

November 1, 2021

**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 Participants<sup>1</sup> in the National Market System Plan Governing the Consolidated Audit Trail (“CAT NMS Plan” or “Plan”)<sup>2</sup> respectfully submit the enclosed Quarterly Progress Report (“QPR”) for the calendar quarter ending on September 30, 2021 (“Q3 2021”), pursuant to Section 6.6(c)(ii) of the CAT NMS Plan.<sup>3</sup> In accordance with Section 6.6(c)(ii), the Q3 2021 QPR includes a detailed description of the progress made by the Participants during Q3 2021 toward achieving each of the milestones set forth in the Implementation Plan.<sup>4</sup> 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. Elad L. Roisman, Commissioner  
The Hon. Allison Herren Lee, Commissioner  
The Hon. Caroline A. Crenshaw, Commissioner  
Mr. David Saltiel, Acting 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  
Hugh Beck, Senior Advisor for Regulatory Reporting  
Mr. Mark Donohue, Senior Policy Advisor, Division of Trading and Markets

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<sup>1</sup> 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. (“FINRA”); Investors Exchange LLC; Long-Term Stock Exchange, Inc., MEMX LLC, Miami International Securities Exchange LLC, MIAX Emerald, LLC, MIAX PEARL, LLC; NASDAQ BX, Inc., Nasdaq GEMX, LLC, Nasdaq ISE, LLC, Nasdaq MRX, LLC, NASDAQ PHLX LLC, The NASDAQ Stock Market LLC; and New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc. and NYSE National, Inc.

<sup>2</sup> 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.

<sup>3</sup> A copy of the Q3 2021 QPR is available on the CAT NMS Plan public website at [www.catnmsplan.com](http://www.catnmsplan.com).

<sup>4</sup> 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](http://www.catnmsplan.com). Subsequent QPRs are also available on the CAT NMS Plan public website.

# CAT Q3 2021 Quarterly Progress Report

FILED NOVEMBER 1, 2021

APPENDIX C MILESTONES

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date <sup>1</sup>	Milestone/Interim Step <sup>2</sup>	Description of Any Variance From the IP	Other Factual Indicators <sup>3</sup>	Description of Status as of 9/30/2021 <sup>4</sup>
1	12/13/2021	12/13/2021	Row 3 of App. C-10(c) & Row 5 of App. C-10(c): FCAT Plan Processor creates linkages of the lifecycle of order events based on the received data through Phase 2d	N/A	On track for completion <ul style="list-style-type: none"> <li>Updated Phase 2d technical specifications published on August 2, 2021</li> <li>Test environment available for Options Phase 2d reporting requirements</li> </ul>	In progress
2	12/13/2021	12/13/2021	Interim Step: Production Go-Live for Options 2d reporting requirements (Large Industry Members)	N/A	On track for completion <ul style="list-style-type: none"> <li>Updated Phase 2d technical specifications published on August 2, 2021</li> <li>Test environment available for Options Phase 2d reporting requirements</li> </ul>	In progress
3	12/13/2021	12/13/2021	Interim Step: Production Go-Live for Equities 2a reporting requirements	N/A	On track for completion	In progress

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup>	Milestone/Interim Step <sup>2</sup>	Description of Any Variance From the IP	Other Factual Indicators <sup>3</sup>	Description of Status as of 9/30/2021 <sup>4</sup>
			(Small Non-OATS Reporters)		<ul style="list-style-type: none"> <li>Equities 2a in production and capable of accepting data from Small Non-OATS Reporters</li> </ul>	
4	12/13/2021	12/13/2021	Interim Step: Production Go-Live for Options 2b reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)	N/A	<p>On track for completion</p> <ul style="list-style-type: none"> <li>Options 2b in production and capable of accepting data from Small OATS Reporters and Small Non-OATS Reporters</li> </ul>	In progress
5	12/13/2021	12/13/2021	Interim Step: Production Go-Live for Equities 2c reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)	N/A	<p>On track for completion</p> <ul style="list-style-type: none"> <li>Equities 2c in production and capable of accepting data from Small OATS Reporters and Small Non-OATS Reporters</li> </ul>	In progress
6	12/13/2021	12/13/2021	Interim Step: Production Go-Live for Options 2d reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)	N/A	<p>On track for completion</p> <ul style="list-style-type: none"> <li>Updated Phase 2d technical specifications published on August 2, 2021</li> <li>Test environment available for Options Phase 2d reporting requirements</li> </ul>	In progress
7	12/13/2021	12/13/2021	Interim Step: LTID Account Information Reporting Go-Live for Phase 2d (Large Industry Members)	N/A	<p>On track for completion</p> <ul style="list-style-type: none"> <li>LTID account information reporting in production and</li> </ul>	In progress

	Implementation Plan Completion Date	Targeted Completion Date or Actual Completion Date <sup>1</sup>	Milestone/Interim Step <sup>2</sup>	Description of Any Variance From the IP	Other Factual Indicators <sup>3</sup>	Description of Status as of 9/30/2021 <sup>4</sup>
					capable of accepting Phase 2d data from Large Industry Members	
8	12/13/2021	12/13/2021	Interim Step: LTID Account Information Reporting Go-Live for Phases 2a, 2b, 2c and 2d (Small Industry Members)	N/A	On track for completion <ul style="list-style-type: none"> <li>LTID account information reporting in production and capable of accepting Phase 2a, 2b, 2c and 2d data from Small Industry Members</li> </ul>	In progress
9	1/31/2022	1/31/2022	Row 5 of App. C-10(a) & Row 7 of App. C-10(a): Customer Account Information – Test Environment Opens (All Industry Members)	N/A	On track for completion <ul style="list-style-type: none"> <li>Updated CAT CAIS CCID technical specifications published on August 24, 2021</li> </ul>	In progress
10	7/11/2022	7/11/2022	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)	N/A	On track for completion <ul style="list-style-type: none"> <li>Updated CAT CAIS CCID technical specifications published on August 24, 2021</li> </ul>	In progress

