SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-101225; File No. 4-698)

October 1, 2024

Joint Industry Plan; Notice of Filing of Partial Amendment No. 1 to an Amendment to the National Market System Plan Governing the Consolidated Audit Trail Regarding Cost Savings Measures

On March 27, 2024, and pursuant to Section 11A(a)(3) of the Securities Exchange Act of 1934 (the "Exchange Act")[1] and Rule 608 of Regulation NMS thereunder,[2] BOX Exchange LLC, Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe C2 Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe Exchange, Inc., The Financial Industry Regulatory Authority, Inc., 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, New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc., and NYSE National, Inc. ("the Participants") filed with the Securities and Exchange Commission (the "Commission" or the "SEC") proposed amendments to the national market system plan governing the consolidated audit trail (the "CAT NMS Plan")[3] that were designed to implement certain costs saving measures (the "Proposed Cost Savings

1 15 U.S.C 78k-1(a)(3).

2 17 CFR 242.608.

3 In July 2012, the Commission adopted Rule 613 of Regulation NMS, which required the Participants to jointly develop and submit to the Commission a national market system plan to create, implement, and maintain a consolidated audit trail (the "CAT"). See Securities Exchange Act Release No. 67457 (July 18, 2012), 77 FR 45722 (Aug. 1, 2012 ("Rule 613 Adopting Release"); 17 CFR 242.613. On November 15, 2016, the Commission approved the CAT NMS Plan. See Securities Exchange Act Release No. 78318 (Nov. 15, 2016), 81 FR 84696 (Nov. 23, 2016) ("CAT NMS Plan Approval Order"). The CAT NMS Plan is Exhibit A to the CAT NMS Plan Approval Order. See CAT NMS Plan Approval Order, at 84943–85034.

Amendments").[4] The Proposed Cost Savings Amendments were published for comment in the Federal Register on April 16, 2024.[5] On July 15, 2024, the Commission instituted proceedings pursuant to Rule 608(b)(2)(i) of Regulation NMS,[6] to determine whether to disapprove the Proposed Cost Savings Amendments or to approve the Proposed Cost Savings Amendments with any changes or subject to any conditions the Commission deems necessary or appropriate after considering public comment (the "OIP").[7]

On September 20, 2024, the Participants submitted a letter to propose certain revisions to the Proposed Cost Savings Amendments and to respond to issued discussed in the OIP.[8] Sections I, II, and III below, which were substantially prepared by CAT LLC on behalf of the Participants, contain a description of the revisions to the Proposed Cost Savings Amendments, additional details regarding the Participants' calculation of estimated cost savings, and responses prepared by the Participants to the OIP, respectively. In addition, Exhibit A attached hereto sets forth the cumulative changes proposed to be made to the CAT NMS Plan. Exhibit B attached hereto sets

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4 See Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission, dated March 27, 2024, available at https://catnmsplan.com/sites/default/files/2024-03/03.27.24-Proposed-CAT-NMS-Plan-Amendment-Cost-Savings-Amendment.pdf. MIAX Sapphire, LLC was not a Participant to the CAT NMS Plan when the Proposal was originally filed, but the Participants filed an immediately-effective amendment to the CAT NMS Plan on July 30, 2024 to add MIAX Sapphire, LLC as a Participant. See Securities Exchange Act Release No. 100631 (July 31, 2024), 89 FR 64011 (Aug. 6, 2024).

5 See Securities Exchange Act Release No. 99938 (Apr. 10, 2024), 89 FR 26983 (Apr. 16, 2024) ("Notice"). Comments received in response to the Notice can be found on the Commission's website at https://www.sec.gov/comments/4-698/4-698-d.htm.

6 17 CFR 242.608(b)(2)(i).

7 See Securities Exchange Act Release No. 100530 (July 15, 2024), 89 FR 58838 (July 19, 2024).

8 See Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission, dated Sept. 20, 2024, available at https://www.sec.gov/comments/4-698/4698-522995-1501362.pdf.

forth the proposed additional revisions to the changes in the Proposed Cost Savings Amendments. The Commission is publishing this notice to solicit comments on the additional revisions to the Proposed Cost Savings Amendments from interested persons.

I. Revisions to the Proposed Cost Savings Amendments

CAT LLC was both surprised and disappointed by the Commission's decision to institute proceedings on the Proposed Cost Savings Amendments, which will delay or ultimately impede CAT LLC's ability to achieve more than $20 million in annual cost savings. All commenters strongly favored the Proposed Cost Savings Amendments.[9] The Commission did not receive any comments opposing the proposed amendments.

While the Commission does not bear any CAT costs, the Commission's objective should be to ensure the CAT achieves its regulatory objectives in an efficient and cost-effective manner. The immense costs of operating the CAT—estimated at $213 million in 2024—are driven by the strict requirements in the CAT NMS Plan to process and store record data volumes in accordance with complex reporting and linkage requirements, within the narrow timeframes required by the SEC. CAT LLC and the Plan Processor have put significant effort into reducing CAT costs that are within their control given these strict requirements, but many additional cost savings measures require Commission action to permit their implementation.

After discussions with the Staff, CAT LLC is withdrawing the proposal to provide an interim CAT-Order-ID on an "as requested" basis, as opposed to on a continuous basis, which

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9 See Letter from Howard Meyerson, Managing Director, FIF, to Commission (May 7, 2024); Letter from Ellen Greene, Managing Director, Equities & Options Market Structure, and Joseph Corcoran, Managing Director, Associate General Counsel, SIFMA, to Vanessa Countryman, Secretary, Commission (May 31, 2024); Letter from Jeffrey S. Davis, Senior Vice President, Principal Deputy General Counsel, Nasdaq, Inc., to Vanessa Countryman, Secretary, Commission (July 1, 2024).

would have resulted in approximately $2 million in annual cost savings. With these changes, CAT LLC strongly urges the Commission to approve the Proposed Cost Savings Amendments without further delay.

A. Processing, Storage, and Query Requirements for Options Market Maker Quotes in Listed Options

The CAT NMS Plan currently contains broad requirements relating to the processing, storage, and querying of Option Market Maker quotes in Listed Options.[10] The Proposed Cost Savings Amendments would save approximately $20 million annually by changing certain processing, query, and storage requirements that would otherwise apply to Options Market Maker quotes in Listed Options.[11] These changes would significantly reduce the costs of the CAT with limited regulatory impact. The vast majority of Options Market Maker quote lifecycles do not involve any execution or allocation and Participant regulatory users very rarely access such data. Options Exchanges would continue to report Options Market Maker quotes in Listed Options in the same manner they do today, but the Plan Processor would only ingest, perform basic data validations, and store such data. Unlinked data would remain accessible to regulators by T+1 at 12:00 p.m. Eastern Time.

