

**MINUTES OF THE MAY 2, 2024, MEETING OF THE  
U.S. COMMODITY FUTURES TRADING COMMISSION'S  
TECHNOLOGY ADVISORY COMMITTEE**

The Technology Advisory Committee (“TAC”) convened for a public meeting on Thursday, May 2, 2024, at 1:06 p.m., at the U.S. Commodity Futures Trading Commission's (“CFTC” or “Commission”) Headquarters Conference Center, located at Three Lafayette Centre, 1155 21st Street, N.W., Washington, D.C. The meeting consisted of five presentations. The topics of the presentations were: (1) The Federal Reserve (“Fed”) and Artificial Intelligence (“AI”); Advancing Responsible Innovation; (2) Takeaways from Market Automation and Issues to Watch; (3) National Institute of Standards and Technology (“NIST”) AI Risk Management Framework; (4) Presentation Regarding U.S. Treasury (“Treasury”) Department’s Cybersecurity Report on AI in the Financial Sector; and (5) Discussion and Consideration of the Emerging and Evolving Technologies Subcommittee Report (“Subcommittee Report”) Regarding Responsible AI in Financial Markets.

TAC Members in Attendance

Carole House, Executive in Residence, Terranet Ventures Inc., TAC Chair  
Ari Redbord, Head of Legal and Government Affairs, TRM Labs, TAC Vice Chair  
Nikos Andrikogiannopoulos, Founder and Chief Executive Officer, Metrika  
Dan Awrey, Professor of Law, Cornell Law School  
Christian Catalini, Co-Founder & Chief Strategy Officer, Lightspark  
Todd Conklin, Chief AI Officer and Deputy Assistant Secretary of the Treasury for Office of Cybersecurity and Critical Infrastructure Protection  
Jonah Crane, Klaros Group, Partner  
Sunil Cutinho, Chief Information Officer, CME Group  
Cantrell Dumas, Director, Derivatives Policy, Better Markets, Inc.  
Timothy Gallagher, Managing Director, Digital Investigations & Cyber Defense and Chief Security Officer, Nardello & Co.  
Michael Greenwald, Global Lead, Digital Assets and Financial Innovation, Amazon Web Services  
Stanley Guzik, Chief Technology & Innovation Officer, S&P Dow Jones Indices  
Jennifer Ilkiw, President, Ice Futures U.S.  
Ben Milne, Founder & CEO, Brale  
Francesca Rossi, IBM Fellow and AI Ethics Global Leader, IBM  
Emin Gun Sirer, Founder and Chief Executive Officer, Ava Labs  
Justin Slaughter, Policy Director, Paradigm  
Todd Smith, Director of Centralized Data Science and Analytics, National Futures Association  
Steve Suppan, Senior Policy Analyst, Institute for Agriculture & Trade Policy  
Corey Then, Vice President of Global Policy, Circle  
Nicol Turner Lee, Senior Fellow, Governance Studies and Director, Center for Technology Innovation, The Brookings Institution  
Michael Wellman, Professor of Computer Science & Engineering, University of Michigan  
Adam Zarazinski, Chief Executive Officer, Inca Digital

### CFTC Commissioners and Staff in Attendance

Christy Goldsmith Romero, TAC Sponsor and Commissioner

Summer K. Mersinger, Commissioner

Caroline D. Pham, Commissioner

Scott Lee, Senior Counsel to Commissioner Goldsmith Romero

Anthony Biagioli, Special Counsel to the Director to the Division of Enforcement, Designated Federal Officer

### Invited Speakers in Attendance

Elham Tabassi, Associate Director for Emerging Technologies, Information Technology Laboratory and Chief AI Advisor, National Institute of Standards and Technology

Sunayna Tuteja, Chief Innovation Officer, Federal Reserve Board

Kirsten Wegner, Chief Executive Officer, Modern Markets Initiative

## **I. Opening Remarks**

Mr. Biagioli called the meeting to order at 1:06 p.m. and introduced the Commissioners in attendance.

Commissioner Goldsmith Romero, the TAC's Sponsor, delivered opening remarks. She welcomed all the attendees to AI Day. She recognized the chairs and others who helped organize the event. She stated that the focus of AI Day was to understand the evolving impact of AI on financial markets, particularly the opportunities and risks associated with generative AI. She emphasized the importance of responsible AI, which encompasses fairness, transparency, explainability, safety, and security.

Commissioner Goldsmith Romero then gave an overview of the agenda of the day. She stressed the importance of safeguarding U.S. financial markets to maintain global trust and leadership. She stated that the TAC had been examining how AI might impact market integrity, and that the committee's report on responsible AI in financial markets would be a key focus of the discussions. She concluded by recognizing all the contributions of the TAC members.