**PARTICIPANT MILESTONES**

	<b>Implementation Plan Completion Date</b>	<b>Targeted Completion Date or Actual Completion Date</b>	<b>Milestones</b>	<b>Description of Any Variance From the IP</b>	<b>Other Factual Indicators</b>	<b>Description of Status as of 9/30/2021</b>
			N/A			

**FINANCIAL ACCOUNTABILITY MILESTONES**

	<b>Implementation Plan Completion Date</b>	<b>Targeted Completion Date or Actual Completion Date</b>	<b>Milestones</b>	<b>Description of Any Variance From the IP</b>	<b>Other Factual Indicators</b>	<b>Description of Status as of 9/30/2021</b>
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: (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: (a) Industry Member reporting (excluding reporting by Small Industry Members that are not OATS reporters) for equities transactions, excluding Customer 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	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 9/30/2021
			<p>market system, excluding linkage of representative orders, from order origination through order execution or order cancellation; and</p> <p>(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</p>			
3	12/31/2021	12/31/2021	<p>FAM Period 3 Completion of Full Availability and Regulatory Utilization of Transactional Database Functionality, defined under CAT NMS Plan Section 1.1 as the point at which:</p> <p>(a) reporting to the Order Audit Trail System (“OATS”) is no longer required for new orders;</p> <p>(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</p>	N/A	<p>On track to be met</p> <ul style="list-style-type: none"> <li>• FINRA retired OATS effective September 1, 2021</li> <li>• Phase 2a has been fully implemented as of October 26, 2020</li> <li>• Phase 2b has been fully implemented as of January 4, 2021</li> <li>• Phase 2c has been fully implemented as of April 26, 2021</li> <li>• Test environment is available for Options Phase 2d reporting requirements</li> <li>• The average overall error rate is less than 5% as of September 30, 2021</li> <li>• The query tool functionality incorporates the data from Phases 2a, 2b and 2c and is available to the Participants and to the Commission</li> <li>• Incorporation of Phase 2d data into the query tool functionality and making it available to the Participants and to the Commission is on track to</li> </ul>	In Progress



	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 9/30/2021
			<p>national market system, from order origination through order execution or order cancellation, is developed, tested, and implemented at a 5% Error Rate or less;</p> <p>(c) Industry Member reporting for 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;</p> <p>(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</p> <p>(e) the requirements of Section 6.10(a) are met.</p>		commence	
4	12/30/2022	12/30/2022	<p>FAM Period 4</p> <p>Completion of Full Implementation of CAT NMS Plan Requirements, defined under CAT NMS Plan Section 1.1 as the point at which the Participants have satisfied all of their obligations to build and</p>	N/A	<p>On track to be met</p> <ul style="list-style-type: none"> <li>See completion of FAM 1 and FAM 2 and factual indicators for FAM 3 for progress to completion of FAM 4</li> </ul>	In Progress

	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 9/30/2021
			<p>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>		<ul style="list-style-type: none"> <li>Updated CAT CAIS CCID technical specifications published on August 24, 2021</li> </ul>	

**EXEMPTION MILESTONES**

	<b>Order Completion Date</b>	<b>Targeted Completion Date or Actual Completion Date</b>	<b>Milestones</b>	<b>Description of Any Variance From the Order</b>	<b>Other Factual Indicators</b>	<b>Description of Status as of 9/30/2021</b>
1	4/30/2021	4/30/2021	Incorporation of error correction rate functionality in the query tool search functionality	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the December orders  Error correction rate functionality for Industry Member data incorporated in query search functionality in February 2021	In progress
2	7/31/2021	7/31/2021	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 December orders	In Progress
3	12/13/2021	12/13/2021	An order that a Participants 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 December orders	In Progress
4	7/31/2023	7/31/2023	Section 8.1.2 of Appendix D of the CAT NMS Plan sets forth timeframes in which results must be returned for various types of queries	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the December orders	In Progress
5	7/31/2023	7/31/2023	Section 8.1.2 of Appendix D requires: "The online targeted query tool must support parallel processing of queries. At a minimum, the online	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the	In Progress

	Order Completion Date	Targeted Completion Date or Actual Completion Date	Milestones	Description of Any Variance From the Order	Other Factual Indicators	Description of Status as of 9/30/2021
			targeted query tool must be able to process up to 300 simultaneous query requests with no performance degradation.”		December orders	
6	7/31/2023	7/31/2023	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 December orders	In Progress
7	7/31/2023	7/31/2023	Linkage of SIP Data and CAT Data	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the December orders	In Progress
8	7/31/2023	7/31/2023	Report port level settings as special handling instructions as part of Material Terms of an Order	N/A	Participants are working with Commission staff to identify appropriate measures with respect to the December orders	In Progress
9	7/31/2023	7/31/2023	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 December orders	In Progress