Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * 374

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 19b-4

File No. * SR 2024 - * 34
Amendment No. (req. for Amendments *)

Filing by MEMX LLC

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial * ☑ Amendment * ☐ Withdrawal ☐

Section 19(b)(2) * ☐ Section 19(b)(3)(A) * ☑ Section 19(b)(3)(B) * ☐

Pilot ☐

Extension of Time Period for Commission Action * ☐

Date Expires *

Rule

☐ 19b-4(f)(1) ☐ 19b-4(f)(4)
☑ 19b-4(f)(2) ☐ 19b-4(f)(5)
☐ 19b-4(f)(3) ☐ 19b-4(f)(6)

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010

Section 806(e)(1) * ☐ Section 806(e)(2) * ☐

Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 3C(b)(2) * ☐

Exhibit 2 Sent As Paper Document ☐ Exhibit 3 Sent As Paper Document ☐

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Proposal to establish fees for Industry Members related to certain historical costs of the CAT NMS Plan.

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name * Anders Last Name * Franzon

Title * General Counsel

E-mail * afranzon@memx.com

Telephone * (551) 370-1003 Fax

Signature

Pursuant to the requirements of the Securities Exchange of 1934, MEMX LLC has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

Date 08/29/2024

By Lauren Strathman
(Name *)

(Title *)
Chief Compliance Officer

NOTE: Clicking the signature block at right will initiate digitally signing the form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

Digitally signed by Lauren Strathman
Date: 2024.08.29 13:42:52 -05'00'

Required fields are shown with yellow backgrounds and astericks.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

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August 2024 Historical CAT Assessm

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

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August 2024 Historical CAT Assessm

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A - Notice of Proposed Rule Change, Security-Based Swap Submission, or Advanced Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2- Notices, Written Comments, Transcripts, Other Communications

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Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

☐ Exhibit Sent As Paper Document

Exhibit 3 - Form, Report, or Questionnaire

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Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

☐ Exhibit Sent As Paper Document

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

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August 2024 Historical CAT Assessme

The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change

Partial Amendment

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If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1. Text of the Proposed Rule Change

(a) Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 ("Exchange Act" or "Act"),[1] MEMX LLC ("MEMX" or the "Exchange") is filing with the Securities and Exchange Commission ("SEC" or "Commission") a proposed rule change to establish fees for Industry Members[2] related to certain historical costs of the National Market System Plan Governing the Consolidated Audit Trail (the "CAT NMS Plan" or "Plan") incurred prior to January 1, 2022. These fees would be payable to Consolidated Audit Trail, LLC ("CAT LLC" or "the Company")[3] and referred to as Historical CAT Assessment 1, and would be described in a section of the Exchange's fee schedule entitled "Consolidated Audit Trail Funding Fees." The fee rate for Historical CAT Assessment 1 will be $0.000013 per executed equivalent share. CAT Executing Brokers will receive their first monthly invoice for Historical CAT Assessment 1 in November 2024 calculated based on their transactions as CAT Executing Brokers for the Buyer ("CEBB") and/or CAT Executing Brokers for the Seller ("CEBS") in October 2024. A notice of the proposed rule change for publication in the Federal Register is attached hereto as Exhibit 1, and the text of the proposed rule change is attached as Exhibit 5.

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1 15 U.S.C. 78s(b)(1).

2 An "Industry Member" is defined as "a member of a national securities exchange or a member of a national securities association." *See* Rule 4.5(u). *See also* Section 1.1 of the CAT NMS Plan. Unless otherwise specified, capitalized terms used in this rule filing are defined as set forth in the CAT NMS Plan and/or the CAT Compliance Rule. *See* Rule 4.5.

3 The term "CAT LLC" may be used to refer to Consolidated Audit Trail, LLC or CAT NMS, LLC, depending on the context.

(b) The Exchange does not believe that the proposed rule change will have any direct effect, or any significant indirect effect, on any other Exchange rule in effect at the time of this filing.

(c) Not applicable.

2. Procedures of the Self-Regulatory Organization

The proposed rule change was approved by Exchange staff pursuant to authority delegated to it by the Board of Directors of the Exchange (the "Board"). Exchange staff will advise the Board of any action taken pursuant to delegated authority. No further action is required under the Exchange's governing documents. Therefore, the Exchange's internal procedures with respect to the proposed rule change are complete.

The persons on the Exchange staff prepared to respond to questions and comments on the proposed rule change are:

Anders Franzon
General Counsel
MEMX LLC
(551) 370-1003

Ikee Gardner
Counsel
MEMX LLC
(551) 370-1019

3. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

a. Purpose

On July 11, 2012, the Commission adopted Rule 613 of Regulation NMS, which required the self-regulatory organizations ("SROs") to submit a national market system ("NMS") plan to create, implement and maintain a consolidated audit trail that would capture customer and order event information for orders in NMS securities across all markets, from the time of order inception through routing, cancellation, modification or

execution.[4] On November 15, 2016, the Commission approved the CAT NMS Plan.[5] Under the CAT NMS Plan, the Operating Committee has the discretion to establish funding for CAT LLC to operate the CAT, including establishing fees for Industry Members to be assessed by CAT LLC that would be implemented on behalf of CAT LLC by the Participants.[6] The Operating Committee adopted a revised funding model to fund the CAT ("CAT Funding Model"). On September 6, 2023, the Commission approved the CAT Funding Model, after concluding that the model was reasonable and that it satisfied the requirements of Section 11A of the Exchange Act and Rule 608 thereunder.[7]

The CAT Funding Model provides a framework for the recovery of the costs to create, develop and maintain the CAT, including providing a method for allocating costs to fund the CAT among Participants and Industry Members. The CAT Funding Model establishes two categories of fees: (1) CAT fees assessed by CAT LLC and payable by certain Industry Members to recover a portion of historical CAT costs previously paid by the Participants ("Historical CAT Assessment" fees); and (2) CAT fees assessed by CAT LLC and payable by Participants and Industry Members to fund prospective CAT costs ("Prospective CAT Costs" fees).[8]

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4 Securities Exchange Act Rel. No. 67457 (July 18, 2012), 77 Fed. Reg. 45721 (Aug. 1, 2012) ("Rule 613 Adopting Release").

