

REQUEST FOR COMMENT ON THE USE OF ARTIFICIAL INTELLIGENCE IN CFTC-REGULATED MARKETS

I. Introduction

Staff of the Commodity Futures Trading Commission (“Commission” or “CFTC”) is seeking public comment on the use of artificial intelligence (“AI”) in markets regulated by the Commission, as well as the implications of such use or adoption. Staff understands that entities regulated by the CFTC, including registered entities and registrants, (collectively “CFTC-regulated entities”)¹ and other market participants are increasingly exploring and using AI and related technologies. Staff recognizes that use of AI may lead to significant benefits in derivatives markets, but such use may also pose risks relating to market safety, customer protection, governance, data privacy, mitigation of bias, and cybersecurity, among other issues. The purpose of this request for public comment is to enable staff to assess the benefits and risks associated with the use of AI in CFTC-regulated markets, to inform staff’s supervisory oversight and to evaluate the need for any future guidance and rulemakings.

This request for public comment is part of a broader staff effort to monitor the adoption of AI, including machine learning, and other uses of automation in CFTC-regulated markets.² This request has also been prompted, in part, by AI-related guidance issued by the White House. In particular, on October 30, 2023, the White House issued an Executive Order (the “Executive Order”) encouraging federal agencies, such as the CFTC, to “consider using their full range of authorities to protect American consumers from fraud, discrimination and threats to privacy and to address other risks that may arise from the use of AI... ”³

In this request for comment, staff is specifically asking about AI use in CFTC-regulated markets, rather than broader questions about AI. This request uses the term “AI” in a manner consistent with the Executive Order to broadly refer to “a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments.”⁴ While this request for comment seeks responses relating to use cases consistent with this definition, the staff is also interested in better understanding concerns raised by the broader set of similar technologies within and beyond the scope of this definition of AI.

¹ For purposes of this request for comment, “registered entity” and “registrant” have the meanings specified in 17 C.F.R. 1.3, and “CFTC-regulated entity” includes swap execution facilities, designated contract markets, designated clearing organizations, swap dealers, commodity pool operators, introducing brokers, and other entities.

² See Rostin Behnam, Chair, CFTC, Address at 2023 U.S. Treasury Market Conference (November 16, 2023), available at [Keynote Speech of Chairman Behnam at 2023 US Treasury Market Conference](#)

³ Executive Office of the President, Executive Order on the Safe, Secure and Trustworthy Development and Use of Artificial Intelligence, Sec. 8a(a), Oct. 30, 2023. See also White House Office of Science and Technology Policy, Blueprint for an AI Bill of Rights, Oct. 2022 (providing guidance on the design, development, and deployment of artificial intelligence (AI) and other automated systems so that they protect the rights of the American public.)

⁴ Executive Order, Sec. 3(b).

Comments must be received on or before [90 days from publication] to be assured of consideration.

II. AI Use in CFTC-regulated markets

Finance is a data-driven enterprise.⁵ The ever-increasing availability of expansive datasets and computing power has fostered a technological shift that has transformed global markets. Prominent in these developments is the rapid evolution and deployment of AI in the financial sector.⁶ Coupled with financial technology (“fintech”), software and data will continue to power the growth of this transformation.⁷ Fintech was one of the top focus areas of AI investment in 2022.⁸ Across the globe, AI is transforming the financial services industry, as institutions rapidly deploy resources to develop and implement AI-based products.⁹ As AI drives transformation in the global markets, it has become relevant in the markets regulated by the CFTC.¹⁰

AI has the potential to offer improved efficiency, enhanced performance, and cost reduction for registrants, registered entities, customers, and other participants in CFTC-regulated markets. AI can identify relationships among variables, including text, that are not readily identified through more traditional techniques. Properly configured, AI can minimize errors,

⁵ See the Bank of England and the Financial Conduct Authority, *Artificial Intelligence Public-Private Forum Final Report*, p. 11 (Feb. 17, 2022) (providing overview of use of artificial intelligence in financial services) available at <https://www.bankofengland.co.uk/-/media/boe/files/fintech/ai-public-private-forum-final-report.pdf>.