Based on discussions with the Staff, CAT LLC is proposing several revisions to the Proposed Cost Savings Amendments.

First, CAT LLC proposes to revise the Proposed Cost Savings Amendments to replace any proposed references to "Options Market Maker Quotes in Listed Options," which is not a

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10 For a description of these requirements, *see* OIP at 58839-40.

11 As described in the SRO Letter, only market maker quotes that are reported to CAT as quote events would be affected by the proposal. Market maker quotes reported to CAT as order events will not be impacted by this proposal and will continue to receive all enrichments and be fully available to regulatory users in DIVER. See SRO Letter at 7.

separately defined term in the CAT NMS Plan, with "Options Market Maker quotes in Listed Options".[12] Relatedly, to eliminate potential confusion regarding the intended scope of the proposal, CAT LLC proposes to eliminate the phrase "and related Reportable Events". CAT LLC believes that the meaning of Options Market Maker quotes in Listed Options is well understood by CAT Reporters as it has been the basis for CAT reporting since the inception of the CAT.[13] Specifically, as described in Section 5.1 (Market Maker Quotes) of the Plan Participant Technical Specifications, there are two types of events used to report Options Market Maker quotes in Listed Options:

- Quote Event: Used to report a new quote or a quote replacement. When a quote is replaced, the Original Quote ID will identify the quote being replaced, and the Quote ID will provide the new ID for the updated and replaced quote (or note in the event that the market maker can only have one quote active at any given time).
- Quote Cancel: Reported when a quote is canceled.[14]

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12 An "Options Market Maker" is "a broker-dealer registered with an exchange for the purpose of making markets in options contracts on the exchange." Section 1.1 of the CAT NMS Plan. A "Listed Option" is defined as having "the meaning set forth in Rule 600(b)(35) of Regulation NMS." See id. Rule 600(b)(35) has since been redesignated as Rule 600(b)(43), which defines a "Listed Option" as "any option traded on a registered national securities exchange or automated facility of a national securities association." 17 CFR 242.600(b)(43).

13 See Section 6.4(d)(iii) of the CAT NMS Plan (describing "the reporting obligations of an Options Market Maker with regard to its quotes in Listed Options"). See also CAT Alert 2020-03, Options Market Maker Quote Sent Time (June 4, 2020).

14 See Section 5.1 of the CAT Reporting Technical Specifications for Plan Participant v.10r.21 [sic] (Apr. 15, 2024), https://www.catnmsplan.com/sites/default/files/2024-04/04.15.2024- CAT_Reporting_Technical_Specifications_for_Participants_4.1.0-r21.pdf.

Accordingly, under the proposed amendments, Option Quote (OQ) and Option Quote Cancel (OQC) events will not be subject to any requirement to link and create an order lifecycle, and will not undergo any linkage validation, linkage feedback, or lifecycle enrichment processing.

Relatedly, trades resulting from an Options Market Maker quote are reported to the CAT by Plan Participants using Option Trade (OT) events. OT events will continue to be subject to the requirement to link and create an order lifecycle, and will undergo linkage validation, linkage feedback, and lifecycle enrichment processing. However, given the proposal to eliminate linkage requirements related to OQ and OQC events, when an Options Market Maker quote is on one side of an OT event, the quote side of the OT event will not be linked to the Options Market Maker quote via the linkage process; instead, a single event lifecycle will be created that contains only the quote side of the OT event. Regulators, however, will be able to readily identify the Options Market Maker quote executed in an OT event via the quoteID field on the side of the OT event involving the Options Market Maker quote. In addition, the side of the OT event that does not involve an Options Market Maker quote would be linked with the relevant order and would include the order lifecycle related to such order, and would be subject to all lifecycle enrichment processing.

Second, CAT LLC proposes to revise the Proposed Cost Savings Amendments to clarify that the Plan Processor would continue to perform ingestion validation on Options Market Maker quotes (but would stop performing linkage validation).[15]

Third, CAT LLC proposes to revise the Proposed Cost Savings Amendments to provide that, upon request of the SEC or any Participant, the Plan Processor will provide the business and

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[15] For reference, see Appendix B-1 (describing data ingestion error codes) and Appendix B-3 (describing linkage validation error codes) of the CAT Reporting Technical Specifications for Plan Participant v.10r.21 [sic] (Apr. 15, 2024).

technical requirements needed to re-create the eliminated enrichments, as well as the code required to derive any eliminated data elements from the unlinked data.

As revised, new Section 3.4 of Appendix D would state:

> **3.4 Requirements for Options Market Maker Quotes in Listed Options**
>
> The provisions of this section shall govern the processing and storage of Options Market Maker quotes in Listed Options and shall override any conflicting provisions in the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1.
>
> Options Market Maker quotes in Listed Options must be reported to the Central Repository as provided under Section 6.4(d)(iii) of the CAT NMS Plan. This data will undergo ingestion validation only and such unlinked data will be made available to regulators by T+1 at 12:00 p.m. Eastern Time. Options Market Maker quotes in Listed Options will not be subject to any requirement to link and create an order lifecycle, and will not undergo any linkage validation, linkage feedback, or lifecycle enrichment processing, but will undergo ingestion validation. Options Market Maker quotes in Listed Options will be accessible through BDSQL and Direct Read interfaces only and will not be accessible through the online targeted query tool.
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> Upon request of the SEC or any Participant, the Plan Processor will provide the business and technical requirements needed to re-create the eliminated enrichments, as well as the code (which is unique to the Plan Processor's linkage implementation) existing as of the effective date of this provision used to derive the eliminated enrichments. The Plan Processor will not maintain the business and technical requirements and the code following the effective date of this provision, but it will retain a copy so that they may be provided to any regulators that might request them in the future.

In addition, as noted in the Proposed Cost Savings Amendments, CAT LLC proposes to amend Section 3, Section 6.1, and Section 8.1.1 of Appendix D of the CAT NMS Plan to include cross-references to new Section 3.4 of Appendix D. Consistent with the revisions discussed above, references to "Options Market Maker Quotes in Listed Options and related Reportable

Events" in Section 3, Section 6.1, and Section 8.1.1 of Appendix D have been revised to "Options Market Maker quotes in Listed Options".