5 Securities Exchange Act Rel. No. 79318 (Nov. 15, 2016), 81 Fed. Reg. 84696 (Nov. 23, 2016) ("CAT NMS Plan Approval Order").

6 Section 11.1(b) of the CAT NMS Plan.

7 Securities Exchange Act Rel. No. 98290 (Sept. 6, 2023), 88 Fed. Reg. 62628 (Sept. 12, 2023) ("CAT Funding Model Approval Order").

8 Under the CAT Funding Model, the Operating Committee may establish one or more Historical CAT Assessments. Section 11.3(b) of the CAT NMS Plan. This filing only establishes Historical CAT Assessment 1 related to certain Historical CAT Costs as described herein; it does not address any other potential Historical CAT Assessment related to other Historical CAT Costs. In addition,

Under the CAT Funding Model, "[t]he Operating Committee will establish one or more fees (each a 'Historical CAT Assessment') to be payable by Industry Members with regard to CAT costs previously paid by the Participants ('Past CAT Costs')."[9] In establishing a Historical CAT Assessment, the Operating Committee will determine a "Historical Recovery Period" and calculate a "Historical Fee Rate" for that Historical Recovery Period. Then, for each month in which a Historical CAT Assessment is in effect, each CEBB and CEBS would be required to pay the fee – the Historical CAT Assessment – for each transaction in Eligible Securities executed by the CEBB or CEBS from the prior month as set forth in CAT Data, where the Historical CAT Assessment for each transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by one-third and by the Historical Fee Rate.[10]

Each Historical CAT Assessment to be paid by CEBBs and CEBSs is designed to contribute toward the recovery of two-thirds of the Historical CAT Costs. Because the Participants previously have paid Past CAT Costs via loans to the Company, the Participants would not be required to pay any Historical CAT Assessment. In lieu of a Historical CAT Assessment, the Participants' one-third share of Historical CAT Costs will be paid by the cancellation of loans made by the Participants to the Company on a

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under the CAT Funding Model, the Operating Committee also may establish CAT Fees related to CAT costs going forward. Section 11.3(a) of the CAT NMS Plan. This filing does not address any potential CAT Fees related to CAT costs going forward. Any such other fee for any other Historical CAT Assessment or CAT Fee for Prospective CAT Costs will be subject to a separate fee filing.

9 Section 11.3(b) of the CAT NMS Plan.

10 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, the proposed recovery of the Past CAT Costs via the Historical CAT Assessment is reasonable." CAT Funding Model Approval Order at 62662.

pro rata basis based on the outstanding loan amounts due under the loans, instead of through the payment of a CAT fee.[11] In addition, the Participants also will be 100% responsible for certain Excluded Costs (as discussed below).

CAT LLC proposes to charge CEBBs and CEBSs (as described in more detail below) Historical CAT Assessment 1 to recover certain historical CAT costs incurred prior to January 1, 2022, in accordance with the CAT Funding Model. To implement this fee on behalf of CAT LLC, the CAT NMS Plan requires the Participants to "file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves, and such fees shall be labeled as 'Consolidated Audit Trail Funding Fees.'"[12] The Plan further states that "Participants will be required to file with the SEC pursuant to Section 19(b) of the Exchange Act a filing for each Historical CAT Assessment."[13] Accordingly, the purpose of this filing is to implement a Historical CAT Assessment on behalf of CAT LLC for Industry Members, referred to as Historical CAT Assessment 1, in accordance with the CAT NMS Plan.[14]

The Exchange previously filed a fee filing to implement Historical CAT Assessment 1. On February 13, 2024, the SEC published this prior filing for Historical CAT Assessment 1, temporarily suspended the fee filing, and instituted proceedings to

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11 Section 11.3(b)(ii) of the CAT NMS Plan.

12 Section 11.1(b) of the CAT NMS Plan.

13 Section 11.3(b)(iii)(B)(I) of the CAT NMS Plan.

14 Note that there may be one or more Historical CAT Assessments depending on the timing of the completion of the Financial Accountability Milestones, among other things. Section 11.3(b) of the CAT NMS Plan.

determine whether to approve or disapprove the fee filing.[15] The Exchange is withdrawing its original fee filing for Historical CAT Assessment 1. This Historical CAT Assessment 1 replaces the prior Historical CAT Assessment 1 that was previously filed with the Commission.

(1) CAT Executing Brokers

Historical CAT Assessment 1 will be charged to each CEBB and CEBS for each applicable transaction in Eligible Securities.[16] The CAT NMS Plan defines a "CAT Executing Broker" to mean:

> (a) with respect to a transaction in an Eligible Security that is executed on an exchange, the Industry Member identified as the Industry Member responsible for the order on the buy-side of the transaction and the Industry Member responsible for the sell-side of the transaction in the equity order trade event and option trade event in the CAT Data submitted to the CAT by the relevant exchange pursuant to the Participant Technical Specifications; and (b) with respect to a transaction in an Eligible Security that is executed otherwise than on an exchange and required to be reported to an equity trade reporting facility of a registered national securities association, the Industry Member identified as the executing broker and the Industry Member identified as the contra-side executing broker in the TRF/ORF/ADF transaction data event in the CAT Data submitted to the CAT by FINRA pursuant to the Participant Technical Specifications; provided, however, in those circumstances where there is a non-Industry Member identified as the contra-side executing broker in the

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15 *See* Exchange Act Release No. 99356 (January 17, 2024), 89 FR 10697 (February 13, 2024) (SR-MEMX-2024-01).

16 In its approval of the CAT Funding Model, the Commission determined that charging CAT fees to CAT Executing Brokers was reasonable. In reaching this conclusion the Commission noted that the use of CAT Executing Brokers is appropriate because the CAT Funding Model is based upon the calculation of *executed* equivalent shares, and, therefore, charging CAT Executing Brokers would reflect their executing role in each transaction. Furthermore, the Commission noted that, because CAT Executing Brokers are already identified in transaction reports from the exchanges and FINRA's equity trade reporting facilities recorded in CAT Data, charging CAT Executing Brokers could streamline the billing process. CAT Funding Model Approval Order at 62629.

TRF/ORF/ADF transaction data event or no contra-side executing broker is identified in the TRF/ORF/ADF transaction data event, then the Industry Member identified as the executing broker in the TRF/ORF/ADF transaction data event would be treated as CAT Executing Broker for the Buyer and for the Seller.[17]

The following fields of the Participant Technical Specifications indicate the CAT Executing Brokers for the transactions executed on an exchange.

