types of design elements, termed hedonic, lead to investors investing at a 5.17% increase.⁹ Additionally, investors who preferred these types of design elements traded 21.4% more than investors who didn’t like those displays.¹⁰ Furthermore, if investors that preferred hedonic design elements had low financial literacy, they traded in a “noisy” (impulsive or irrational) fashion.¹¹ These gamification experiences could lead to investors going beyond their intended investment goals to participate in stock trades or signing up for services that they did not need.

Recognizing this problem, Massachusetts Secretary of State Bill Galvin filed a complaint against Robinhood in 2020 under the state’s stricter fiduciary duty rule and accused the broker of gamifying their platform to promote risky investments from inexperienced investors.¹² He stated that: “The worst aspect of what [Robinhood] do clearly is the way they are gamifying the idea of investing”¹³. The complaint was filed because of Robinhood’s alleged “aggressive tactics to attract inexperienced investors, its use of

the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisors, FEDERAL REGISTER (Aug. 9, 2023) <https://www.govinfo.gov/content/pkg/FR-2023-08-09/pdf/2023-16377.pdf> at pg. 53972

⁷ Dr Zachary Fitz Walter, *What is Gamification?*, GAMIFY (n.d.) <https://www.gamify.com/what-is-gamification>

⁸ Maggie Fitzgerald, *Robinhood gets rid of confetti feature amid scrutiny over gamification of investing*, CNBC (March 31, 2021) <https://www.cnbc.com/2021/03/31/robinhood-gets-rid-of-confetti-feature-amid-scrutiny-over-gamification.html>

⁹ Philipp Chapkovski, Mariana Khapko, and Marius Zoican, *Trading Gamification and Investor Behavior*, SWEDISH HOUSE OF FINANCE RESEARCH PAPER NO. 21-25 (Oct. 2, 2023) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3971868 at pg. 4

¹⁰ Id.

¹¹ Id.

¹² Eric Platt and Madison Darbyshire, *Robinhood faces legal action over ‘gamification’ of investing*, FINANCIAL TIMES (Dec. 16, 2020) <https://www.ft.com/content/0e451231-fa4c-4686-bf2f-a5e107f337b9>

¹³ Maggie Fitzgerald, *Massachusetts Secretary of Commonwealth Galvin says Robinhood is a reckless company gamifying investing*, CNBC (Dec. 16, 2020) <https://www.cnbc.com/2020/12/16/massachusetts-sec-o-commonwealth-galvin-says-robinhood-is-a-reckless-company-gamifying-investing.html>



gamification strategies to manipulate customers, and its failure to prevent frequent outages and disruptions on its trading platform”¹⁴. The Massachusetts Supreme Court recently found in favor of Secretary of State Galvin’s application of his state’s strict fiduciary duty rule to Robinhood.¹⁵

We believe that the increasing AI-driven PDA technology integration in the securities investment industry will only make gamification design elements more effective in convincing investors to make bad decisions. The AI industry itself makes these claims. One such company says this about their AI products: “But gamification is just the first step. It increases user engagement tenfold, whilst growing brand awareness and loyalty, gathering insightful data, increasing conversion rates and educating the customer. Add AI to streamline these and you’ve suddenly got a product suite which is quicker and more efficient than ever”.¹⁶ While some of this positive framing for AI usage in marketing can be attributed to advertising puffery and salesmanship, AI will make gamification better at convincing customers, especially younger and low-financial literacy customers, to trade more frequently and make more risky choices than is in their best interest. AI-powered gamification in the securities investment industry risks disguising systemic conflicts of interest under the banner of “fun”, at great expense to a broad class of investors

Public Citizen supports the technological scope of the SEC’s proposed rule to combat these threats from gamification among other risks.

C. Guidelines for PDA investment products are needed because PDA investment technologies faces drift and data input issues

The securities investment industry is currently integrating PDA technology into its everyday business offerings to their clients. This includes the use of digital trading platforms, computer-generated advice, and various specialized applications. For example, JP Morgan is currently building a ChatGPT-like investment bot called

¹⁴ Id.

¹⁵ Lisa Fu, Robinhood Loses Bid to Block Massachusetts from Enforcing State Fiduciary Rule, AdvisorHub (Aug. 25, 2023) <https://www.advisorhub.com/robinhood-loses-bid-to-block-massachusetts-from-enforcing-state-fiduciary-rule/#:~:text=%E2%80%9CThis%20landmark%20decision%20affirms%20the,Galvin%20said%20in%20a%20statement.>

¹⁶ Laura Gumbrell, *The new era of AI: Taking your CRM to the next level with Smartico*, IGB (June 15, 2023) <https://igamingbusiness.com/marketing-affiliates/crm/the-new-era-of-ai-taking-your-crm-to-the-next-level-with-smartico/>



IndexGPT.¹⁷ Generative pre-training transformer (GPT) models are AI systems that generate answers to question prompts and are often used for their powerful predictive analytics capabilities. We believe that, because of their inherent flaws, AI-driven PDA models in the securities investment industry must be subjected to conflict-of-interest rules that require broker-dealers and investment advisers to test for and eliminate conflicts. Additionally, investment brokers' and/or advisors' AI-driven PDA models may ignore pertinent information in creating their products like stock analysis or risk assessments.

