

April 28, 2023

VIA EMAIL AND HAND DELIVERY

Ms. Vanessa Countryman
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Re: CAT NMS Plan Section 6.6(c)(ii) Quarterly Progress Report

Dear Ms. Countryman:

The Participants¹ in the National Market System Plan Governing the Consolidated Audit Trail (“CAT NMS Plan”)² respectfully submit the enclosed Quarterly Progress Report (“QPR”) for the calendar quarter ending on March 31, 2023 (“Q1 2023”), pursuant to Section 6.6(c)(ii) of the CAT NMS Plan.³ In accordance with Section 6.6(c)(ii), the Q1 2023 QPR includes a detailed description of the progress made by the Participants during Q1 2023 toward achieving each of the milestones set forth in the Implementation Plan.⁴ Please feel free to contact any of the Participants if you have any questions.

Respectfully submitted,

Participants of the CAT NMS Plan

Enclosures

cc: The Hon. Gary Gensler, Chair
The Hon. Hester M. Peirce, Commissioner
The Hon. Caroline A. Crenshaw, Commissioner
The Hon. Mark T. Uyeda, Commissioner
The Hon. Jaime Lizárraga, Commissioner
Mr. Haoxiang Zhu, Director, Division of Trading and Markets
Mr. David S. Shillman, Associate Director, Division of Trading and Markets
Mr. David Hsu, Assistant Director, Division of Trading and Markets
Mr. Hugh Beck, Senior Advisor for Regulatory Reporting
Ms. Erika Berg, Special Counsel, Division of Trading and Markets
Mr. Mark Donohue, Senior Policy Advisor, Division of Trading and Markets

¹ The twenty-five Participants of the CAT NMS Plan are: BOX Exchange LLC; Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe C2 Exchange, Inc. and Cboe Exchange, Inc.; Financial Industry Regulatory Authority, Inc.; Investors Exchange LLC; Long-Term Stock Exchange, Inc.; MEMX LLC; Miami International Securities Exchange LLC, MIAX Emerald, LLC, and MIAX PEARL, LLC; NASDAQ BX, Inc., Nasdaq GEMX, LLC, Nasdaq ISE, LLC, Nasdaq MRX, LLC, NASDAQ PHLX LLC, and The NASDAQ Stock Market LLC; and New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc. and NYSE National, Inc.

² The Limited Liability Company Agreement of Consolidated Audit Trail, LLC is the CAT NMS Plan. Unless otherwise noted, capitalized terms are used as defined in Rule 613, in the CAT NMS Plan or in this letter.

³ A copy of the Q1 2023 QPR is available on the CAT NMS Plan public website at www.catnmsplan.com.

⁴ The Implementation Plan was filed with the Commission on July 22, 2020 and is available on the CAT NMS Plan public website at www.catnmsplan.com. Subsequent QPRs are also available on the CAT NMS Plan public website.

CAT Q1 2023 Quarterly Progress Report

FILED APRIL 28, 2023

APPENDIX C MILESTONES

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date¹	Milestone/Interim Step²	Description of Any Variance From the IP	Other Factual Indicators³	Description of Status as of 3/31/2023⁴
1	7/11/2022	Not before second half of 2023	Row 6 of App. C-10(a) & Row 8 of App. C-10(a): Customer and Account Information – Production Environment Go-Live (All Industry Members)	<ul style="list-style-type: none"> It was announced on February 1, 2023 that the targeted completion date for full CAIS reporting compliance was extended from March 17, 2023 to a date to be announced (the new date is not anticipated to be before the second half of 2023) 	<ul style="list-style-type: none"> Deployed Full CAIS Release 6b to production on January 23, 2023 to temporarily disable certain validations On February 1, 2023, announced: <ul style="list-style-type: none"> Updated deadline for Interim Compliance Obligation 4, moving date from March 10, 2023 to a date to be announced (the new date is not anticipated to be before the second half of 2023) Updated deadline for remaining requirements for Industry Members for 	<ul style="list-style-type: none"> The Full CAIS Production Environment opened April 25, 2022 and it remains open. Industry Members have been required to report, and are reporting, required data to CAIS on a daily basis since November 7, 2022, consistent with interim reporting obligations The remaining CAIS obligations for Industry Members are the deadlines for Interim Obligation 4 (which

¹ The “Completion Date” indicates the targeted completion date for the milestone, unless the status for the milestone has been designated as “Completed.” In that case, the “Completion Date” indicates the date by which the milestone was completed.