⁶ See European Securities and Markets Authority, *Artificial Intelligence in EU Securities Markets*, p. 4 (Feb. 1, 2023) (describing potential transformative power of artificial intelligence and machine learning) available at https://www.esma.europa.eu/sites/default/files/library/ESMA50-164-6247-AI_in_securities_markets.pdf.

⁷ See, e.g., J. Christopher Giancarlo, Acting Chair, CFTC, Address at the New York Fintech Innovation Lab: LabCFTC: Engaging Innovators in Digital Financial Markets (May 17, 2017), available at <https://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo-23>. In 2017 remarks, Chairman Giancarlo noted that automated trading constituted up to 70 percent of regulated futures markets at that time. See also Testimony of Gary Gensler, Chair, SEC, before the H. Comm. on Financial Services, (April 18, 2023) (noting that, even in 2018, artificial intelligence and predictive analytics were transforming the economy, including finance, and citing examples), available at <https://www.sec.gov/news/testimony/gensler-testimony-house-financial-services-041823>.

⁸ See AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, *Artificial Intelligence Index 2023 Annual Report*, p. 171, available at https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf.

⁹ See Financial Industry Regulatory Authority, *Artificial Intelligence in the Securities Industry* (June 10, 2020) available at <https://www.finra.org/rules-guidance/key-topics/fintech/report/artificial-intelligence-in-the-securities-industry>. The report notes that artificial intelligence use is “proliferating” in the securities industry, where firms have both built centers of expertise and explored tools developed by financial technology startups.

¹⁰ See Kirsten Hyde, *Generative AI Gaining Traction in Derivatives Markets* (Oct. 4, 2023) (summarizing participant comments at October 2, 2023 Futures Industry Association expo regarding generative AI tools and models), available at <https://www.fia.org/marketvoice/articles/generative-ai-gaining-traction-derivatives-markets>. See also Christy Goldsmith Romero, Commissioner, CFTC, Opening Statement at the CFTC Technology Advisory Committee on DeFi, Responsible Artificial Intelligence, Cloud Technology & Cyber Resilience (March 22, 2023) (noting that artificial intelligence being increasingly employed by exchanges and financial institutions), available at <https://www.cftc.gov/PressRoom/SpeechesTestimony/romerostatement032223>.

reduce transaction times, and remove unnecessary manual processes. AI can take many forms, including “generative AI”, which has become widely known for building content.¹¹

Algorithms and other advanced programming have long been employed in financial services, and such applications have evolved to incorporate AI.¹² While it may be difficult to draw a precise boundary between algorithms and AI, it is evident that use of AI has already gained a significant foothold in financial services, including derivatives markets. As early as 2017, AI was used for trading.¹³ A recent publication by the International Organization of Securities Commissions (“IOSCO”) found that market intermediaries are deploying AI and machine learning for uses including advisory and support services, client identification and monitoring (including compliance with know-your-customer obligations), and risk management.¹⁴ Generative AI can be used to leverage market analysis, supplement human analysis, and mitigate investment risk by designing and implementing hedging strategies.¹⁵ One author has described how AI expressed through “chatbots” could be trained to perform sentiment analysis.¹⁶ Elsewhere, another author has reported how ChatGPT may serve as a financial

¹¹ See, for example, IBM Data and AI Team, *Understanding the Different Types of Artificial Intelligence* (Oct. 12, 2023), available at: <https://www.ibm.com/blog/understanding-the-different-types-of-artificial-intelligence/> (walking through various types of artificial intelligence); Generative AI, by GAO, June 2023, available at: <https://www.gao.gov/assets/830/826491.pdf>. (defining generative artificial intelligence).

¹² See Commissioner Kristin Johnson, *Artificial Intelligence and the Future of Financial Markets*, Manuel F. Cohen Lecture, George Washington University Law School (Oct. 17, 2023) (describing the historic development and integration of increasingly complex algorithms including supervised and unsupervised machine learning algorithms in financial markets).

¹³ See Financial Stability Board, *Artificial Intelligence and Machine Learning in Financial Services*, p. 18-19 (Nov. 1, 2017) (examining AI trading use cases, and citing an estimate that “pure” AI and machine learning participants have about \$10 billion in assets under management), available at <https://www.fsb.org/wp-content/uploads/P011117.pdf>. See also Statement of Commissioner Caroline D. Pham on Risk Management Program for Swap Dealers and Futures Commission Merchants Advance Notice of Proposed Rulemaking (June 1, 2023), <https://www.cftc.gov/PressRoom/SpeechesTestimony/phamstatement060123>.