B. Storage for Raw Unprocessed Data and Interim Operational Copies of CAT Data Older Than 15 Days

The CAT NMS Plan currently requires CAT Data to be "directly available and searchable electronically without manual intervention for at least six years" and within certain query tool response times.[16] The Proposed Cost Savings Amendments would save approximately $1 million annually by permitting the Plan Processor to move raw unprocessed data (i.e., as-submitted data) and interim operational data older than 15 days to a more cost-effective storage tier that is optimized for infrequent access. In each case, retrieving such data for regulators would require some "manual intervention" by the Plan Processor.

As described in the Proposed Cost Savings Amendments, when a regulator queries CAT data, the CAT always provides results to the user based on the latest, most current version of the data. Accordingly, raw unprocessed data and interim operational data older than 15 days do not provide any regulatory value after the final corrected data version is delivered by T+5 at 8:00 a.m. ET.

Based on discussions with the Staff, CAT LLC proposes to amend the Proposed Cost Savings Amendments to clarify the scope of affected data.[17] In addition, CAT LLC proposes to clarify that the Plan Processor will restore archived data to an accessible storage tier upon request to the CAT Help Desk by an authorized regulatory user from the Participants or a senior

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16 See Section 6.5(b)(i) and Appendix D, Section 1.4 of the CAT NMS Plan.

17 Exhibit A of the Proposed Cost Savings Amendments previously referred to "interim raw unprocessed data"; the text of Exhibit A has been clarified to refer to "raw unprocessed data".

officer from the SEC.[18] Finally, CAT LLC proposes to clarify that "Interim Operational Data" does not include processed data relating to Options Market Maker quotes in Listed Options made available to regulators by T+1 at 12:00 p.m. ET. As revised, new Section 6.3 of Appendix D would state:

> **6.3 Exceptions to Data Availability Requirements**
>
> Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1, the following types of data may be retained in an archive storage tier. Archived data is not directly available and searchable electronically without manual intervention and will not be subject to any query tool performance requirements until it is restored to an accessible storage tier. The Plan Processor will restore archived data to an accessible storage tier upon request to the CAT Help Desk by an authorized regulatory user from the Participants or a senior officer from the SEC.
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> - Raw Unprocessed Data older than 15 days. "Raw Unprocessed Data" means data that has been ingested by the Plan Processor and made available to regulators prior to 12:00 p.m. Eastern Time on T+1.
>
> - Interim Operational Data older than 15 days. "Interim Operational Data" means all processed, validated and unlinked data made available to regulators by T+1 at 12:00 p.m. ET and all iterations of processed data made available to regulators between T+1 and T+5, but excludes the final version of corrected data that is made available at T+5 at 8:00 a.m. ET. For the avoidance of doubt, "Interim Operational Data" does not include processed data relating to Options Market Maker quotes in Listed Options made available to regulators by T+1 at 12:00 p.m. ET.

[18] CAT Data is currently stored in three storage tiers: S3 Frequent Access, S3 Infrequent Access, and S3 Instant Archive Access. Data files that are either new or that have recently been read by regulatory users are stored in S3 Frequent Access. If a file is not read by a regulatory user for 30 days, then it moves to S3 Infrequent Access. Similarly, if a file is not read by a regulatory user for 90 days, then it moves to S3 Archive Instant Access. The Plan Processor currently anticipates that archived data would be restored to the S3 Frequent Access tier. Storage tiers are subject to change based on future technology developments and product offerings.

- All submission and feedback files older than 15 days.

In addition, as noted in Exhibit A of the Proposed Cost Savings Amendments, CAT LLC proposes to add the phrase "subject to the exceptions in Section 6.3 of Appendix D" to Section 6.5(b)(i)[19] and Section 1.4 of Appendix D.

C. Provision of an Interim CAT-Order-ID on an "As Requested" Basis

The CAT NMS Plan currently requires the Plan Processor to provide an interim CAT-Order-ID by T+1 at 9 p.m. ET, even where no regulatory need exists.[20] With respect to this requirement, the Commission has previously invited the Participants "to develop alternative solutions that achieve the regulatory goals of Rule 613 and the CAT NMS Plan in a more cost-effective manner," noting that "the Commission emphasizes its willingness to consider such alternative solutions in the form of a proposed CAT NMS Plan amendment."[21]

CAT LLC originally proposed to provide an interim CAT-Order-ID on an "as requested" basis, which would have saved approximately $2 million annually. This alternative solution would have preserved the Commission's ability to obtain an interim CAT-Order-ID promptly upon request, while avoiding the substantial cost of delivering an interim CAT-Order-ID on a regular ongoing basis even where no regulatory need exists. CAT LLC would have added a separate line item to its budget to reflect costs attributable to SEC requests to generate an interim CAT-Order-ID.

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19 The Proposed Cost Savings Amendments inadvertently referred to Section 6.5(d)(i); however, Exhibit A of the Proposed Cost Savings Amendments accurately reflected the addition of the phrase "subject to the exceptions in Section 6.3 of Appendix D" to Section 6.5(b)(i) as intended.

20 See Exchange Act Release No. 98848 (Nov. 2, 2023), 88 Fed. Reg. 77128 (Nov. 8, 2023) (granting exemptive relief from the requirement set forth in appendix D, section 6.1 of the CAT NMS Plan that lifecycle linkages be created by T+1 at noon ET).

21 Exchange Act Release No. 95234 (July 8, 2022), 87 Fed. Reg. 42247, 42248 (July 14, 2022).

However, after discussions with the Staff, CAT LLC is withdrawing this proposal. Accordingly, the prior changes to Section 6.1 of Appendix D relating to this proposal have been eliminated. The Participants continue to believe that the approximate $2 million in annual savings associated with the proposal substantially outweigh the minimal regulatory impact. Subject to further discussions with the Staff, the Participants will consider whether to re-propose this proposal in a future cost savings amendment.

II. Additional Details Regarding Calculation of $21 Million in Estimated Annual Savings

The Commission requested "additional details and underlying calculations used to estimate the cost savings as well as information on the costs to the Plan Processor of implementing each element of each of the proposed amendments (e.g., some amendments would require coding changes, which would impose costs)."[22]

The Proposed Cost Savings Amendments and the SRO Letter include detailed information regarding how the cost savings estimates were calculated, which CAT LLC is further supplementing below. As previously described, all cost savings estimates are based on reasonable assumptions related to, among other factors, the current state and costs of CAT operations; current CAT NMS Plan requirements; reporting by Participants, Industry Members and market data providers; observed data rates and volumes; current discounts, reservations, and cost savings plans; and associated cloud fees.[23] CAT LLC believes that the cost savings estimates and assumptions are reasonable and provide an adequate basis for the Commission to evaluate the costs and benefits of the Cost Savings Amendments.

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22 OIP at 58847.