² To further enhance the publicly available information, the Participants have included additional details in this document to reflect certain interim steps not included in the Implementation Plan to complete implementation of the CAT. These interim steps are provided for informational purposes only and are not relevant for purposes of assessing the Participants’ timely satisfaction of the Financial Accountability Milestones.

³ For milestones that are in progress or have not been initiated, this will include the basis for making the adjustment and the impact of this adjustment on any other Implementation Milestone, and, if applicable, any other factual indicators that demonstrate the current level of completion with respect to the Implementation Milestone.

⁴ This Quarterly Progress Report reflects activities by the Participants to meet the relevant milestones and interim steps. Additional information and metrics on Industry Member testing and readiness are provided in industry update meetings and related materials. See CAT Event Materials, available at <https://catnmsplan.com/events/materials>.

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date ¹	Milestone/Interim Step ²	Description of Any Variance From the IP	Other Factual Indicators ³	Description of Status as of 3/31/2023 ⁴
					<p>Full CAIS compliance (referred to as the Full CAIS Compliance Go-Live date), moving date from March 17, 2023 to a date to be announced (the new date is not anticipated to be before the second half of 2023)⁵</p> <ul style="list-style-type: none"> • Published revised CAT Alert with updated timeline for remaining CAIS reporting obligations on February 14, 2023 (see https://www.catnmsplan.com/sites/default/files/2023-02/02.15.23-CAT-Alert-2022-01.pdf) • Deployed CAIS release providing operational resiliency items to production on March 20, 2023 	<p>relates to Industry Members' repair of all outstanding rejects and resolution of all outstanding material inconsistencies) and the final Full CAIS compliance deadline (which adds the requirement to repair all rejections and resolve all material inconsistencies on a go forward basis within the Plan-established deadlines)</p> <ul style="list-style-type: none"> • The CAIS system accepts and validates the CAIS data submitted by Industry Members and provides Industry Members with initial feedback on data errors • Outstanding CAIS system issues present challenges for Industry Members

⁵ Subsequent to Q1 2023, on April 20, 2023, CAT announced that new deadlines for the last two Industry Member CAIS compliance deadlines noted in CAT Alert 2022-01 - Interim Reporting Obligation 4 and Full CAIS Compliance Go-Live - will be announced no later than August 15, 2023 and will not be before the fourth quarter of 2023. The new deadlines will include sufficient time for Industry Members to correct errors once known issues that could impact their CAT reporting compliance obligations have been addressed. Additional information will be provided in an updated CAT Alert when available.

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date ¹	Milestone/Interim Step ²	Description of Any Variance From the IP	Other Factual Indicators ³	Description of Status as of 3/31/2023 ⁴
						<p>with respect to error corrections and for regulators with respect to information available in the CAIS regulatory portal</p> <ul style="list-style-type: none"> • Analysis of requirements, internal testing and deployment of various releases to address outstanding issues have been underway • Discussions are ongoing about the timeline for the two remaining Full CAIS reporting obligations referenced above to address these outstanding issues

PARTICIPANT MILESTONES

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
			N/A			

FINANCIAL ACCOUNTABILITY MILESTONES

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
1	7/31/2020	7/20/2020	FAM Period 1 Completion of Initial Industry Member Core Equity and Option Reporting, defined under CAT NMS Plan Section 1.1 as the reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of both: <ul style="list-style-type: none"> (a) equities transaction data, excluding Customer Account Information, Customer-ID, and Customer Identifying Information; and (b) options transaction data, excluding Customer Account Information, Customer-ID, and Customer Identifying Information. 	N/A	N/A	Completed
2	12/31/2020	12/31/2020	FAM Period 2 Completion of Full Implementation of Core Equity Reporting, defined under CAT NMS Plan Section 1.1 as the point at which: <ul style="list-style-type: none"> (a) Industry Member reporting (excluding reporting by Small Industry Members that are not OATS reporters) for equities transactions, excluding Customer 	N/A	N/A	Completed