¹⁴ See Board of the International Organization of Securities Commissions, *The Use of Artificial Intelligence and Machine Learning by Market Intermediaries and Asset Managers, Final Report*, p. 6-8 (Sept. 2021) (cataloguing uses of artificial intelligence and machine learning by firms), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf>.

¹⁵ See Deloitte AI Institute, *The Generative AI Dossier*, p. 71 (describing uses of generative AI in trading), available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consulting/us-ai-institute-gen-ai-use-cases.pdf>.

¹⁶ See Lance Eliot, *Profitably Using Generative AI ChatGPT as Your Stock Trading Advisor, Albeit With AI Ethics Cautionary Caveats in Mind*, *Forbes* (May 3, 2023), available at <https://www.forbes.com/sites/lanceeliot/2023/05/03/profitably-using-generative-ai-chatgpt-as-your-stock-trading-advisor-albeit-with-ai-ethics-cautionary-caveats-in-mind/?sh=360798981a0c>. See also Schlomo Benartzi, *Can AI Replace Your Financial Advisor? Not Yet. But Wait.*, *Wall Street Journal* (Oct. 29, 2023), available at <https://www.wsj.com/tech/ai/ai-financial-advisers-chatgpt-7f0cac60>.

advisor.¹⁷ In addition to trading, AI may be used to augment compliance functions.¹⁸ These functions include surveillance, anti-money laundering, and regulatory reporting.¹⁹

The applications for AI in derivatives markets are evolving as rapidly as technology and availability of data and skilled personnel can drive their use in the market. This technology has the ability to impact all aspects of business in derivatives markets in ways both currently understood, and yet to be imagined. This request for comment is an important step by which staff seeks to better understand the current and potential uses of AI in the context of the CFTC's mission. Under the Commodity Exchange Act, that mission includes promoting responsible innovation while also protecting market participants and ensuring the financial integrity of transactions subject to the Act.²⁰

Questions:

Questions 1 through 8, below, address current and potential uses of AI by CFTC-regulated entities. To the extent practicable, please indicate the significance of the role, or business organizational form, of CFTC-regulated entities (for example, a derivatives clearing organization, futures commission merchant, swap dealer, swap execution facility, or designated contract market) or other derivatives market participant.

1. **Question 1. Scope.** Is the definition of AI in the Executive Order²¹, as described in the preamble above, appropriate for CFTC-regulated entities and markets? Would defining AI more broadly or adopting a more narrowly tailored definition of AI be necessary for guidance or proposed rules applied to CFTC-regulated markets? Do market participants draw a line between trading based on AI and other automated trading currently in use? If so, where is or should the line be drawn? What criteria should be used to differentiate between AI and other forms of automated trading?
2. **Question 2. General Uses.** A variety of enterprises, activities, and regulatory responsibilities of CFTC-regulated entities are shaped by software and data and, as such, may be impacted by the use of AI. Are there ways in which AI is currently being used by CFTC-regulated entities or by other persons for activities within the scope of the CFTC's jurisdiction? Activities of interest include, but are not limited to, the following:

¹⁷ See Benartzi at note 14.

¹⁸ See Statement of Kevin Greenfield, Deputy Comptroller for Operational Risk Policy, OCC, before the H. Comm. on Financial Services Task Force on Artificial Intelligence, p. 4-5 (May 13, 2022) (discussing use of innovative technologies for "RegTech" (regulatory compliance)), available at <https://occ.gov/news-issuances/congressional-testimony/2022/ct-occ-2022-52-written.pdf>.

¹⁹ See LabCFTC, CFTC, *A Primer on Artificial Intelligence in Financial Markets*, p. 13, available at https://www.cftc.gov/media/2846/LabCFTC_PrimerArtificialIntelligence102119/download.

²⁰ Commodity Exchange Act, Sec. 3. 7 U.S.C. Sec. 5.

²¹ The Executive Order defines AI as "a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments." Executive Order, Sec. 3(b).