23 See Proposed Cost Savings Amendments at 2 n.5.

One-time implementation costs are expected to be minimal relative to overall cost savings. Implementation costs may vary based on various factors, including the details of any requirements in any final amendment approved by the Commission and any changes in labor costs. One-time implementation costs will generally consist of Plan Processor labor costs associated with coding and software development, as well as any related cloud fees associated with the development, testing and load testing of the proposed changes. Ongoing operational costs, other than cloud hosting costs, will not be affected by the proposed amendments.

1. Processing, Storage, and Query Requirements for Options Market Maker Quotes in Listed Options: Estimated Annual Savings of $20 Million

The Proposed Cost Savings Amendments would save approximately $20 million annually by changing certain processing, query, and storage requirements that would otherwise apply to Options Market Maker quotes in Listed Options.

Processing Requirements. The Plan Processor estimates that approximately $12 million in savings would be attributable to linkage processing and data processing reductions, assuming 22 processing days per month for a total of 264 processing days in a year and based on data volumes observed in the first half of 2024. Linkage processing costs would be reduced from approximately $27,000 per day to $0 per day, resulting in estimated annual linkage processing savings of $7,128,000 ($27,000/day x 264 days). Data processing costs (i.e., costs attributable to data ingestion and preparation and publication of data versions to the relevant regulatory interfaces) would be reduced from approximately $27,000 per day to $9,000 per day, resulting in estimated annual data processing savings of $4,752,000 ($18,000/day x 264 days). In the aggregate, linkage processing and data processing savings would total $11,880,000, or approximately $12 million, based on data volumes observed in the first half of 2024. If data

volumes continue to increase as they have historically, the associated costs avoided would similarly increase.

Storage Requirements. The Plan Processor estimates that approximately $8 million in savings would be attributable to the reduction in the storage footprint for Options Market Maker quotes in Listed Options through the elimination of versioned quote data (i.e., T+2 8 am ET, T+5 8 am ET, DIVER and OLA copies). The $8 million in savings assumes a reduction of the current production storage footprint of approximately 37.5 petabytes (PB) per month based on data volumes from the first half of 2024 to approximately 9 PB per month spread across the S3 Intelligent Tiers (Frequent Access, Infrequent Access, and Archive Instant Access).[24]

Query Requirements. As described in the SRO Letter, the Plan Processor estimates that the continued optimization of Options Market Maker quotes in Listed Options to make them available via DIVER would cost approximately $2.8 million per year. This estimate consists of (i) $2.2 million per year in compute costs for producing the DIVER-specific hash partition copy of Options Market Maker quotes;[25] and (ii) $600,000 per year in storage costs for one

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[24] Specific to storage cost estimates, S3 Intelligent Tier storage fees in production are allocated at a ratio of 1 (S3 Frequent Access) : 1 (S3 Infrequent Access) : 8 (S3 Archive Instant Access). This ratio describes the current percentage distribution of data files between storage tiers, which is driven by regulatory usage. Data files that are either new or that have recently been read by regulatory users are stored in S3 Frequent Access. If a file is not read by a regulatory user for 30 days, then it moves to S3 Infrequent Access. Similarly, if a file is not read by a regulatory user for 90 days, then it moves to S3 Archive Instant Access. Based on current observed regulatory usage, the Plan Processor's storage cost model is based on a 1:1:8 ratio across the S3 storage tiers. If regulatory users begin to read more older data files, then those files would be moved up to S3 Frequent Access, and the 1:1:8 ratio between the S3 storage tiers would change. Because each S3 storage tier has its own cost-per-petabyte of data, any change in the 1:1:8 ratio based on regulatory usage would affect storage costs.

[25] The $2.2 million estimate was calculated by multiplying (x) the cost of DIVER-specific ETL jobs for Options Market Maker quotes, which is approximately $13,500 per day, by (y) a 65 percent allocation of compute time toward Options Market Maker quotes for Participant options data and multiplying that result by (z) 252 trading days in a year.

year's worth of DIVER-specific copies of Options Market Maker quotes.[26] These amounts are included in the processing and storage estimates described above.

2. Storage for Raw Unprocessed Data and Interim Operational Copies of CAT Data Older Than 15 Days: Estimated Annual Savings of $1 Million

The Proposed Cost Savings Amendments would save approximately $1 million annually by permitting the Plan Processor to move raw unprocessed data (i.e., as-submitted data) and interim operational data older than 15 days to a more cost-effective storage tier that is optimized for infrequent access.

The estimated $1 million in reduced storage costs are attributable to storage pricing for Glacier Deep Archive, currently the lowest storage tier available on AWS cloud, and are based on data volumes observed in the first half of 2024.[27]

CAT LLC reiterates that the affected data provides minimal regulatory value after the final corrected data version is delivered by T+5 at 8 a.m. ET. When a regulator queries CAT data, the CAT provides results to the user based on the latest, most current version of the data. As required by the CAT NMS Plan, prior to 12:00 p.m. on T+1, raw unprocessed data (i.e., as-submitted data) that has been ingested by the Plan Processor must be available to Participants' regulatory staff and the SEC. Between T+1 and T+5, the CAT query tools will return the latest iteration of processed data available. Any interim data versions are ultimately supplanted in all

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[26] The $600,000 estimate was calculated by multiplying (x) the total storage of DIVER-specific copies, which is 0.0542 petabytes per day by (y) a 90 percent allocation of storage toward Options Market Maker quotes based on record volume and multiplying that result by (z) 252 trading days in a year.

[27] The affected data currently represents approximately 52% of the daily storage footprint in CAT. Specifically, raw unprocessed data (i.e., as-submitted data) represents approximately 16% of the daily storage footprint, and interim operational copies (i.e., T+1 12 pm ET, T+1 9 pm ET, and associated DIVER copies) represent approximately 36% of the daily storage footprint.

CAT query tools by the final version of corrected data that is made available at T+5 at 8:00 a.m. ET. Accordingly, raw unprocessed data and the various iterations of interim operational data delivered between T+1 and T+5 provide minimal regulatory value after T+5, and regulators are unlikely to access this data after T+5. Currently, regulators may access such data "without manual intervention" as required by the CAT NMS Plan via the use of CAT data management APIs, but after four years of operation, the Plan Processor has not seen any regulatory usage of this data.

CAT LLC further reiterates that it is not proposing to delete this data; rather, it is only asking the Commission to allow the Plan Processor to move this data to a more cost-effective storage tier requiring some "manual intervention" in order to save $1 million annually. Upon request by the Staff to the CAT Help Desk, archived data would be restored by the Plan Processor to an accessible storage tier, at which point it would be available and searchable electronically by the Staff in the same manner it is today.