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
			Account Information, Customer-ID, and Customer Identifying Information, is developed, tested, and implemented at a 5% Error Rate or less and with sufficient intra-firm linkage, inter-firm linkage, national securities exchange linkage, and trade reporting facilities linkage to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, excluding linkage of representative orders, from order origination through order execution or order cancellation; and (b) the query tool functionality required by Section 6.10(c)(i)(A) and Appendix D, Sections 8.1.1-8.1.3 and Section 8.2.1 incorporates the Industry Member equities transaction data described in condition (a) and is available to the Participants and to the Commission			
3	12/31/2021	12/31/2021	FAM Period 3 Completion of Full Availability and Regulatory Utilization of Transactional	N/A	N/A	Completed

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
			<p>Database Functionality, defined under CAT NMS Plan Section 1.1 as the point at which:</p> <ul style="list-style-type: none"> (a) reporting to the Order Audit Trail System (“OATS”) is no longer required for new orders; (b) Industry Member reporting for equities transactions and simple electronic options transactions, excluding Customer Account Information, Customer-ID, and Customer Identifying Information, with sufficient intra-firm linkage, inter-firm linkage, national securities exchange linkage, trade reporting facilities linkage, and representative order linkages (including any equities allocation information provided in an Allocation Report) to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, is developed, tested, and implemented at a 5% Error Rate or less; (c) Industry Member reporting for 			

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
			<p>manual options transactions and complex options transactions, excluding Customer Account Information, Customer-ID, and Customer Identifying Information, with all required linkages to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, including any options allocation information provided in an Allocation Report, is developed, tested, and fully implemented; (d) the query tool functionality required by Section 6.10(c)(i)(A) and Appendix D, Sections 8.1.1-8.1.3, Section 8.2.1, and Section 8.5 incorporates the data described in conditions (b)-(c) and is available to the Participants and to the Commission; and (e) the requirements of Section 6.10(a) are met.</p>			
4	12/30/2022	Not before second half of 2023	FAM Period 4 Completion of Full Implementation of CAT NMS Plan Requirements, defined	<ul style="list-style-type: none"> It was announced on February 1, 2023 that the 	<ul style="list-style-type: none"> See completion of FAM 1, FAM 2 and FAM 3 for progress to completion of FAM 4 FINRA retired OATS effective September 1, 2021 	<ul style="list-style-type: none"> The Full CAIS Production Environment

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			<p>under CAT NMS Plan Section 1.1 as the point at which the Participants have satisfied all of their obligations to build and implement the CAT, such that all CAT system functionality required by Rule 613 and the CAT NMS Plan has been developed, successfully tested, and fully implemented at the initial Error Rates specified by Section 6.5(d)(i) or less, including functionality that efficiently permits the Participants and the Commission to access all CAT Data required to be stored in the Central Repository pursuant to Section 6.5(a), including Customer Account Information, Customer-ID, Customer Identifying Information, and Allocation Reports, and to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, including any related allocation information provided in an Allocation Report.</p>	<p>targeted completion date for full CAIS reporting compliance was extended from March 17, 2023 to a date to be announced (the new date is not anticipated to be before the second half of 2023)</p>	<ul style="list-style-type: none"> • Phase 2a has been fully implemented as of October 26, 2020 • Phase 2b has been fully implemented as of January 4, 2021 • Phase 2c has been fully implemented as of April 26, 2021 • Phase 2d has been fully implemented as of December 13, 2021 • The average overall error rate was less than 5% as of December 30, 2022 and remains less than 5% as of March 31, 2023 • The query tool functionality incorporates the data from Phases 2a, 2b, 2c and 2d and is available to the Participants and to the Commission • With respect to Phase 2e: <ul style="list-style-type: none"> ○ The Full CAIS Production Environment opened April 25, 2022 and it remains open. Certain Industry Member Full CAIS reporting obligations have been delayed, but Industry Members have been required to report, and are reporting, required data to CAIS on a daily basis since November 7, 2022 (for additional details, see discussion in the “Description of Status as of 3/31/2023” column). ○ Deployed Full CAIS Release 6b to production on January 23, 2023 to temporarily disable certain validations ○ On February 1, 2023, announced: <ul style="list-style-type: none"> ▪ Updated deadline for Interim Compliance Obligation 4, moving date from March 10, 2023 to a date to be announced (the new date is not anticipated to be before the 	<p>opened April 25, 2022 and it remains open.</p> <ul style="list-style-type: none"> • Industry Members have been required to report, and are reporting, required data to CAIS on a daily basis since November 7, 2022, consistent with interim reporting obligations • The remaining CAIS obligations for Industry Members are the deadlines for Interim Obligation 4 (which relates to Industry Members’ repair of all outstanding rejects and resolution of all