- a. Trading.
In addition to market intelligence, analytics, data processing, and risk evaluation, is AI being used to design strategies or make decisions related to specific trades (directional, hedging or speculative)? How much autonomy is given to AI to identify a trade and place it in the market, with or without human supervision? Is AI being used to mitigate human error in the trading process, or to otherwise “quality control” or validate trading? How does this differ from traditional trading algorithms? How often are AI-driven trading strategies updated? Is use of AI more prevalent for the trading of certain products or markets or by certain types of entities? If so, why? What are the measures for evaluating success when using AI?
- b. Data Processing and Analytics. What data processing and analytic tasks have been supported by AI? To what extent do AI-driven analytics inform or supplant human action? Have training and use protocols been developed and/or applied in conjunction with the application of AI analytics? How is AI used to monitor for anomalies or issues with data quality? If analytical errors are discovered, what steps are taken to evaluate and cure those errors? What monitoring is in place to identify data processing errors made by an AI-based system?
- c. Risk Management. Is AI used to monitor or evaluate margin, capital, risk tolerances, credit, or position limits? If so, please explain how AI is being used in risk management. In addition to monitoring, has AI been integrated into mechanisms to enforce compliance with margin, capital, or risk limits? Again, if yes, please explain how. Are AI programmers aware/taking steps to evaluate and mitigate harmful AI to AI interactions? In what other ways is AI being used as a part of risk management efforts?
- d. Compliance. How is AI being used in compliance? Compliance is broadly interpreted here and includes, but is not limited to, know-your-customer (KYC customer validation), anti-money laundering, anti-fraud, trade documentation and regulatory reporting. Are CFTC-regulated entities using AI to comply with specific CFTC requirements, such as in the context of swap dealer business conduct standards? An additional and important subset of compliance is surveillance, which would include identifying market manipulation, including, but not limited to, spoofing, wash trades, and “marking-the-close” trading. For self-regulatory organizations (“SROs”), please explain any ways in which AI is being adopted as a part of surveillance and oversight of members.
- e. Books and records. CFTC-regulated entities are required to maintain in a readily producible fashion a variety of records, including trade histories, audio recordings, and digital communications. Is AI being used to organize, validate or search required records? Is AI being used to proactively search for risks in records and recordings? Alternatively, is AI being used to search for gaps in records or broken records for compliance or other purposes?

- f. Systems development. AI-based tools are being increasingly used by software developers to enhance productivity, particularly for manual and repetitive tasks. Is AI being used by software developers in CFTC-regulated markets to assist in the development of internal applications and services? Is AI being used to assist in quality assurance?
 - g. Cybersecurity and resilience. How, if at all, is AI being used to assess the cyber vulnerabilities of systems or data? To the extent that firms have outsourced activities or data management to third party service providers, has AI been employed to evaluate the cybersecurity and resilience of these systems as well?
 - h. Customer interactions. Potential uses for AI with respect to customer service could include chatbots and digital assistants, data mining for purposes of marketing or advice, and monitoring for risk. How is AI being used to communicate with existing and potential customers? Are customers informed when AI has been used to generate answers, advice, or other communications? Does AI serve as the basis for customer engagement or interactions? Do AI-powered chat bots provide a way to opt out and connect with a human? Are preprogrammed automated advisors being developed or used in CFTC-regulated markets? What feedback have customers provided regarding the quality of AI-based customer service interactions?
3. **Question 3. Potential uses of AI.** The above question considers active uses of AI in conjunction with a variety of activities. This question addresses the potential of AI. Even if AI is not currently used or used widely to accomplish the activities described by question 2, above, do you envision that firms or individuals will likely implement AI, including generative AI, to accomplish these activities in the near future?
 4. **Question 4. AI and geography.** To the extent that AI is used, is AI application within a firm segmented based on the location of the facility or customer?
 5. **Question 5. AI roadblocks.** Are there barriers or obstacles impeding the acquisition, application, or use of AI suitable for accomplishing the activities described in question 2? Are the barriers generic (cost, lack of sufficient pool of workers skilled in AI application, concerns about utility, etc.) or are they specific to any of the activities? How do these barriers vary across different types of firms? To what extent is regulatory clarity a concern or impediment to AI implementation?
 6. **Question 6. AI and third-party service providers.** To what extent are third-party service providers relied upon for the provision of AI services that support the uses described in question 2, above? To the extent that AI supports the activities described in question 2, which of them tend to be performed by in-house staff rather than third-party service providers, and why? Are AI technologies being developed within CFTC-

regulated entities as proprietary technology? If not, are CFTC-regulated entities acquiring technologies from third-party service providers? What specific third-party AI-based software are participants in CFTC-regulated markets adopting? What challenges may CFTC-regulated entities face when attempting to manage, update, or deconstruct the decisions or analysis made by third-party created software or technology?