Commissioner Mersinger followed with prerecorded opening remarks. She praised Commissioner Goldsmith Romero and the TAC for their leadership in exploring AI. She discussed the opportunities and risks brought by new technologies. She suggested that the CFTC should have a technology-neutral approach, focusing on regulatory outcomes rather than regulating specific technologies to avoid overreach and ensure adaptability with evolving innovations.

Commissioner Pham also provided prerecorded opening remarks. She commended the TAC for its leadership on AI, highlighting the role of AI in the financial sector over the years, especially in automation and efficiency. She emphasized the importance of risk management frameworks, including model risk management, to govern AI deployment in trading and markets. She also stressed the importance of understanding AI's potential risks and opportunities to ensure proper oversight and market integrity, while fostering innovation.

Mr. Biagioli conducted a roll call of members participating virtually and introduced the Chair of TAC, Ms. House. Chair House then introduced the first panelist, Ms. Tuteja.

## **II. Presentation 1 - The Federal Reserve and AI: Advancing Responsible Innovation**

Ms. Tuteja discussed the Fed's approach to exploring and experimenting with generative AI. She emphasized the importance of balancing excitement about AI's potential with its risks and perils.

Ms. Tuteja introduced the Fed's framework for responsible innovation which is centered around four key principles: education, enablement, experimentation, and execution. First, everyone at the Federal Reserve is educated about AI's capabilities and risks through immersive sessions and industry roundtables. Second, all staff are provided access to generative AI technologies in a controlled environment for a hands-on experience. Third, staff run experiments to validate whether AI technologies are viable, scalable, secure, and desirable for solving specific problems. Fourth, staff has started to think about how successful AI solutions could be implemented and scaled.

Ms. Tuteja also described how the Fed is exploring key AI use cases through the "five C's" framework of concision, content creation, code transformation, customer engagement, and catalyzing operational efficiencies. She emphasized that AI should be seen as a copilot rather than an autonomous operator. The Fed's focus remains on experimentation and learning, with a cautious approach to scaling AI. She concluded by emphasizing the importance of a thoughtful and balanced approach to AI development, where experimentation, education, and cross-disciplinary collaboration are key.

Chair House thanked Ms. Tuteja and opened the floor for member discussion. The comments and discussion focused on issues related to the challenges and strategies involved in integrating innovative technologies, discussing the capabilities of Launchpad (a platform for experimentation), addressing the issue of algorithmic and data bias through cross-functional collaboration, and addressing the chaos and innovation created by AI through a collaborative and open approach to innovation.

## **III. Presentation 2 – Takeaways from Market Automation and Issues to Watch**

Vice Chair Redbord then introduced the next panelist, Ms. Wegner. Ms. Wegner discussed the rapid advancements in algorithmic trading and artificial intelligence. She highlighted the exponential rate of technological change, emphasizing that AI's growth has outpaced predictions. She underscored the importance of fostering responsible innovation to ensure the benefits of AI are protected (such as reduced trading costs and improved efficiency), while addressing concerns around data privacy, algorithmic bias and market fairness.

Ms. Wegner stressed that AI should be viewed as a tool to assist humans, rather than replace them entirely, and highlighted the need for clear definitions of AI and its various subcategories. She also discussed the importance of collaboration between industry players and regulators to create effective policies. She touched on the ongoing "data gold rush," which raises questions

about data ownership and access and the necessity of a federal data privacy framework to guide AI policy. Finally, Ms. Wegner discussed key policy questions related to data privacy, consumer rights, and AI regulation at both the federal and state levels.

Vice Chair Redbord thanked Ms. Wegner and opened the floor for member discussion. The comments and discussion focused on issues related to decentralized finance and blockchain synergies, the impact of consumer rights to delete or opt out of data collection, the ethical and practical aspects of monetizing data, and the impact of General Data Protection Regulation in Europe and how American companies are adopting European privacy laws that could put them at risk, and the future of privacy and data.

### **III. Presentation 3 – NIST AI Risk Management Framework**

Vice Chair Redbord introduced the next panelist, Ms. Tabassi. Ms. Tabassi outlined NIST’s work on AI risk management, specifically the AI Risk Management Framework. She stated that it was a voluntary framework designed to help organizations manage AI risks. Some core components of this framework include a shared understanding of AI terms, seven trustworthy attributes (validity, safety, security, explainability, fairness, privacy protection, and transparency), a risk-based approach, practical guidance under four functions (map, measure, manage, govern), collaborating with experts from various fields, and aligning with international standards and efforts. She stated that NIST was in the process of releasing new documents (including a draft executive order) addressing generative AI risks. Overall, she stated that NIST aimed to create a flexible, risk-based framework for managing AI’s risks and trustworthiness and encouraging a culture of proactive risk management rather than simply responding to harms.

