

**MINUTES OF THE JANUARY 8, 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 Monday, January 8, 2024, at 12:31 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 four presentations and their corresponding discussions. The first presentation discussed the White House Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (“EO”). The second presentation discussed U.S. government efforts to modernize federal cyber defense. The third presentation discussed the implications of artificial intelligence (“AI”) on financial markets. The fourth presentation discussed updates from the Subcommittee on Digital Assets and Blockchain Technology, which was followed by consideration of and the TAC’s vote to approve the Subcommittee’s Decentralized Finance report.

TAC Members in Attendance

Carole House, Chair, TAC and Executive in Residence, Terranet Ventures Inc.,
Ari Redbord, Vice Chair, TAC and Head of Legal and Government Affairs, TRM Labs
Nikos Andrikogiannopoulos, Founder and Chief Executive Officer, Metrika
Dan Awrey, Professor of Law, Cornell Law School (Special Government Employee)
Christian Catalini, Co-Founder and Chief Strategy Officer, Lightspark
Todd Conklin, Deputy Assistant Secretary of the Treasury for Office of Cybersecurity and
Critical Infrastructure Protection, U.S. Department of the Treasury
Jonah Crane, Partner, Klaros Group
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
Dan Guido, Co-Founder & Chief Executive Officer, Trail of Bits
Jennifer Ilkiw, President of ICE Futures, U.S.
Ben Milne, Founder & Chief Executive Officer, Brale
John Palmer, President, CBOE Digital, CBOE Global Markets, Inc.
Joe Saluzzi, Co-Founder, Partner, and Co-Head of Equity Trading, Themis Trading, LLC
Michael Shaulov, Chief Executive Officer, Fireblocks
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 and Trade Policy
Corey Then, Vice President of Global Policy, Circle,
Nicol Turner Lee, Center for Technology Innovation, The Brookings Institution
Jeffrey Zhang, Assistant Professor of Law, University of Michigan Law School (Special
Government Employee)

CFTC Commissioners and Staff in Attendance

Christy Goldsmith Romero, Commissioner and TAC Sponsor

Kristin N. Johnson, Commissioner

Summer K. Mersinger, Commissioner (recorded remarks)

Anthony Biagioli, Special Counsel to the Director of Division of Enforcement, Designated Federal Officer (“DFO”) (virtual)

Andrew Rodgers, Trial Attorney, Division of Enforcement, Alternate Designated Federal Officer (“ADFO”)

Benjamin Rankin, Trial Attorney, Division of Enforcement, ADFO

Invited Speakers in Attendance

Elizabeth Kelly, Special Assistant to the President, White House Economic Council

Mitch Herckis, Branch Director for Federal Cybersecurity, Office of the Federal Chief Information Officer, White House

Michael Wellman, Professor of Computer Science & Engineering, University of Michigan

I. Opening Remarks

Mr. Rodgers, an ADFO for the TAC, called the meeting to order.

Commissioner Goldsmith Romero, the sponsor of the TAC, provided opening remarks. She welcomed everyone to the CFTC and highlighted the importance of responsible technology deployment in AI, emphasizing the need for accountability and transparency. She also thanked the TAC leadership and staff for organizing the event and introduced the new subcommittee co-chairs.

Commissioner Johnson then provided her opening remarks, emphasizing the importance of cyber resilience and raising concerns about potential gaps in regulations. She also mentioned the significance of addressing bias in AI technologies. She expressed gratitude to all those attending and organizing the TAC meeting.

Commissioner Mersinger began by expressing gratitude to all who made the meeting possible. She stressed the importance of discussing advancements in cybersecurity and artificial intelligence.

Mr. Rodgers concluded by giving logistical instructions and conducting a roll call.

II. Presentation I: White House Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence

Ms. House, the TAC Chair, gave brief remarks highlighting the White House’s efforts in AI policy, emphasizing the importance of transparency, cybersecurity, and privacy in AI development. She also stressed the need for collaboration between the public and private sectors. She concluded by introducing the first presenter, Ms. Kelly.

Ms. Kelly highlighted the significance of AI in various sectors such as drug discovery, climate change mitigation, and streamlining everyday tasks. She discussed the risks associated with AI including threats to privacy, discrimination, and national security.

She then discussed the eight fundamental principles of the Executive Order, including protecting safety and security, promoting innovation and competition, and advancing U.S. leadership on AI. She described key actions by the U.S., including developing guidance for testing AI models and safety, promoting workforce training on AI, and ensuring equitable deployment of AI technologies.

Ms. Kelly also noted AI's role in fraud detection, compliance, and customer service in financial markets. She then highlighted the need for safeguards against discrimination and privacy breaches in AI applications.

Finally, she discussed the need for Congress to pass comprehensive privacy legislation and highlighted ongoing efforts to engage with lawmakers on AI governance. Overall, she emphasized the importance of collaboration between government, industry, and civil society to address AI's challenges while harnessing its potential benefits.

Ms. House then opened the floor to questions and comments from the TAC membership. Generally, the concerns and discussions raised in this session included: the potential implications of the Executive Order in the U.S. government, questions about collaboration among Chief AI Officers in various agencies, incentivizing outside talent to join the U.S. government, data access and privacy concerns, the possibility of creating an independent agency for AI regulation, the balance between supporting open-source AI development and addressing associated risks, and the need to foster innovation alongside responsible AI governance within government.

[Break]

III. Presentation II: U.S. Government Efforts to Modernize Federal Cyber Defenses

Mr. Redbord stated that this presentation would build on discussions from prior meetings regarding cybersecurity to ensure cyber resilience in financial markets. He then introduced Mr. Herckis.