3. Provision of an Interim CAT-Order-ID on an "As Requested" Basis: Estimated Annual Savings of $2 Million

As noted above, after discussions with the Staff, the proposal to provide an interim CAT-Order-ID to the Commission on an "as requested" basis has been withdrawn. Accordingly, the $2 million in annual cost savings associated with this proposal have been eliminated. The Plan Processor will continue to be required to produce an interim CAT-Order-ID on a daily basis.

III. Additional Responses to OIP

A. Processing, Query, and Storage Requirements for Options Market Maker Quotes in Listed Options

Under the Proposed Cost Savings Amendments, Options Market Maker quotes in Listed Options will no longer be subject to enrichment processing. The Commission requested, "in addition to the three 'Eliminated [Enrichments]' discussed in the SRO Letter, . . . more

information on data elements—namely, a list of fields and variables for various event types in current CAT Data—that would no longer be directly available, would only be available indirectly (via notifications or making of requests to the Plan Processor or other entities), or would be available on a delay relative to today."[28]

As previously described, the following data elements will no longer be available in CAT under the Proposed Cost Savings Amendments:

- Derived Next Event Timestamp / Derived Next Event Epoch Timestamp
- CAT Lifecycle Sequence Number
- CAT Lifecycle ID (*i.e.*, CAT Order ID and Venue Order ID)[29]

In addition to the elements previously noted, the Derived Next Event Type Code will no longer be available under the proposed amendments.

In addition, the following processing enrichments, which can be characterized as linkage metadata, will no longer be available:

- Intra Venue Link Status Code
- Unlinked Indicator
- Lifecycle Assembly Date
- Associated Lifecycles

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28 OIP at 58847. As described in the SRO Letter, the "Eliminated Enrichments" are "(i) derived next event timestamp; (ii) lifecycle sequence number; and (iii) the CAT Lifecycle ID." SRO Letter at 5. See also Proposed Cost Savings Amendments at 4; Notice at 26985.

29 The CAT Order ID is the lifecycle ID across all CAT Reporters whereas the Venue Order ID is the lifecycle ID within a single CAT Reporter. Because option quote events only exist within a single CAT Reporter, the CAT Order ID and Venue Order ID are identical for such events.

As reflected in the proposed amendment as revised, upon request of the SEC or any Participant, the Plan Processor will provide the existing code required to derive any eliminated data elements from the unprocessed data.

Finally, the Staff requested information regarding how the "Top Indicator" data element would be affected under the proposed amendments. Plan Participant events do not represent the top of a lifecycle. Accordingly, the "Top Indicator" is not an enrichment available on Plan Participant events.

B. Provision of an Interim CAT-Order-ID on an "As Requested" Basis

The Commission requested certain additional information regarding the proposal to provide an interim CAT-Order-ID on an "as requested" basis.[30] As noted above, this proposal has been withdrawn after discussions with the Staff. Therefore, CAT LLC believes it is no longer necessary to respond to this portion of the OIP.

IV. Solicitation of Comments

The Commission seeks comments on the proposed additional revisions to the Proposed Cost Savings Amendments. Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed additional revisions to the Proposed Cost Savings Amendments are consistent with the Exchange Act. Comments may be submitted by any of the following methods:

Electronic Comments:

- Use the Commission's Internet comment form (http://www.sec.gov/rules/sro.shtml); or

30 OIP at 58847.

- Send an e-mail to rule-comments@sec.gov. Please include File Number 4-698 on the subject line.

Paper Comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number 4-698. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the Proposed Cost Savings Amendments that are filed with the Commission, and all written communications relating to the Proposed Cost Savings Amendments between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the Participants' offices. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment

submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number 4-698 and should be submitted on or before [insert date 21 days after publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[31]

Sherry R. Haywood,

Assistant Secretary.

[31] 17 CFR 200.30-3(a)(85).

EXHIBIT A

Cumulative Proposed Revisions to CAT NMS Plan

Additions **underlined**; deletions **[bracketed]**

* * * * *

ARTICLE VI

FUNCTIONS AND ACTIVITIES OF CAT SYSTEM

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Section 6.5. Central Repository.

. . .

(b) Retention of Data.

(i) Consistent with Appendix D, Data Retention Requirements, the Central Repository shall retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of SEC Rule 613 in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention by the Plan Processor for a period of not less than six (6) years**, subject to the exceptions in Section 6.3 of Appendix D**. Such data when available to the Participant regulatory staff and the SEC shall be linked.

(ii) The Plan Processor shall implement and comply with the records retention policy contemplated by Section 6.1(d)(i) (as such policy is reviewed and updated periodically in accordance with Section 6.1(d)(i)).

* * * * *

APPENDIX D

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1.2 Technical Environments

The architecture must include environments for production, development, quality assurance testing, disaster recovery, industry-wide coordinated testing, and individual on-going CAT Reporter testing. The building and introduction of environments available to CAT Reporters may be phased in to align with the following agreed upon implementation milestones:

- Development environment – the development environment must be created to build, develop, and maintain enhancements and new requirements. This environment must be separate from those listed below.

- Quality assurance environment – a quality assurance (QA) environment must be created to allow simulation and testing of all applications, interfaces, and data integration points contained in the CAT System.

    - The QA environment shall be able to simulate end-to-end production functionality and perform with the same operational characteristics, including processing speed, as the production environment.
    - The QA environment shall support varied types of changes, such as, but not limited to, the following:

        - Application patches;
        - Bug fixes;
        - Operating system upgrades;
        - Introduction of new hardware or software components;
        - New functionality;
        - Network changes;
        - Regression testing of existing functionality;
        - Stress or load testing (simulation of production-level usage); and
        - Recovery and failover.

    - A comprehensive test plan for each build and subsequent releases must be documented.

- Production environment – fully operational environment that supports receipt, ingestion, processing and storage of CAT Data. Backup/disaster recovery components must be included as part of the production environment.

- Industry test environment –

    - The Plan Processor must provide an environment supporting industry testing (test environment) that is functionally equivalent to the production environment, including:

- End-to-end functionality (e.g., data validation, processing, linkage, error identification, correction and reporting mechanism) from ingestion to output, sized to meet the standards of the production SLA;
- Performance metrics that mirror the production environment; and
- Management with the same information security policies applicable to the production environment.

- The industry test environment must also contain functionality to support industry testing, including:

  - Minimum availability of 24x6;
  - Replica of production data when needed for testing;
  - Data storage sized to meet varying needs, dependent upon scope and test scenarios; and
  - Support of two versions of code (current and pending).