Vice Chair Redbord thanked Ms. Tabassi and opened the floor for member discussion. The comments and discussion focused on issues related to AI risk management, AI transparency and explainability, the evolution of AI, the environmental impact of AI, and the need for continued collaboration between industry and regulators.

### **IV. Presentation 4 – Presentation Regarding U.S. Treasury Department’s Cybersecurity Report on AI in the Financial Sector**

Chair House introduced the next panelist. Mr. Conklin presented on the Treasury’s recent report, “Managing Artificial Intelligence: Specific Cybersecurity Risks in the Financial Services Sector.” The Treasury report was developed following forty-two interviews with a range of stakeholders in the financial sector. The Treasury collaborated with federal regulatory agencies to assess how AI was being used in the financial sector, emphasizing the integration of AI into existing risk management frameworks. He noted that financial institutions are cautious about adopting generative AI. He also highlighted gaps in data sharing and noted that smaller firms struggle due to the lack of data for AI development. Finally, he suggested some best practices for managing AI cybersecurity risks, such as integrating AI into enterprise risk management, developing AI-specific frameworks, and evolving the role of Chief Data Officers to address data supply chain issues.

Chair House thanked Mr. Conklin and opened the floor for member discussion. The comments and discussion focused on issues related to international collaboration, how advancements in technology such as AI can exacerbate the disparities between large and small financial institutions, and concerns regarding AI enabled fraud in financial institutions and the need for strong security measures.

[Break]

## **V. Presentation 5 – Discussion and Consideration of the Emerging and Evolving Technologies Subcommittee Report (“Subcommittee Report”) Regarding Responsible AI in Financial Markets**

Mr. Biagioli reconvened the meeting and turned it back over to Chair House who introduced the final panelists for the day. Dr. Lee and Mr. Smith thanked the Commissioners for their leadership and all those who supported the work of the committee.

Dr. Lee then discussed the Subcommittee Report. She stated that the Subcommittee Report presented a comprehensive overview of the challenges and objectives related to AI adoption within the context of CFTC-regulated entities. Key objectives included offering a comprehensive overview of AI adoption among CFTC-registered entities, defining responsible AI governance, and understanding the regulatory landscape globally. The Subcommittee Report addressed the flexible, evolving nature of AI terminology and the need to make these terms applicable to both the entities that the CFTC oversees and the broader financial ecosystem. The Subcommittee Report explored AI applications through real and hypothetical use cases. Additionally, the Subcommittee Report focused on responsible AI, emphasizing fairness, robustness, transparency, explainability, and privacy. In closing, Dr. Lee emphasized the Subcommittee Report was designed to be a starting point and an evolving document that would grow as the AI landscape shifts.

Mr. Smith then discussed key points the subcommittee identified for addressing AI-related risks in the financial sector. Key risks included the lack of transparency, poor data quality, mishandling of data, ensuring that AI systems don't perpetuate bias, risks from widely used models, and risks associated with third-party AI providers. He also discussed the key AI use cases that were identified including cases in trading, customer communications, risk management, regulatory compliance, and back-office operations. The subcommittee recommended that the CFTC hold public roundtables to better understand the impact of AI, adopt the NIST AI Risk Management Framework, examine existing AI related regulations and determine regulatory gaps, coordinate with other agencies regarding AI policies, and invest in staff training and technical expertise to equip staff to be able to better participate in AI dialogues.

Dr. Lee then asked whether subcommittee members had further comments. Dr. Rossi also expressed strong satisfaction with the Subcommittee Report, highlighting several key strengths. She praised the collaborative effort that went into the Subcommittee Report, the clear definitions provided by the report, the focus on the NIST Risk Management Framework, and the Subcommittee Report's recommendations.

Mr. Conklin also expressed appreciation for the thoroughness and collaboration reflected by the quality of the Subcommittee Report. He highlighted that the financial services sector is among the most innovative in AI and suggested others learn from its best practices while remaining mindful of risks.


Dr. Lee then asked if there were any further subcommittee comments. The comments and discussion focused on expressing appreciation for the Subcommittee Report and its thoroughness.

Chair House then opened the floor for a motion to vote on the Subcommittee report and its recommendations and to submit them to the Commission. The motion was adopted. Before the vote, Mr. Cutinho stated he felt that the Subcommittee Report was a bit confusing because it does not draw a line or distinction between artificial intelligence as a discipline and generative AI as a manifestation of that discipline. Mr. Biagioli conducted a vote by rollcall with a simple majority needed to approve the Subcommittee Report and its recommendations. There were nineteen votes in favor and one abstention. A simple majority was achieved on the Subcommittee Report and its recommendations, and it was adopted for submission to be considered by the Commission.

## **VI. Closing Remarks and Adjournment**

Commissioner Goldsmith Romero thanked the participants and CFTC staff who helped with the meeting.

Mr. Biagioli adjourned the meeting at 4:36 p.m.

  
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Carole House  
TAC Chair

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