Equity Order Trade (EOT)[18]

#	Field Name	Data Type	Description	Include Key
12.*n*.8/ 13.*n*.8	member	Member Alias	The identifier for the member firm that is responsible for the order on this side of the trade. Not required if there is no order for the side as indicated by the NOBUYID/NOSELLID instruction. This must be provided if orderID is provided.	C

Option Trade (OT)[19]

#	Field Name	Data Type	Description	Include Key
16.*n*.13 / 17.*n*.13	member	Member Alias	The identifier for the member firm that is responsible for the order	R

[17] Section 1.1 of the CAT NMS Plan. Note that CEBBs and CEBSs may, but are not required to, pass-through their CAT fees to their clients, who may, in turn, pass their fees to their clients until they are imposed ultimately on the account that executed the transaction. *See* CAT Funding Model Approval Order at 62649.

[18] *See* Table 23, Section 4.7 (Order Trade Event) of the CAT Reporting Technical Specifications for Plan Participants, Version 4.1.0-r21 (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 ("CAT Reporting Technical Specifications for Plan Participants").

[19] *See* Table 51, Section 5.2.5.1 (Simple Option Trade Event) of the CAT Reporting Technical Specifications for Plan Participants.

In addition, the following fields of the Participant Technical Specifications would indicate the CAT Executing Brokers for the transactions executed otherwise than on an exchange.

TRF/ORF/ADF Transaction Data Event (TRF)[20]

#	Field Name	Data Type	Description	Include Key
26	reportingExecutingMpid	Member Alias	MPID of the executing party	R
28	contraExecutingMpid	Member Alias	MPID of the contra-side executing party.	C

(2) Calculation of Historical Fee Rate 1

The Operating Committee determined the Historical Fee Rate to be used in calculating Historical CAT Assessment 1 ("Historical Fee Rate 1") by dividing the Historical CAT Costs for Historical CAT Assessment 1 ("Historical CAT Costs 1") by the projected total executed share volume of all transactions in Eligible Securities for the Historical Recovery Period for Historical CAT Assessment 1 ("Historical Recovery Period 1"), as discussed in detail below. Based on this calculation, the Operating Committee has determined that Historical Fee Rate 1 would be $0.00003994969693072937 per executed equivalent share. This rate is then divided by three and rounded to determine the fee rate of $0.000013 per executed equivalent share that will be assessed to CEBBs and CEBSs, as also discussed in detail below.

(A) Executed Equivalent Shares for Transactions in Eligible Securities

[20] *See* Table 61, Section 6.1 (TRF/ORF/ADF Transaction Data Event) of the CAT Reporting Technical Specifications for Plan Participants.

Under the CAT NMS Plan, for purposes of calculating each Historical CAT Assessment, executed equivalent shares in a transaction in Eligible Securities will be reasonably counted as follows: (1) each executed share for a transaction in NMS Stocks will be counted as one executed equivalent share; (2) each executed contract for a transaction in Listed Options will be counted based on the multiplier applicable to the specific Listed Options (*i.e.*, 100 executed equivalent shares or such other applicable multiplier); and (3) each executed share for a transaction in OTC Equity Securities shall be counted as 0.01 executed equivalent share.[21]

(B) Historical CAT Costs 1

The CAT NMS Plan states that "[t]he Operating Committee will reasonably determine the Historical CAT Costs sought to be recovered by each Historical CAT Assessment, where the Historical CAT Costs will be Past CAT Costs minus Past CAT Costs reasonably excluded from Historical CAT Costs by the Operating Committee. Each Historical CAT Assessment will seek to recover from CAT Executing Brokers two-thirds of Historical CAT Costs incurred during the period covered by the Historical CAT Assessment."[22] As described in detail below, Historical CAT Costs 1 would be $318,059,819. This figure includes Past CAT Costs of $401,312,909 minus certain Excluded Costs of $83,253,090. Participants collectively will remain responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67), plus the Excluded Costs

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21 Section 11.3(a)(i)(B) and 11.3(b)(i)(B) of the CAT NMS Plan. In approving the CAT Funding Model, the Commission concluded that "the use of executed equivalent share volume as the basis of the proposed cost allocation methodology is reasonable and consistent with the approach taken by the funding principles of the CAT NMS Plan." CAT Funding Model Approval Order at 62640.

22 Section 11.3(b)(i)(C) of the CAT NMS Plan.

of $83,253,090. CEBBs collectively will be responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67), and CEBSs collectively will be responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67).

The following describes in detail Historical CAT Costs 1 with regard to four separate historical time periods as well as Past CAT Costs excluded from Historical CAT Costs 1 ("Excluded Costs"). The following cost details are provided in accordance with the requirement in the CAT NMS Plan to provide in the fee filing "a brief description of the amount and type of Historical CAT Costs, including (1) the technology line items of cloud hosting services, operating fees, CAIS operating fees, change request fees, and capitalized developed technology costs, (2) legal, (3) consulting, (4) insurance, (5) professional and administration and (6) public relations costs."[23] Each of the costs described below are reasonable, appropriate and necessary for the creation, implementation and maintenance of CAT.

(i) Historical CAT Costs Incurred Prior to June 22, 2020 (Pre-FAM Costs)

Historical CAT Costs 1 would include costs incurred by CAT prior to June 22, 2020 ("Pre-FAM Period") and already funded by the Participants, excluding Excluded Costs (described further below). Historical CAT Costs 1 would include costs for the Pre-FAM Period of $124,290,730. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($41,430,243.33), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($41,430,243.33) and CEBSs paying one-third ($41,430,243.33). These costs do not

[23] Section 11.3(b)(iii)(B)(II)(B) of the CAT NMS Plan.

include Excluded Costs, as discussed further below. The following table breaks down Historical CAT Costs 1 for the Pre-FAM Period into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Historical CAT Costs 1 for Pre-FAM Period (Prior to June 22, 2020)**[24]
Capitalized Developed Technology Costs*	$51,847,150
Technology Costs:	$33,568,579
Cloud Hosting Services	$10,268,840
Operating Fees	$21,085,485
CAIS Operating Fees	$2,072,908
Change Request Fees	$141,346
Legal	$19,674,463
Consulting	$17,013,414
Insurance	$880,419
Professional and administration	$1,082,036
Public relations	$224,669
Total Operating Expenses	**$124,290,730**

* The non-cash amortization of these capitalized developed technology costs of $2,115,545 incurred during the period prior to June 22, 2020 have been appropriately excluded from the above table.[25]

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[24] The costs described in this table of costs for the Pre-FAM Period were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website. In addition, in accordance with Section 6.6(a)(i) of the CAT NMS Plan, in 2018 CAT LLC provided the SEC with "an independent audit of fees, costs, and expenses incurred by the Participants on behalf of the Company prior to the Effective Date of the Plan that will be publicly available." The audit is available on the CAT website.