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
					<p>second half of 2023)</p> <ul style="list-style-type: none"> ▪ Updated deadline for remaining requirements for Industry Members for Full CAIS compliance (referred to as the Full CAIS Compliance Go-Live date), moving date from March 17, 2023 to a date to be announced (the new date is not anticipated to be before the second half of 2023) ○ Published revised CAT Alert with updated timeline for remaining CAIS reporting obligations on February 14, 2023 (see https://www.catnmsplan.com/sites/default/files/2023-02/02.15.23-CAT-Alert-2022-01.pdf) ○ Deployed CAIS release providing operational resiliency items to production on March 20, 2023 	<p>outstanding material inconsistencies) and the final Full CAIS compliance deadline (which adds the requirement to repair all rejections and resolve all material inconsistencies on a go forward basis within the Plan-established deadlines)</p> <ul style="list-style-type: none"> • The CAIS system accepts and validates the CAIS data submitted by Industry Members and provides Industry Members with initial feedback on data errors • Outstanding CAIS

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
						<p>system issues present challenges for Industry Members with respect to error corrections and for regulators with respect to information available in the CAIS regulatory portal</p> <ul style="list-style-type: none"> • Analysis of requirements, internal testing and deployment of various releases to address outstanding issues have been underway • Discussions are ongoing about the timeline for the two remaining Full CAIS reporting

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the IP	Other Factual Indicators	Description of Status as of 3/31/2023
						obligations referenced above to address these outstanding issues

EXEMPTION MILESTONES

	Order Completion Date	Targeted Completion Date or Actual Completion Date	Milestones⁶	Description of Any Variance From the Order	Other Factual Indicators	Description of Status as of 3/31/2023
1	7/31/2024	7/31/2024	Re-Processing of Corrected Data Received After T+5: Corrections received after T+5 are to be reprocessed, with the Participants' regulatory staff and SEC notified and informed as to how reprocessing will be completed	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the Third Order. The targeted replay functionality was deployed for certain CAT Data on September 26, 2022.	In Progress
2	7/31/2024	7/31/2024	Participant Reporting of Rejected Orders: An order that a Participant receives, but then rejects, is a CAT Reportable Event, and that the receipt of that order and the time at which that order was received also must be reported pursuant to Section 6.3(d). Rejected orders that are reported to the Central Repository must be processed and assembled to create the complete lifecycle of each Reportable Event.	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the Third Order.	In Progress
3	7/31/2024	7/31/2024	Lifecycle Linkages Timeframes: The Plan Processor "must have completed initial data validation, made lifecycle linkages (i.e., completed processing and linkage of the initial transaction data) and communicated errors to CAT Reporters" by T+1 at noon	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the Third Order.	In Progress
4	7/31/2024	7/31/2024	SIP Data Linkage: Linkage of SIP Data and CAT Data	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the Third Order.	In Progress
5	7/31/2024	7/31/2024	Port Level Settings: Report port level settings as	N/A	Participants are working with Commission staff to	In Progress

⁶ Securities Exchange Act Rel. No. 95234 (July 9, 2022) ("Third Order").

	Order Completion Date	Targeted Completion Date or Actual Completion Date	Milestones⁶	Description of Any Variance From the Order	Other Factual Indicators	Description of Status as of 3/31/2023
			special handling instructions as part of Material Terms of an Order		identify appropriate measures with respect to the Third Order	
6	7/31/2024	7/31/2024	Lifecycle Linkages Between Customer Orders and “Representative” Orders: Link all related order events from all CAT Reporters in the lifecycle of a representative orders	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the Third Order. The CAT has the ability to process information linking customer orders and representative orders.	In Progress