- The industry test environment must support the following types of industry testing:

  - Technical upgrades made by the Plan Processor;
  - CAT code releases that impact CAT Reporters;
  - Changes to industry data feeds (e.g., SIP, OPRA, etc.);
  - Industry-wide disaster recovery testing;
  - Individual CAT Reporter and Data Submitter testing of their upgrades against CAT interfaces and functionality; and
  - Multiple, simultaneous CAT Reporter testing.

- The industry test environment must be a discrete environment separate from the production environment.
- The Plan Processor must provide the linkage processing of data submitted during coordinated, scheduled, industry-wide testing. Results of the linkage processes must be communicated back to Participants as well as to the Operating Committee.
- Data from industry testing must be saved for three months. **Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1, such test data (whether related to the CAT order and transaction system or the customer account and information system) may be deleted by the Plan Processor after three months.** Operational metrics associated with industry testing (including but not limited to testing results, firms who participated, and amount of data reported and linked) must be stored for the same duration as the CAT production data.

- The Plan Processor must provide support for industry testing, including testing procedures, coordination of industry testing, publish notifications, and provide help desk support during industry testing.
- The Participants and the SEC must have access to industry test data.

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1.4 Data Retention Requirements

The Plan Processor must develop a formal record retention policy and program for the CAT, to be approved by the Operating Committee, which will, at a minimum:

- Contain requirements associated with data retention, maintenance, destruction, and holds;
- Comply with applicable SEC record-keeping requirements;
- Have a record hold program where specific CAT Data can be archived offline for as long as necessary;
- Store and retain both raw data submitted by CAT Reporters and processed data; and
- Make data directly available and searchable electronically without manual intervention for at least six years**, subject to the exceptions in Section 6.3 of Appendix D**.

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3. Reporting and Linkage Requirements

All CAT Data reported to the Central Repository must be processed and assembled to create the complete lifecycle of each Reportable Event. Reportable Events must contain data elements sufficient to ensure the same regulatory coverage currently provided by existing regulatory reporting systems that have been identified as candidates for retirement.

Additionally, the Central Repository must be able to:

- Assign a unique CAT-Reporter-ID to all reports submitted to the system based on sub-identifiers, (e.g., MPIDs, ETPID, trading mnemonic) currently used by CAT Reporters in their order handling and trading processes.

- Handle duplicate sub-identifiers used by members of different Participants to be properly associated with each Participant.

- Generate and associate one or more Customer-IDs with all Reportable Events representing new orders received from a Customer(s) of a CAT Reporter. The Customer-ID(s) will be generated from a Firm Designated ID provided by the CAT Reporter for each such event, which will be included on all new order events.

- Accept time stamps on order events handled electronically to the finest level of granularity captured by CAT Reporters. Additionally, the CAT must be able to expand the time stamp field to accept time stamps to an even finer granularity as trading systems expand to capture time stamps in ever finer granularity. The Plan Processor must normalize all processed date/time CAT Data into a standard time zone/format.

In addition, the data required from CAT Reporters will include all events and data elements required by the Plan Processor in the Technical Specifications to build the:

- Life cycle of an order for defined events within a CAT Reporter;

- Life cycle of an order for defined events intra-CAT Reporter; and

- State of all orders across all CAT Reporters at any point in time.

The Plan Processor must use the "daisy chain approach" to link and create the order lifecycle. In the daisy chain approach, a series of unique order identifiers, assigned to all order events handled by CAT Reporters are linked together by the Central Repository and assigned a single CAT-generated CAT-Order-ID that is associated with each individual order event and used to create the complete lifecycle of an order.

By using the daisy chain approach the Plan Processor must be able to link all related order events from all CAT Reporters involved in the lifecycle of an order. At a minimum, the Central Repository must be able to create the lifecycle between:

- All order events handled within an individual CAT Reporter, including orders routed to internal desks or departments with different functions (e.g., an internal ATS);

- Customer orders to "representative" orders created in firm accounts for the purpose of facilitating a customer order (e.g., linking a customer order handled on a riskless principal basis to the street-side proprietary order);

- Orders routed between broker-dealers;

- Orders routed from broker-dealers to exchanges;

- Orders sent from an exchange to its routing broker-dealer;

- Executed orders and trade reports;

- Various legs of option/equity complex orders; and

- Order events for all equity and option order handling scenarios that are currently or may potentially be used by CAT Reporters, including:

    - Agency route to another broker-dealer or exchange;
    - Riskless principal route to another broker-dealer or exchange capturing within the lifecycle both the customer leg and street side principal leg;
    - Orders routed from one exchange through a routing broker-dealer to a second exchange;
    - Orders worked through an average price account capturing both the individual street side execution(s) and the average price fill to the Customer;
    - Orders aggregated with other orders for further routing and execution capturing both the street side executions for the aggregated order and the fills to each customer order;
    - Complex orders involving one or more options legs and an equity leg, with a linkage between the option and equity legs;
    - Complex orders containing more legs than an exchange's order management system can accept, causing the original order to be broken into multiple orders;
    - Orders negotiated over the telephone or via a negotiation system;
    - Orders routed on an agency basis to a foreign exchange;
    - Execution of customer order via allocation of shares from a pre-existing principal order;
    - Market maker quotes; and
    - Complex orders involving two or more options legs.

Additionally, the Central Repository must be able to:

- Link each order lifecycle back to the originating Customer;

- Integrate and appropriately link reports representing repairs of original submissions that are rejected by the CAT due to a failure to meet a particular data validation;

- Integrate into the CAT and appropriately link reports representing records that are corrected by a CAT Reporter for the purposes of correcting data errors not identified in the data validation process;

- Assign a single CAT-Order-ID to all events contained within the lifecycle of an order so that regulators can readily identify all events contained therein; and

- Process and link Manual Order Events with the remainder of the associated order lifecycle.

As described in Section 3.4 of Appendix D, Options Market Maker quotes in Listed Options will be subject to ingestion only and will not be subject to any linkage requirements.

. . .

3.4 Requirements for Options Market Maker Quotes in Listed Options

The provisions of this section shall govern the processing and storage of Options Market Maker quotes in Listed Options and shall override any conflicting provisions in the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1.

Options Market Maker quotes in Listed Options must be reported to the Central Repository as provided under Section 6.4(d)(iii) of the CAT NMS Plan. This data will undergo ingestion validation only and such unlinked data will be made available to regulators by T+1 at 12:00 p.m. Eastern Time. Options Market Maker quotes in Listed Options will not be subject to any requirement to link and create an order lifecycle, and will not undergo any linkage validation, linkage feedback, or lifecycle enrichment processing, but will undergo ingestion validation. Options Market Maker quotes in Listed Options will be accessible through BDSQL and Direct Read interfaces only and will not be accessible through the online targeted query tool.