[25] With respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

The Pre-FAM Period includes a broad range of CAT-related activity from 2012 through June 22, 2020, including the evaluation of the requirements of SEC Rule 613, the development of the CAT NMS Plan, the evaluation and selection of the initial and successor Plan Processors, the commencement of the creation and implementation of the CAT to comply with Rule 613 and the CAT NMS Plan, including technical specifications for transaction reporting and regulatory access, and related technology and the commencement of reporting to the CAT. The following describes the costs for each of the categories for the Pre-FAM Period.

(a) Technology Costs – Cloud Hosting Services.

The $10,268,840 in technology costs for cloud hosting services represent costs incurred for services provided by the cloud services provider for the CAT, Amazon Web Services, Inc. ("AWS"), during the Pre-FAM Period.

As part of its proposal for acting as the successor Plan Processor for the CAT, FCAT selected AWS as a subcontractor to provide cloud hosting services. In 2019, after reviewing the capabilities of other cloud services providers, FCAT determined that AWS was the only cloud services provider at that time sufficiently mature and capable of providing the full suite of necessary cloud services for the CAT, including, for example, the security, resiliency and complexity necessary for the CAT computing requirements. The use of cloud hosting services is standard for this type of high-volume data activity and reasonable and necessary for implementation of the CAT, particularly given the substantial data volumes associated with the CAT.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay FCAT the fees incurred by the Plan Processor for cloud hosting services provided by AWS as FCAT's subcontrator on a monthly basis for the cloud hosting services, and FCAT, in turn, pays such fees to AWS. The fees for cloud hosting services were negotiated by FCAT on an arm's length basis with the goals of managing cost and receiving services required to comply with the CAT NMS Plan and Rule 613, taking into consideration a variety of factors, including the expected volume of data, the breadth of services provided and market rates for similar services. The fees for cloud hosting services during the Pre-FAM Period were paid to FCAT by CAT NMS, LLC[26] and subsequently Consolidated Audit Trail, LLC (as previously noted, both entities are referred to generally as "CAT LLC"),[27] and FCAT, in turn, paid AWS. CAT LLC was funded via loan contributions by the Participants.[28]

AWS was engaged by FCAT to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. Services provided by AWS include storage services, databases, compute services and other services (such as networking, management tools and DevOps tools). AWS also was

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26 CAT NMS, LLC was formed by FINRA and the U.S. national securities exchanges to implement the requirements of SEC Rule 613 under the Exchange Act. SEC Rule 613 required the SROs to jointly submit to the SEC the CAT NMS Plan to create, implement and maintain the CAT. The SEC approved the CAT NMS Plan on November 15, 2016. CAT NMS Plan Approval Order.

27 On August 29, 2019, the Participants formed a new Delaware limited liability company named Consolidated Audit Trail, LLC for the purpose of conducting activities related to the CAT from and after the effectiveness of the proposed amendment of the CAT NMS Plan to replace CAT NMS, LLC. *See* Securities Exchange Act Rel. No. 87149 (Sept. 27, 2019), 84 Fed. Reg. 52905 (Oct. 3, 2019).

28 For each of the costs paid by CAT NMS, LLC and Consolidated Audit Trail, LLC as discussed throughout this filing, CAT NMS, LLC and Consolidated Audit Trail, LLC paid these costs via loan contributions by the Participants to CAT NMS, LLC and Consolidated Audit Trail, LLC, respectively.

engaged to provide various environments for CAT, such as development, performance testing, test and production environments.

The cost for AWS services for the CAT is a function of the volume of CAT Data. The greater the amount of CAT Data, the greater the cost of AWS services to the CAT. During the Pre-FAM Period from the engagement of AWS in February 2019 through June 2020, AWS provided cloud hosting services for volumes of CAT Data far in excess of the volume predictions set forth in the CAT NMS Plan. The CAT NMS Plan states, when all CAT Reporters are submitting their data to the CAT, it "must be sized to receive[,] process and load more than 58 billion records per day,"[29] and that "[i]t is expected that the Central Repository will grow to more than 29 petabytes of raw, uncompressed data."[30] However, the volume of CAT Data for the Pre-FAM Period was far in excess of these predicted levels. By the end of this period, data submitted to the CAT included options and equities Participant Data,[31] Phase 2a and Phase 2b Industry Member Data[32] (including certain linkages), as well as SIP Data,[33] reference data and other types of Other Data.[34] The following chart provides data regarding the average

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29 Appendix D-4 of the CAT NMS Plan at n.262.

30 Appendix D-5 of the CAT NMS Plan.

31 *See* Section 6.3(d) of the CAT NMS Plan.

32 *See* Securities Exchange Rel. No. 88702 (Apr. 20, 2020), 85 Fed. Reg. 23075 (Apr. 24, 2020) ("Phased Reporting Exemptive Relief Order") for a description of Phase 2a and Phase 2b Industry Member Data.

33 *See* Section 6.5(a)(ii) of the CAT NMS Plan.