7. **Question 7. Governance of AI Uses.** How are firms tracking the uses being made of AI, both by in-house operations and by third-party service providers relied upon by firms? How is accountability for AI use assigned? Is the use of AI audited for accuracy and safety? How frequently are AI systems updated?
8. **Question 8. Additional AI uses.** To the extent not already discussed, please identify any additional current or prospective uses of AI in CFTC-regulated markets or by CFTC-regulated entities.

III. AI Risks in CFTC-regulated markets

The predictions, recommendations or decisions made by AI may create or heighten risks that vary based on the specific application of AI.²² If not properly managed, these risks may cause significant harms. For example, use of AI in trading applications may contribute to inappropriate trading behavior or market disruptions,²³ AI-based customer interactions may lead to unintended biases and deceptive or misleading communications,²⁴ and when used for any critical business process, AI may exacerbate risks to operational resiliency.²⁵

While AI may present unique challenges to CFTC-regulated entities' ability to identify and manage certain risks, not all of the potential risks associated with the use of AI in Commission-regulated markets are unique to AI. For example, Commission-regulated entities currently manage numerous risks to their operational resiliency, to their compliance with consumer protection laws and regulations, and to their trading programs. The types of potential risks can appear similar because AI, like other technologies, processes, tools or models, does not

²² See Board of the International Organization of Securities Commissions, *The Use of Artificial Intelligence and Machine Learning by Market Intermediaries and Asset Managers, Final Report*, p. 9-13 (Sept. 2021) (cataloguing identified potential risks and harms posed by use of artificial intelligence and machine learning by firms), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf>.

²³ See Financial Stability Board, *Artificial Intelligence and Machine Learning in Financial Services*, p. 32-34 (Nov. 1, 2017) (noting the potential implications for financial stability stemming from multiple firms using AI and machine learning to develop trading strategies), available at <https://www.fsb.org/wp-content/uploads/P011117.pdf>.

²⁴ See National Institute of Science and Technology, *Special Publication 1270 - Towards a Standard for Identifying and Managing Bias in Artificial Intelligence* (Mar. 2022), at section 3.1 (describing dataset challenges resulting in AI bias and discrimination), available at <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1270.pdf>

²⁵ See Financial Stability Board, *Artificial Intelligence and Machine Learning in Financial Services*, p. 25-27 (Nov. 1, 2017) (noting the possible effects of AI and machine learning on financial institutions, including the potential for operational disruptions due to the reliance on AI technological developers and service providers), available at <https://www.fsb.org/wp-content/uploads/P011117.pdf>.

change the underlying activity for which it is being used but the manner in which the activity is being conducted.²⁶

The complexity and autonomy of some AI, deployed in a context of ever-increasing datasets and computing power, also presents unique challenges to CFTC-regulated entities in identifying and managing risks. Some of these unique challenges may relate to the explainability of results produced by AI.²⁷ Use of an AI model may introduce risks if the predictions, recommendations or decisions made by the AI model cannot be fully explainable. The Executive Order highlights many concerns and potential harms related to such risks.²⁸

Questions

Questions 9 through 18, below, address concerns regarding the use of AI in CFTC-regulated markets and by CFTC-regulated entities. To the extent practicable, please indicate the significance of the role, or business organizational form, of CFTC-regulated entities (for example, a derivatives clearing organization, futures commission merchant, swap dealer, swap execution facility, or designated contract market) or other derivatives market participant.