Mr. Herckis outlined the federal government's approach to IT and cybersecurity policy. He emphasized the collaborative efforts across various agencies. He also discussed the evolution of cybersecurity threats and the need for a shift from traditional perimeter defenses to a Zero Trust approach.

He then explained that a Zero Trust strategy involves verifying every attempt to establish access, assuming fallibility in users and frameworks, and continuously verifying outcomes. He highlighted the key components of the federal Zero Trust Strategy, such as phishing-resistant multi-factor authentication, encryption, endpoint detection, and vulnerability disclosure programs. He further discussed the progress made in implementing Zero Trust across federal agencies, collaboration with Congress and industry partners, and the use of metrics to measure

progress. Finally, Mr. Herckis highlighted the importance of securing the software supply chain and efforts to establish standards for secure software development.

Mr. Redbord then opened the floor to questions and comments from the TAC membership. Generally, the concerns and discussions raised in this session included: the balance between offensive and defensive cybersecurity efforts, the needs for a continuous defensive focus due to the persistent threat landscape, cybersecurity regulations and concerns about open source software security, the importance of visible security and adopting a risk-based approach, the need for user-friendly security solutions that are also compliance friendly, and the impact of quantum computing on cybersecurity.

IV. Presentation III: Understanding the Implication of Artificial Intelligence on Financial Markets

Mr. Redbord introduced Mr. Wellman, who presented on the implications of AI on financial markets and the financial system. He highlighted the fragility of the financial sector and its susceptibility to AI due to factors like speed, information processing capabilities, and weakness in the existing regulatory infrastructure. He explained how AI, particularly deep reinforcement learning and regenerative AI, can lead to qualitatively new behaviors in financial markets, including the potential for autonomous trading strategies and manipulation techniques.

Mr. Wellman also emphasized the need for regulatory adaption to address AI driven market manipulation. He discussed how AI's speed and precision enable new trading strategies and the automation of decision-making.

Finally, he touched on concerns regarding the concentration of ownership of nonpublic information and legislation aimed at addressing AI-related risks in finance, such as the Financial AI Risk Reduction Act.

Generally, Mr. Wellman advocated for a nuanced understanding of AI's impact on financial markets and the implementation of robust regulatory frameworks to mitigate associated risks.

Mr. Redbord then opened the floor to questions and comments from the TAC membership. Generally, the concerns and discussions raised in this section included: the effectiveness of the consolidated audit trail in light of advancements in AI and market manipulation techniques, the manipulation between machine-to-machine interactions in AI driven trading systems, how AI is reshaping risk assessment in finance and the challenges of defining and quantifying risk, and the need to collaborate to ensure consistency and effectiveness in regulations across sectors.

[Break]

V. Presentation IV: Subcommittee on Digital Assets and Blockchain Technology on Study of Decentralized Finance

Ms. House introduced the final topic of the day, the consideration of the report containing recommendations regarding decentralized finance from the subcommittee on Digital Assets and Blockchain Technology. Mr. Redbord began the discussion by emphasizing the potential of blockchain technology and DeFi, and highlighted both its promise and risks. He then thanked the members that drafted the report, which aims to address the challenges and opportunities presented by DeFi.

The report emphasizes problem-solving and collaboration between industry and government to regulate DeFi effectively. The report provides a definition of DeFi and explores its various dimensions, including access, development, governance, balance sheets, and operational centralization. It also discusses the regulatory objectives guiding the exploration of DeFi and associated risks.

Ms. House and Mr. Awrey discussed key points from the report: (1) determining how DeFi systems fall within existing frameworks, (2) policymakers may need to expand legal authorities or use existing ones to cover more parts of the DeFi ecosystem to mitigate risks, (3) risks in DeFi ecosystems vary based on design and features, requiring specific evaluation for each system, (4) allocating responsibility and ensuring compliance in decentralized governance structures presents challenges, and (5) fostering constructive dialogue between policymakers and the DeFi industry is crucial for effective regulation. To address these issues, Ms. House recommended a deeper understanding of the issues, identifying risks, and fostering collaboration with industry and standard setters. She also stated that illicit finance and anti-money laundering concerns in DeFi could be addressed by building identity parameters into these ecosystems.

Ms. House then opened the floor to questions and comments from the TAC membership. Generally, the concerns and discussions raised in this section included: the unique challenges of software security in DeFi compared to traditional finance, concerns about regulatory implications and structural vulnerabilities, defining DeFi, and optimizing resource allocation.

Ms. Allen (who was not present at the TAC meeting) provided a statement on the report, which was read into the record.

Ms. House moved to adopt the report and recommendations on DeFi, with a motion that Mr. Crane seconded, followed by a call for further discussion or comment from members, to which there were no responses. The report and its recommendations were then voted on by roll call with a simple majority needed for the motion to pass. There were fourteen votes in favor, zero votes of no, and five abstentions. A simple majority was achieved on the Digital Assets and Blockchain Technology Subcommittee's report and recommendations and they were adopted for submission to be considered by the Commission.

VI. Closing Remarks

In closing, Commissioner Goldsmith Romero expressed gratitude for the dedication of all stakeholders involved in addressing complex issues related to AI such as customer protection and market integrity. She stated she looked forward to future engagement on the issues discussed at today's meeting.

Mr. Rodgers adjourned the meeting at 4:13 pm EST.

Carole House

Carole House
Chair, TAC

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Date