34 *See* Appendix C-108 of the CAT NMS Plan.

daily volume, cumulative total events, total compute hours and storage footprint of the CAT during the Pre-FAM Period.[35]

	Date Range: 3/29/19 to 4/12/20*	Date Range: 4/13/20 to 6/21/20**
Average Daily Volume in Billions		
Participant - Equities	5	5
Participant - Options	80	981
Industry Member - Equities	-	3
Industry Member - Options	-	0.04
SIP – Options & Equities	64	70
Average Total Daily Volume	149	166
Cumulative Total Events for the Period	3,890	4,990
Total Compute Hours for the Period	N/A[36]	5,663,247
Storage Footprint at End of Period (Petabytes)	30.57	47.96

* The Participant Equities in RSA format.
** Start of Industry Member reporting on 4/13/2020

(b) Technology Costs – Operating Fees

The $21,085,485 in technology costs related to operating fees represent costs incurred with regard to activities of FCAT as the Plan Processor. Operating fees are those fees paid by CAT LLC to FCAT as the Plan Processor to operate and maintain the CAT and to perform business operations related to the system, including compliance, security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management as required by the CAT NMS Plan.

35 Note that the volume data described in this table does not include CAIS data.

36 Note that, although there were compute hours during this period, data related to such compute hours are no longer available in current data.

FCAT was selected to assume the role of the successor Plan Processor. Prior to this selection, the Participants engaged in discussions with two prior Bidders[37] for the successor Plan Processor role. The Operating Committee formed a Selection Subcommittee in accordance with Section 4.12 of the CAT NMS Plan to evaluate and review Bids and to make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor. In an April 9, 2019 letter to the Commission, the Participants described the reasons for its selection of the successor Plan Processor:

> The Selection Subcommittee considered factors including, but not limited to, the following, in recommending FINRA to the Operating Committee as the successor Plan Processor:
>
> > a. FINRA's specialized technical expertise and capabilities in the area of broker-dealer technology;
> > b. The need to appoint a successor Plan Processor with specialized expertise to develop, implement, and maintain the CAT System in accordance with the CAT NMS Plan and SEC Rule 613;
> > c. FINRA's detailed proposal in response to CATLLC's recent inquiries; and
> > d. FINRA's data query and analytics systems demonstration to the Participants.
>
> Based on these and other factors, the Selection Subcommittee determined that FINRA was the most appropriate Bidder to become the successor Plan Processor.[38]

On February 26, 2019, the Operating Committee (with FINRA recusing itself) voted to select FINRA as the successor Plan Processor pursuant to Section 6.1(t) of the CAT NMS

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37 The term "Bidder" is defined in Section 1.1 of the CAT NMS Plan.

38 Letter from Michael J. Simon, Chair, CAT NMS, LLC Operating Committee, to Brent J. Fields, Secretary, SEC (Apr. 9, 2019), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection-040919.pdf.

Plan.[39] On March 29, 2019, CAT LLC and FCAT (a wholly owned subsidiary of FINRA) entered into a Plan Processor Agreement pursuant to which FCAT would perform the functions and duties of the Plan Processor contemplated by the CAT NMS Plan, including the management and operation of the CAT.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay FCAT a negotiated monthly fixed price for the operation of the CAT. This fixed price contract was negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan and Rule 613, taking into consideration a variety of factors, including the breadth of services provided and market rates for similar types of activity. The operating fees during the Pre-FAM Period were paid to FCAT by CAT LLC.

From March 29, 2019 (the commencement of the Plan Processor Agreement with FCAT) through June 22, 2020 (the end of the Pre-FAM Period), the Plan Processor's activities with respect to the CAT included the following:

- Commenced user acceptance testing with market data provided by Exegy Incorporated ("Exegy"), a market data provider;[40]
- Published Technical Specifications and related reporting scenarios documents for Phase 2a, 2b and 2c reporting for Industry Members, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Facilitated testing for Phase 2a and 2b reporting for Industry Members;

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39 *Id.*

40 The use of Exegy to provide market data, including the costs and market data provided, is discussed below in Section 3(a)(2)(B)(i)(i).

- Began developing Technical Specifications and related reporting scenarios documents for Phase 2d reporting for Industry Members, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;

- Published Central Repository Access Technical Specifications, and provided regulator access to test data from Industry Members;

- Facilitated Participant exchanges that support options market makers sending Quote Sent Time to the CAT;

- Facilitated the introduction of OPRA and Options NBBO Other Data to CAT;

- Addressed compliance items, including drafting CAT policies and procedures, and addressing requirements under Regulation SCI;

- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;

- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;

- Oversaw the security of the CAT;

- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;

- Provided support to subcontractors under the Plan Processor Agreement;

- Provided support in discussions with Participants, the SEC and its staff;

- Operated the FINRA CAT Helpdesk, which is the primary source for answers to questions about CAT, including questions regarding: clock synchronization, firm reporting responsibilities, interpretive questions, technical specifications for reporting to CAT and more;

- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;

- Administered the CAT website and all of its content;[41] and

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41 The CAT website is https://www.catnmsplan.com.

- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

The $2,072,908 in technology costs related to CAIS operating fees represent the fees paid for FCAT's subcontractor charged with the development and operation of CAT's Customer and Account Information System ("CAIS"). The CAT is required under the CAT NMS Plan to capture and store Customer Identifying Information and Customer Account Information in a database separate from the transactional database and to create a CAT-Customer-ID for each Customer.

During the Pre-FAM Period, the CAIS-related services were provided by the Plan Processor through the Plan Processor's subcontractor, Kingland Systems Incorporation ("Kingland"). Kingland had experience operating in the securities regulatory technology space, and as a part of its proposal for acting as the Plan Processor for the CAT, FCAT selected Kingland as a subcontractor to provide certain CAIS-related services.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay to the Plan Processor the fees incurred by FCAT for CAIS-related services provided by FCAT through Kingland on a monthly basis. FCAT negotiated the fees for Kingland's CAIS-related services on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan, taking into consideration a variety of factors, including the services to be provided and market rates for similar types of activity. The fees for CAIS-related services during the Pre-FAM Period were paid by CAT LLC to FCAT. FCAT, in turn, paid Kingland.