- 9. Question 9. Governance.** Given the unique challenges²⁹ associated with identifying and managing AI risks, concerns have been raised regarding firms' ability to manage such challenges through existing governance processes.³⁰

Have CFTC-regulated entities modified their governance structures to specifically address AI? If so, how? Do these changes include having designated senior management responsible for the oversight of the development, testing, deployment, monitoring, and controls of AI? Do structures appoint a human to be "in the loop" to prevent cascading failures driven by AI? Is any particular AI-specific risk management framework, such as that published by NIST³¹, being used to guide such changes? In the event that the AI tool is procured or operated by a third-party, what additional challenges to governance have

²⁶ See Board of Governors of the Federal Reserve System, Bureau of Consumer Financial Protection, Federal Deposit Insurance Corporation, National Credit Union Administration, and Office of the Comptroller of the Currency, *Request for Information and Comment on Financial Institutions' Use of Artificial Intelligence, Including Machine Learning* (Mar. 2021), 86 FR 16837 at 16839 (describing potential risks of AI and how many of the potential risks associated with using AI are not unique to AI).

²⁷ See *Id.* at 16840 (describing how a lack of explainability can pose different challenges in different contexts, including an increase in uncertainty and increased risk).

²⁸ See Executive Order, Sec. 8(a)

²⁹ See National Institute of Standards and Technology, *Artificial Intelligence Risk Management Framework*, p. 38-39 (Jan. 2023) (enumerating how risks associated with AI differ from traditional software risks) available at <https://nvlpubs.nist.gov/nistpubs/ai/NIST.AI.100-1.pdf>.

³⁰ See Board of the International Organization of Securities Commissions, *The Use of Artificial Intelligence and Machine Learning by Market Intermediaries and Asset Managers, Final Report*, p. 17-18 (Sept. 2021) (explaining that the emerging challenges presented by AI require governance changes, including "the involvement of an appropriately senior individual (or groups of individuals) with the relevant and current skill set and knowledge is accountable for oversight of the firm's use of AI."), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf>.

³¹ National Institute of Standards and Technology, *Artificial Intelligence Risk Management Framework* (Jan. 2023), available at <https://nvlpubs.nist.gov/nistpubs/ai/NIST.AI.100-1.pdf>.

been identified, and are they capable of being fully addressed through in-house governance measures?

10. Question 10. Cybersecurity. Do market participants identify AI as a source of cybersecurity vulnerability? Are there difficulties with or concerns over employing AI to probe, scan, or repair digital systems? How have market participants modified governance structures and risk management frameworks to account for cybersecurity and system safeguard risks driven by AI? Have firms implemented measures to defend against these threats? What obstacles have impeded the implementation of defenses to AI-based threats? What unique cybersecurity issues arise from the use of AI technologies created and licensed by third-parties?

11. Question 11. Explainability and transparency.

How do CFTC-regulated entities manage the lack of explainability associated with some AI models? Are there certain AI applications where explainability is more of an issue or concern? Is lack of explainability more likely to be associated with AI procured from a third party? Does procurement of AI from a third party impact the ability to manage the lack of explainability? If SROs are using AI to oversee members, are there particular issues concerning explainability in the context of investigations and enforcement actions?

If firms are using AI models to determine obligations or requirements for other parties, such as margin requirements, are there AI-specific transparency issues? Describe any potential transparency concerns that may arise as a result of SROs adopting AI technologies as part of their market oversight responsibilities.

12. Question 12. Data quality.

Does the initial or ongoing quality of data sets used by AI raise concerns? How have data processes changed to address different quality needs associated with AI? What controls are in place to ensure that the data used by AI is of sufficient quality and based on a sufficiently sized data set? Do controls differ depending upon whether the data is procured from a third party?

What procedures are being used to select the training data for AI systems used by CFTC-registered entities? What procedures are being used to clean and partition training data for AI systems used by CFTC-regulated entities?

13. Question 13. Market Manipulation and Fraud

Bad actors are increasingly able to use AI to engage in more sophisticated forms of fraud and illegal conduct.³² Does the proliferation of AI present increased risks of

³² See, Testimony of Daniel Gorfine, former Chief Innovation Officer at the CFTC, before the S. Comm. on Banking, Housing and Urban Affairs, p. 5-6 (Sept. 20, 2023) (discussing use of AI and other advanced technology to engage in more sophisticated forms of fraud and illegal conduct, including through voice cloning), available at https://www.banking.senate.gov/imo/media/doc/gorfine_testimony_9-20-23.pdf

manipulation, fraud, or other illicit activity in the markets overseen by the Commission? Why or why not? How have governance structures addressed this risk? What, if any, policies should be considered, in addition to existing rules, to address potential increases in illegal conduct as a result of the use of AI? Please also specifically comment on whether the adoption of AI may impede enforcement of antifraud and market manipulation regulations.