One major flaw inherent in AI-driven PDA models is the concept of model drift, or decay in the model's accuracy or predictive power. Recently, research has shown that ChatGPT now performs worse at solving certain basic math operations and answering medical questions than when it first came out.¹⁸ The reason for this drift is that PDA models are complex and full of interactions, and if the AI or its owners change just one or two parameters without extreme care, the PDA model might begin to produce false information. In addition, models may drift or decay because they create their own trading data or do not evolve to meet changing external circumstances. We presume that drift will also affect financial modeling. This type of AI-driven PDA model drift could cause PDA models to regularly produce investment analysis for their users that inadvertently benefits the interests of the broker/advisor over the investor.

Additionally, AI-driven PDA systems rely on human data inputs and guidelines for their analysis, and human filters can be inaccurate or contain a lack of due diligence/follow-up.¹⁹ If this tech fails on even an occasional basis due to human input error, like if a specific AI-driven PDA system lacked appropriate data representativeness (data from all necessary and proper sectors, not just from certain sectors) and relevant inputs from their owners²⁰, our financial system and individual consumers could see negative

¹⁷ Dan Ennis, *JPMorgan applies for patent on ChatGPT-like tech for investment advice*, BANKING DIVE (May 26, 2023) <https://www.bankingdive.com/news/jpmorgan-indexgpt-patent-application-investment-advice-chatgpt/651430/>

¹⁸ Josh Zumbrun, *Why ChatGPT Is Getting Dumber at Basic Math*, THE WALL STREET JOURNAL (Aug. 4, 2023) <https://www.wsj.com/articles/chatgpt-openai-math-artificial-intelligence-8aba83f0>

¹⁹ Philip Meissner and Christoph Keding, *The Human Factor in AI-Based Decision-Making*, MIT SLOAN MANAGEMENT REVIEW (Oct. 12, 2021) <https://sloanreview.mit.edu/article/the-human-factor-in-ai-based-decision-making/>

²⁰ Staff of Organization for Economic Co-operation and Development, *Artificial Intelligence, Machine Learning and Big Data in Finance: Opportunities, Challenges, and Implications for Policy Makers*, OCED (2021) <https://www.oecd.org/finance/financial-markets/Artificial-intelligence-machine-learning-big-data-in-finance.pdf> at pg. 37



effects. Similarly, designers/users of PDA models may implement data performance metrics into the PDA model that purposefully or inadvertently benefit the designer or user over the investor.²¹ This data input problem would be almost impossible for a consumer to detect and very difficult for regulators to identify absent new guardrails and affirmative duties imposed on investment firms/advisors, as the proposed rule would require.

For these reasons, Public Citizen supports the SEC's attempt to create guardrails for the application of PDA technology in the securities investment industry because of the drift and data input issues that these technologies contain.

Suggestion to improve this rule

To promote the interest of retail investors, we offer the following recommendation to improve the proposed rule:

- The SEC should require that any AI (partial or entirely) created product or solicitation/outreach for/to customers (e.g., AI stock analysis, AI callbots soliciting retail investors etc.) provided by broker/dealers and/or investment advisors should be clearly labeled and disclosed as AI created to their customers
 - The purpose of this proposed addition is to allow customers to see where the information is coming from for the purposes of information accuracy, decision to fact check if necessary, and proper notice of where the information is coming from in service of the fiduciary duty
 - We propose that the disclosure clearly state that AI was used to create the product, perhaps something like “This communication was generated by AI”. A disclosure about investment advice should add that AI guidance does not eliminate risk
 - Any label/watermark must also clearly state that AI was used to produce the product, and not just utilize a simple company logo watermark as seen here in a Messi [deepfake](#)²²

²¹ Laurent Dupont, Olivier Fliche, Su Yang, *Governance of Artificial Intelligence in Finance*, ACPR (June 12, 2020) https://acpr.banque-france.fr/sites/default/files/medias/documents/20200612_ai_governance_finance.pdf at pg.10

²² Ruairidh Barlow, *Watch: AI Generated Video Lionel Messi Answering Question In English Goes Viral*, FOOTBALL ESPANA (Sept. 12, 2023) <https://www.football-espana.net/2023/09/12/watch-ai-generated-video-lionel-messi-answering-question-in-english-goes-viral>



215 Pennsylvania Avenue, SE • Washington, D.C. 20003 • 202/546-4996 • www.citizen.org

We welcome the SEC's interest in this important area and look forward to working together to refine this proposal to better regulate AI-driven PDA use in the securities investment industry. For questions, please contact Bartlett Naylor at bnaylor@citizen.org or Richard Anthony at ranthony@citizen.org.

Sincerely,

Public Citizen