During the Pre-FAM Period, Kingland began development of the CAIS Technical Specifications and the building of CAIS. In addition, Kingland also worked on the build related to the CCID Alternative, an alternative approach to customer information that was not included in the CAT NMS Plan as originally adopted.[42] Furthermore, Kingland also worked on the acceleration of the reporting of large trader identifiers ("LTID") earlier than originally contemplated during this period, in accordance with exemptive relief granted by the SEC.[43]

(d) Technology Costs – Change Request Fees

The technology costs related to change request fees include costs related to certain modifications, upgrades or other changes to the CAT. Change requests are standard practice and necessary to reflect operational changes, including changes related to new market developments, such as new market participants. In general, if CAT LLC determines that a modification, upgrade or other change to the functionality or service is necessary and appropriate, CAT LLC will submit a request for such a change to the Plan Processor. The Plan Processor will then respond to the request with a proposal for implementing the change, including the cost (if any) of such a change. CAT LLC then determines whether to approve the proposed change. The change request costs were paid by CAT LLC to FCAT. During the Pre-FAM Period, CAT LLC incurred costs of $141,346 related to change requests implemented by FCAT. Such change requests

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42 For a discussion of the CCID Alternative, *see* Securities Exchange Act Rel. No. 88393 (Mar. 17, 2020), 85 Fed. Reg. 16152 (Mar. 20, 2020).

43 Phased Reporting Exemptive Relief Order at 23079-80.

related to a development fee regarding the OPRA and SIP data feeds, and the reprocessing of certain exchange data.[44]

(e) Technology Costs – Capitalized Developed Technology Costs

This category of costs includes capitalizable application development costs incurred in the development of the CAT. The capitalized developed technology costs for the Pre-FAM Period of $51,847,150 relate to technology provided by the Initial Plan Processor and the successor Plan Processor.

Initial Plan Processor: Thesys CAT, LLC. The capitalized developed technology costs related to the Initial Plan Processor include costs incurred with regard to testing for Participant reporting, Participant reporting to the CAT, a security assessment of the CAT, and the development of the billing function for the CAT.

On January 17, 2017, the Selection Committee of the CAT NMS Plan selected the Initial Plan Processor, Thesys Technologies, LLC, for the CAT NMS Plan pursuant to Article V of the CAT NMS Plan.[45] The Participants utilized a request for proposal ("RFP") to seek proposals to build and operate the CAT, receiving a number of proposals in response to the RFP. The Participants carefully reviewed and considered each of the proposals, including holding in-person meetings with each of the Bidders. After several rounds of review, the Participants selected the Initial Plan Processor in accordance with

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44 Note that CAT LLC also has incurred costs related to specific Industry Members (*e.g.*, reprocessing costs related to Industry Member reporting errors).

45 Letter from the Participants to Brent J. Fields, Secretary, SEC (Jan. 18, 2017), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf.

the CAT NMS Plan, taking into consideration that the Initial Plan Processor had experience operating in the securities regulatory technology space, among other considerations. On April 6, 2017, CAT LLC entered into an agreement with Thesys CAT LLC ("Thesys CAT"), a Thesys affiliate, to perform the functions and duties of the Plan Processor contemplated by the CAT NMS Plan, including the management and operation of the CAT. Under the agreement, CAT LLC would pay Thesys CAT a negotiated, fixed price fee for its role as the Initial Plan Processor. Effective January 30, 2019, the Plan Processor Agreement with Thesys CAT was terminated, and FCAT was subsequently selected as the successor Plan Processor.

From January 17, 2017 through January 30, 2019, the time in which the Thesys CAT was engaged for the CAT, but excluding the period from November 15, 2017 through January 30, 2019, the Initial Plan Processor engaged in various activities with respect to the CAT, including preparing iterative drafts of Participant Technical Specifications, Industry Member Technical Specifications and the Central Repository Access Technical Specifications. In addition, Thesys CAT also developed CAT technology, addressed compliance items, including drafting CAT policies and procedures, addressing Regulation SCI requirements, establishing a CAT Compliance Officer and a Chief Information Security Officer, addressed security-related matters for the CAT, and worked towards the initiation of Participant reporting per the Participant Technical Specifications.

Successor Plan Processor: FCAT. The capitalized developed technology costs related to FCAT include: (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, including

the completion of go-live functionality related to options ingestion and validation, equities regulatory services agreement query tool updates and unlinked options data query, options linkages release, Industry Member Phase 2a file submission and data integrity (including error corrections), and Industry Member testing, including reporting relationships, ATS order type management, basic reporting statistics, SFTP data integrity feedback and error correction; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including a one-time development fee for a secure analytics workspace, a one-time development fee of an Industry Member connectivity solution, and a one-time development fee for the acceleration of multi-factor authentication; (3) CAIS implementation fees; and (4) license fees.

(f) Legal Costs

The legal costs of $19,674,463 represent the fees paid for legal services provided by two law firms, Wilmer Cutler Pickering Hale and Dorr LLP ("WilmerHale") and Pillsbury Winthrop Shaw Pittman LLP ("Pillsbury"), during the Pre-FAM Period. The legal costs exclude those costs incurred from November 15, 2017 through November 15, 2018.

Law Firm: WilmerHale. Following the adoption of Rule 613, the Participants determined it was necessary to engage external legal counsel to advise the Participants with respect to corporate and regulatory legal matters related to the CAT, including drafting and developing the CAT NMS Plan. The Participants considered a variety of factors in their analysis of prospective law firms, including (1) the firm's qualifications, resources and expertise; (2) the firm's relevant experience and understanding of the

regulatory matters raised by the CAT and in advising on matters of similar scope; (3) the composition of the legal team; and (4) professional fees. Following a series of interviews, the Participants acting as a consortium determined that WilmerHale was well qualified given the balance of these considerations and engaged WilmerHale in February 2013.

WilmerHale's billing rates are negotiated on an annual basis and are determined with reference to the rates charged by other leading law firms for similar work. The Participants assess WilmerHale's performance and review prospective budgets and staffing plans submitted by WilmerHale on an annual basis. WilmerHale's compensation arrangements are reasonable and appropriate, and in line with the rates charged by other leading law firms for similar work.

The legal costs for WilmerHale during the Pre-FAM Period included costs incurred from 2013 until June 22, 2020 to address corporate and regulatory legal matters related to the CAT. The legal fees for this law firm during the period from February 2013 until the formation of the CAT NMS, LLC on November 15, 2016 were paid directly by the exchanges and FINRA to WilmerHale. After the formation of CAT NMS LLC, the legal fees were paid by CAT LLC to WilmerHale.