For firms that integrate AI into trading decision-making, describe the policies and practices adopted to prevent the use of AI-driven strategies in schemes designed to manipulate the market.

Describe efforts to use AI-based market supervisory technologies to detect market manipulation or fraud.

14. Question 14. Concentration.

Are components of AI models currently procured from a concentrated number of firms? If so, which types of provider markets are concentrated and to what extent? What risks exist if the key inputs to AI models are, or become, concentrated? Does the concentration of cloud providers result in concentrations of AI services? Do the features of certain AI systems cause vendor lock-in (i.e., certain cloud providers may provide certain AI skills only available on that cloud provider)?

15. Question 15. Bias.

What controls are currently used to ensure that the data used in AI is of sufficient quantity and quality to prevent unlawful discrimination and bias while also being sufficiently broad for a reliable application of AI? How are biases that are reflected in historical data identified and addressed? How are biases identified in the algorithms, and mitigated or removed to minimize biased outcomes? Are biases in stress test scenarios and risk management getting into risk management systems through use of AI?

Are the datasets used for developing AI sufficiently diverse and inclusive, and capable of recognizing a variety of languages and language uses, so that the engagement occurs in a non-discriminatory manner? Are the AI tools compliant with Sec. 508 of the Rehabilitation Act?³³

What uses of AI in CFTC-regulated markets present the greatest risk of bias?

16. Question 16. Customer protection.

What controls and governance structures are currently used by CFTC-regulated entities to ensure that AI does not place their interests ahead of customer interests? Does the use

³³ 29 USC Sec. 794d.

of AI increase the risk of such conflict of interest?³⁴ What are the areas of customer protection that will become increasingly more relevant with the wide-spread adoption of AI (e.g., disclosure, risk management)?

17. Question 17. Privacy and confidentiality

Is the advancement of AI in CFTC-regulated markets resulting in greater risks to individual privacy rights? Why or why not? What steps are being taken to mitigate privacy and confidentiality risks? Are privacy-enhancing technologies³⁵ currently being used?

What protections are CFTC-regulated entities adopting to ensure the confidentiality of proprietary data used in AI?

18. Question 18. Third-party service providers

Are there any risks specifically associated with using AI technologies created by third party providers? What efforts are users of third-party AI technology taking to understand and mitigate these risks? What due diligence procedures are in place to evaluate the risks posed by third-party providers prior to adopting third-party AI technologies?

What disclosures should be required regarding a firm's use of third-party providers for AI services?

19. Question 19. Risks to competition

Does the use of AI and its potential to create large economies of scale present the potential to harm competition among market participants? Please specifically address any market functions that are at the greatest risk of seeing harm to competition through the increased adoption of AI.

20. Question 20. Other risks

Are there AI risks to CFTC-regulated markets that may arise now or in the future that are not addressed by the questions above?

IV. Conclusion

Staff of the Commission is seeking public feedback on all aspects of current or potential future uses, benefits, and risk of AI by CFTC-regulated entities and other derivative market participants. Staff is interested in responses to the questions posed above as well as any other

³⁴ See, Securities and Exchange Commission, *Conflicts of Interest Associated With the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers*, 88 Fed. Reg. 53960 at 53961 (Aug. 9, 2023) (explaining how “the scalability of these technologies and the potential for firms to reach a broad audience at a rapid speed [allows] any resulting conflicts of interest ... [to potentially] cause harm to investors in a more pronounced fashion and on a broader scale than previously possible.”)

³⁵ As defined in the Executive Order at Sec. 3.

relevant aspects of AI that would be helpful to its understanding of how AI may impact the derivatives markets in the near-term and long-term. Staff may use this information in analyzing potential future Commission actions including, but not limited to, the issuance of new or amended guidance, interpretations, policy statements, or regulations, or other potential Commission action. Staff welcomes any relevant comments, including on related topics that may not be specifically mentioned but that a commenter believes should be considered.