Upon request of the SEC or any Participant, the Plan Processor will provide the business and technical requirements needed to re-create the eliminated enrichments, as well as the code (which is unique to the Plan Processor's linkage implementation) existing as of the effective date of this provision used to derive the eliminated enrichments. The Plan Processor will not maintain the business and technical requirements and the code following the effective date of this provision, but it will retain a copy so that they may be provided to any regulators that might request them in the future.

. . .

6.1 Data Processing

CAT order events must be processed within established timeframes to ensure data can be made available to Participants' regulatory staff and the SEC in a timely manner. The processing timelines start on the day the order event is received by the Central Repository for processing.
Most events must be reported to the CAT by 8:00 a.m. Eastern Time the Trading Day after the order event occurred (referred to as transaction date). The processing timeframes below are

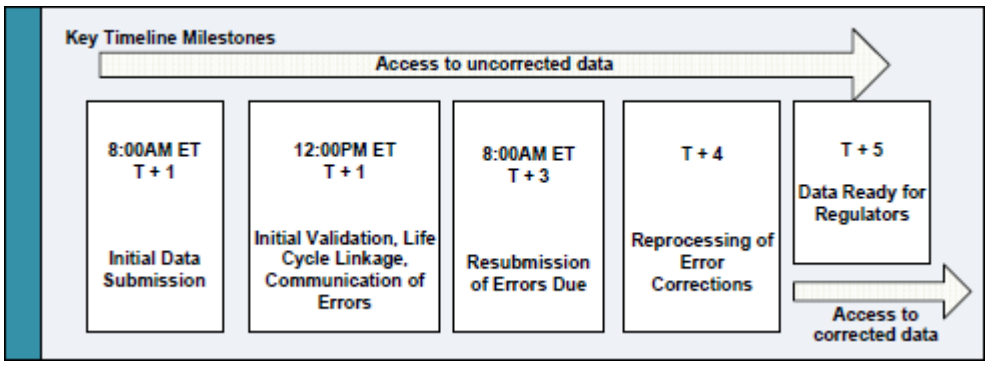
presented in this context. All events submitted after T+1 (either reported late or submitted later because not all of the information was available) must be processed within these timeframes based on the date they were received.

The Participants require the following timeframes (Figure A) for the identification, communication and correction of errors from the time an order event is received by the processor:

- Noon Eastern Time T+1 (transaction date + one day) – Initial data validation, lifecycle linkages and communication of errors to CAT Reporters;
- 8:00 a.m. Eastern Time T+3 (transaction date + three days) – Resubmission of corrected data; and
- 8:00 a.m. Eastern Time T+5 (transaction date + five days) – Corrected data available to Participant regulatory staff and the SEC.

Late submissions or re-submissions (after 8:00 a.m.) may be considered to be processed that day if it falls within a given time period after the cutoff. This threshold will be determined by the Plan Processor and approved by the Operating Committee. In the event that a significant portion of the data has not been received as monitored by the Plan Processor, the Plan Processor may decide to halt processing pending submission of that data.

Figure A: CAT Central Repository Data Processing Timelines



For the avoidance of doubt, processing and storage of Options Market Maker quotes in Listed Options shall be governed by Section 3.4 of Appendix D.

. . .

6.3 Exceptions to Data Availability Requirements

Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1, the following types of data may be retained in an archive storage tier. Archived data is not directly available and searchable electronically without manual intervention and will not be subject to any query tool performance requirements until it is restored to an accessible storage tier. The Plan Processor will restore archived data to an accessible storage tier upon request to the CAT Help Desk by an authorized regulatory user from the Participants or a senior officer from the SEC.

- **Raw Unprocessed Data older than 15 days. "Raw Unprocessed Data" means data that has been ingested by the Plan Processor and made available to regulators prior to 12:00 p.m. Eastern Time on T+1.**

- **Interim Operational Data older than 15 days. "Interim Operational Data" means all processed, validated and unlinked data made available to regulators by T+1 at 12:00 p.m. ET and all iterations of processed data made available to regulators between T+1 and T+5, but excludes the final version of corrected data that is made available at T+5 at 8:00 a.m. ET. For the avoidance of doubt, "Interim Operational Data" does not include processed data relating to Options Market Maker quotes in Listed Options made available to regulators by T+1 at 12:00 p.m. ET.**

- **All submission and feedback files older than 15 days.**

. . .

8.1 Regulator Access

The Plan Processor must provide Participants' regulatory staff and the SEC with access to all CAT Data for regulatory purposes only. Participants' regulatory staff and the SEC will access CAT Data to perform functions, including economic analyses, market structure analyses, market surveillance, investigations, and examinations.

The CAT must be able to support, at a minimum, 3,000 regulatory users within the system. It is estimated that approximately 20% of all users will use the system on a daily or weekly basis while approximately 10% of all users will require advanced regulator-user access, as described below. Furthermore, it is estimated that there may be approximately 600 concurrent users accessing the CAT at any given point in time. These users must be able to access and use the system without an unacceptable decline in system performance.[29]

[29] Specific performance requirements will be included in the SLA.

As stated in Appendix D, Data Security, the Plan Processor must be able to support an arbitrary number of user roles. Defined roles must include, at a minimum:

- Basic regulator users – Individuals with approved access who plan to use the Central Repository to run basic queries (e.g., pulling all trades in a single stock by a specific party).

- Advanced regulator users – Individuals with approved access who plan to use the Central Repository to construct and run their own complex queries.

Regulators will have access to processed CAT Data through two different methods, an online-targeted query tool and user-defined direct queries and bulk extracts.

As described in Section 3.4 of Appendix D, Options Market Maker quotes in Listed Options will be accessible through BDSQL and Direct Read interfaces only and will not be accessible through the online targeted query tool.

EXHIBIT B

Proposed Additional Revisions to Changes in Proposed Cost Savings Amendment

Additions **underlined**; deletions **[bracketed]**

* * * * *

APPENDIX D

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3. Reporting and Linkage Requirements

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As described in Section 3.4 of Appendix D, Options Market Maker **[Quotes]quotes** in Listed Options **[and related Reportable Events]** will be subject to ingestion only and will not be subject to any linkage requirements.

. . .

3.4 Requirements for Options Market Maker Quotes in Listed Options

The provisions of this section shall govern the processing and storage of Options Market Maker **[Quotes]quotes** in Listed Options **[and related Reportable Events]** and shall override any conflicting provisions in the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1.