After WilmerHale was engaged in 2013 through the end of the Pre-FAM Period on June 22, 2020 (excluding the legal costs from November 15, 2017 through November 15, 2018), WilmerHale provided legal assistance to the CAT on a variety of matters, including with regard to the following:

- Analyzed various legal matters associated with the Selection Plan, and drafted an amendment to the Selection Plan;

- Assisted with the RFP and bidding process for the CAT Plan Processor;

- Analyzed legal matters related to the Development Advisory Group ("DAG");

- Drafted the CAT NMS Plan, analyzed various items related to the CAT NMS Plan, and responded to comment letters on CAT NMS Plan;

- Provided legal support for the formation of the legal entity, the governance of the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding and Other Products) and the DAG, governance support during the transition to the new governance structure under the CAT NMS Plan, and governance support after the adoption of the CAT NMS Plan, which involved support for the Operating Committee, Advisory Committee, Compliance Subcommittee and CAT working groups;

- Assisted with the development of the CAT funding model and drafted related amendments of the CAT NMS Plan and related filings;

- Negotiated and drafted the plan processor agreements with the Initial Plan Processor and the successor Plan Processor;

- Provided assistance with compliance with Regulation SCI;

- Assisted with clock synchronization study;

- Provided assistance with respect to the establishment of CAT security;

- Drafted exemptive requests from CAT NMS Plan requirements, including with regard to options market maker quotes, Customer IDs, CAT Reporter IDs, linking allocations to executions, CAT reporting timeline, FDIDs, customer and account information, timestamp granularity, small industry members, data facility reporting and linkage, allocation reports, SRO-assigned market participant identifiers and cancelled trade indicators, thereby seeking to implement changes that would be cost effective and benefit Industry Members and Participants;

- Assisted with the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;

- Provided advice regarding CAT policies and procedures;

- Analyzed the SEC's amendment of the CAT NMS Plan regarding financial accountability;

- Provided interpretations of and related to the CAT NMS Plan;
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues; and
- Assisted with third-party vendor agreements.

Law Firm: Pillsbury. The legal costs for CAT during the Pre-FAM Period include costs related to the legal services performed by Pillsbury. The Participants interviewed this law firm as well as other potential law firms to provide legal assistance regarding certain liability matters. After considering a variety of factors in its analysis, including the relevant expertise and fees of the firm, CAT LLC determined to hire Pillsbury in April 2019. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees were paid by CAT LLC to Pillsbury. The legal costs for Pillsbury during the Pre-FAM Period included costs incurred from April 2019 until June 22, 2020 to address legal matters regarding the agreements between CAT Reporters and CAT LLC concerning certain terms associated with CAT Reporting (the "Reporter Agreement"). During that period, Pillsbury advised CAT LLC regarding applicable legal matters, participated in negotiations between the Participants and Industry Members, participated in meetings with senior SEC staff, the Chairman, and Commissioners, represented CAT LLC and the Participants in an SEC administrative proceeding, and drafted a proposed amendment to the CAT NMS Plan regarding liability matters. Liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants. Moreover, litigation involving CAT LLC is an expense of operating the CAT, and, therefore, is

appropriately an obligation of both Participants and Industry Members under the CAT Funding Model.

(g) Consulting Costs

The consulting costs of $17,013,414 represent the fees paid to the consulting firm Deloitte & Touche LLP ("Deloitte") as project manager during the Pre-FAM Period, from October 2012 until June 22, 2020. These consulting costs include costs for advisory services related to the operation of the CAT, and meeting facilitation and communications coordination, vendor support and financial analyses.

To help facilitate project management given the unprecedented complexity and scope of the CAT project, the Participants determined it was necessary to engage a consulting firm to assist with the CAT project in 2012, following the adoption of Rule 613. A variety of factors were considered in the analysis of prospective consulting firms, including (1) the firm's qualifications, resources, and expertise; (2) the firm's relevant experience and understanding of the regulatory issues raised by the CAT and in coordinating matters of similar scope; (3) the composition of the consulting team; and (4) professional fees. Following a series of interviews, the exchanges and FINRA as a consortium determined that Deloitte was well qualified given the balance of these considerations and engaged Deloitte on October 1, 2012.

Deloitte's fee rates are negotiated on an annual basis and are in line with market rates for this type of specialized consulting work. CAT LLC assesses Deloitte's performance and reviews prospective budgets and staffing plans submitted by Deloitte on

an annual basis. Deloitte's compensation arrangements are reasonable and appropriate, and in line with the rates charged by other leading consulting firms for similar work.

The consulting costs for CAT during the period from 2012 until the formation of the CAT NMS, LLC were paid directly by the Participants to Deloitte. After the formation of CAT NMS, LLC, the consulting fees were paid by CAT LLC to Deloitte. CAT LLC reviewed the consulting fees each month and approved the invoices.

After Deloitte was hired in 2012 through the end of the Pre-FAM Period on June 22, 2020 (excluding the consulting costs from November 15, 2017 through November 15, 2018), Deloitte provided a variety of consulting services, including the following:

- Established and implemented program operations for the CAT project, including the program managment office and workstream design;
- Assisted with the Plan Processor selection process, including but not limited to, the development of the RFP and the bidder evaluation process, and facilitation and consolidation of the Participant's independent reviews;
- Assisted with the development and drafting of the CAT NMS Plan, including conducting cost-benefit studies, analyzing OATS and CAT requirements, and drafting appendices to the Plan;
- Assisted with cost and funding-related activities for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided governance support to the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding and Other Products) and the DAG, governance support during the transition to the new governance structure under the CAT NMS Plan and governance support after the adoption of the CAT NMS Plan, which involved support for the Operating Committee, Advisory Committee, Compliance Subcommittee and CAT working groups;

- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;

- Assisted with industry outreach and communications regarding the CAT, including assistance with industry outreach events, the development of the CAT website, frequently asked questions, and coordinating with the CAT LLC's public relations firm;

- Provided support for updating the SEC on the progress of the development of the CAT;

- Provided active planning and coordination with and support for the Initial Plan Processor with regard to the development of the CAT, and reported to the Participants on the progress;

- Coordinated efforts regarding the selection of the successor Plan Processor;

- Assisted with the transition from the Initial Plan Processor to the successor Plan Processor, including support for the Operating Committee and successor Plan Processor for the new role; and

- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $880,419 represent the cost incurred for insurance for CAT during the Pre-FAM Period. Commencing in 2020, CAT LLC performed an evaluation of various potential alternatives for CAT insurance policies, which included engaging in discussions with different insurance companies and conducting cost comparisons of various alternative approaches to insurance. Based on an analysis of a variety of factors, including coverage and premiums, CAT LLC determined to purchase cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions liability insurance from USI Insurance Services LLC ("USI"). Such policies are standard for corporate entities, and cyber security liability insurance is important for the CAT

System. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

In adopting the CAT NMS Plan, the Commission amended the Plan to add a requirement that CAT LLC's financial statements be prepared in compliance with GAAP, audited by an independent public accounting firm, and made publicly available.[46] The professional and administration costs include costs related to accounting and accounting advisory services to support the operating and financial functions of CAT, financial statement audit services by an independent accounting firm, preparation of tax returns, and various cash management and treasury functions. In addition, professional and administration costs for the Pre-FAM Period include costs related to the receipt of market data and a security assessment. The costs for these professional and administration services were $1,082,036 for the Pre-FAM Period.