Options Market Maker **[Quotes]quotes** in Listed Options must be reported to the Central Repository as provided under Section 6.4(d)(iii) of the CAT NMS Plan. This data will undergo ingestion **validation** only and such unlinked data will be made available to regulators by T+1 at 12:00 p.m. Eastern Time. Options Market Maker **[Quotes]quotes** in Listed Options will not be subject to any requirement to link and create an order lifecycle, and will not undergo any **linkage** validation, **linkage** feedback, **[linkage,]** or **lifecycle** enrichment processing**, but will undergo ingestion validation**. Options Market Maker **[Quotes]quotes** in Listed Options will be accessible through BDSQL and Direct Read interfaces only and will not be accessible through the online targeted query tool.

Upon request of the SEC or any Participant, the Plan Processor will provide the business and technical requirements needed to re-create the eliminated enrichments, as well as the code (which is unique to the Plan Processor's linkage implementation) existing as of the effective date of this provision used to derive the eliminated enrichments. The Plan Processor will not maintain the business and technical requirements and the code following the effective date of this provision, but it will retain a copy so that they may be provided to any regulators that might request them in the future.

. . .

6.1 Data Processing

CAT order events must be processed within established timeframes to ensure data can be made available to Participants' regulatory staff and the SEC in a timely manner. The processing timelines start on the day the order event is received by the Central Repository for processing.
Most events must be reported to the CAT by 8:00 a.m. Eastern Time the Trading Day after the order event occurred (referred to as transaction date). The processing timeframes below are presented in this context. All events submitted after T+1 (either reported late or submitted later because not all of the information was available) must be processed within these timeframes based on the date they were received.

The Participants require the following timeframes (Figure A) for the identification, communication and correction of errors from the time an order event is received by the processor:

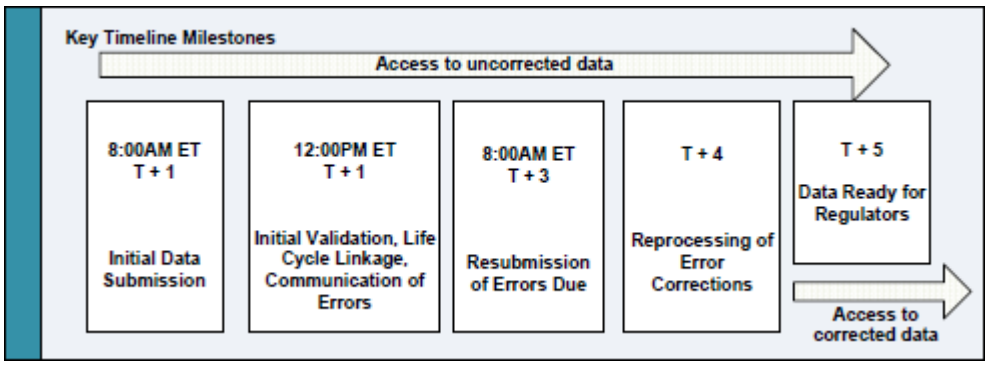
- Noon Eastern Time T+1 (transaction date + one day) – Initial data validation**, lifecycle linkages** and communication of errors to CAT Reporters;

- 8:00 a.m. Eastern Time T+3 (transaction date + three days) – Resubmission of corrected data; and

- 8:00 a.m. Eastern Time T+5 (transaction date + five days) – Corrected data available to Participant regulatory staff and the SEC.

Late submissions or re-submissions (after 8:00 a.m.) may be considered to be processed that day if it falls within a given time period after the cutoff. This threshold will be determined by the Plan Processor and approved by the Operating Committee. In the event that a significant portion of the data has not been received as monitored by the Plan Processor, the Plan Processor may decide to halt processing pending submission of that data.

Figure A: CAT Central Repository Data Processing Timelines



[{changes to second box in chart: 12:00 PM ET T+1 Initial Validation, Life Cycle Linkage, Communication of Errors}]

[Where there is an immediate regulatory need (for example, in the case of a major market event), upon request of a senior officer of the Division of Trading and Markets, the Division of Enforcement, or the Division of Examinations to CAT LLC, the Plan Processor shall be directed to create an interim CAT-Order-ID and make it available to regulators by T+1 at 9 p.m. ET if the request is received prior to T+1 at 8 a.m. ET, or generally within 14 hours of receiving the request if such request was received after T+1 at 8 a.m. ET.]

For the avoidance of doubt, processing and storage of Options Market Maker **[Quotes]**<u>**quotes**</u> in Listed Options **[and related Reportable Events]** shall be governed by Section 3.4 of Appendix D.

. . .

<u>6.3 Exceptions to Data Availability Requirements</u>

Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or Exchange Act Rule 17a-1, the following types of data may be retained in an archive storage tier**[, in which case they will be made available upon request by Participant regulatory staff or the SEC to the CAT Help Desk]**. Archived data is not directly available and searchable electronically without manual intervention and will not be subject to any query tool performance requirements until it is restored to an accessible storage tier. <u>**The Plan Processor will restore archived data to an accessible storage tier upon request to the CAT Help Desk by an authorized regulatory user from the Participants or a senior officer from the SEC.**</u>

- **[All raw unprocessed data (i.e., as submitted data) and interim operational data older than 15 days. Interim operational data includes all processed, validated and unlinked data made available to regulators by T+1 at 12:00 p.m. ET, and all**

iterations of processed data made available to regulators between T+1 and T+5, but excludes the final version of corrected data that is made available at T+5 at 8:00 a.m. ET.]Raw Unprocessed Data older than 15 days. "Raw Unprocessed Data" means data that has been ingested by the Plan Processor and made available to regulators prior to 12:00 p.m. Eastern Time on T+1.

- **Interim Operational Data older than 15 days. "Interim Operational Data" means all processed, validated and unlinked data made available to regulators by T+1 at 12:00 p.m. ET and all iterations of processed data made available to regulators between T+1 and T+5, but excludes the final version of corrected data that is made available at T+5 at 8:00 a.m. ET. For the avoidance of doubt, "Interim Operational Data" does not include processed data relating to Options Market Maker quotes in Listed Options made available to regulators by T+1 at 12:00 p.m. ET.**

- All submission and feedback files older than 15 days.

. . .

8.1 Regulator Access

. . .

As described in Section 3.4 of Appendix D, Options Market Maker **[Quotes]quotes** in Listed Options **[and related Reportable Events]** will be accessible through BDSQL and Direct Read interfaces only and will not be accessible through the online targeted query tool.