Financial Advisory Firm: Anchin Accountants & Advisors ("Anchin"). CAT LLC determined to hire a financial advisory firm, Anchin, to assist with financial matters for the CAT in April 2018. CAT LLC interviewed Anchin as well as other potential financial advisory firms to assist with the CAT project, considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The hourly fee rates for this firm were in line with market rates for these financial advisory services. The fees for these services were paid by CAT LLC to Anchin.

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46 Section 9.2 of the CAT NMS Plan.

After Anchin was hired in April 2018 through the end of the Pre-FAM Period on June 22, 2020 (excluding the period from April 2018 through November 15, 2018), Anchin provided a variety of services, including the following:

- Developed, updated and maintained internal controls;
- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Addressed accounting and financial reporting matters relating to the transition from CAT NMS, LLC to Consolidated Audit Trail, LLC, including supporting the dissolution of CAT NMS, LLC;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;
- Reviewed historical costs from inception; and

- Provided accounting and financial information in support of SEC filings.

Accounting Firm: Grant Thornton LLP ("Grant Thornton"). In February 2020, CAT LLC determined to engage an independent accounting firm, Grant Thornton, to complete the audit of CAT LLC's financial statements, in accordance with the requirements of the CAT NMS Plan. CAT LLC interviewed this firm as well as another potential accounting firm to audit CAT LLC's financial statements, considering a variety of factors in its analysis, including the relevant expertise and fees of each of the firms. CAT LLC determined that Grant Thornton was well-qualified for the proposed role given the balance of these considerations. Grant Thornton's fixed fee rate compensation arrangement was reasonable and appropriate, and in line with the market rates charged for these types of accounting services. The fees for these services were paid by CAT LLC to Grant Thornton.

Market Data Provider: Exegy. The professional and administrative costs for the Pre-FAM Period included costs related to the receipt of certain market data for the CAT pursuant to an agreement with the CAT LLC, and then with FCAT. Exegy provided SIP Data required by the CAT NMS Plan.

After performing an analysis of the available market data vendors to confirm that the data provided met the SIP Data requirements of the CAT NMS Plan and comparing the costs of the vendors providing the required SIP Data, CAT LLC determined to purchase market data from Exegy from July 2018 through March 2019. CAT LLC determined that, unlike certain other vendors, Exegy provided market data that included

all data elements required by the CAT NMS Plan.[47] In addition, the fees were reasonable and in line with market rates for the market data received. Accordingly, the professional and administrative costs for the Pre-FAM Period include the Exegy costs from November 2018 through March 2019. The cost of the market data was reasonable for the market data received. The fees for the market data were paid directly by CAT LLC to Exegy.

Upon the termination of the contract between CAT LLC and Exegy, FCAT entered into a contract with Exegy to purchase the required market data from Exegy in July 2019. All costs under the contract were treated as a direct pass through cost to CAT LLC. Therefore, the fees for the market data were paid by CAT LLC to FCAT, who, in turn, paid Exegy for the market data.

Security Assessment: RSM US LLP ("RSM"). The operating costs for the Pre-FAM Period include costs related to a third party security assessment of the CAT performed by RSM. The assessment was designed to verify and validate the effective design, implementation, and operation of the controls specified by NIST Special Publication 800-53, Revision 4 and related standards and guidelines. Such a security assessment is in line with industry practice and important given the data included in the CAT. CAT LLC determined to engage RSM to perform the security assessment, after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fees were reasonable and in line with market rates for such an assessment. RSM performed the assessment from October 2018 through December 2018. Accordingly, the costs for the Pre-FAM Period include the costs incurred in November

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47 *See* Section 6.5(a)(ii) of the CAT NMS Plan.

and December 2018. The cost for the security assessment were paid directly to RSM by CAT LLC.

(j) Public Relations Costs

The public relations costs of $224,669 represent the fees paid to public relations firms during the Pre-FAM Period for professional communications services to CAT, including media relations consulting, strategy and execution. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants. Specifically, the public relations firms provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). Public relations services were important for various reasons, including monitoring comments made by market participants about CAT and understanding issues related to the CAT discussed on the public record.

The services performed by each of the public relations firms were comparable. The fees for such services were reasonable and in line with market rates. Only one public relations firm was engaged at a time; the three firms were engaged sequentially as the primary public relations contact moved among the three firms during this time period.

Public Relations Firm: Peppercomm, Inc. ("Peppercomm"). The national securities exchanges and FINRA, acting as a consortium, determined to hire the public relations firm Peppercomm in October 2014 and continued to engage this firm through

September 2017. The exchanges and FINRA made this engagement decision after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fee rates for this public relations firm were negotiated on an arm's length basis and were in line with market rates for these types of services. The public relations costs during the period from October 2014 until the formation of the CAT NMS, LLC were paid directly by the exchanges and FINRA to the public relations firm. After the formation of CAT NMS, LLC, the consulting fees were paid by CAT LLC.

Public Relations Firm: Sloane & Company ("Sloane"). CAT LLC determined to hire a new public relations firm, Sloane, in March 2018, based on, among other things, their expertise and the primary contact's history with the project. The fee rates for this public relations firm were in line with market rates for these types of services. The fees during the Pre-FAM Period were paid by CAT LLC to Sloane. CAT LLC continued the engagement with Sloane until February 2020.

Public Relations Firm: Peak Strategies. CAT LLC determined to hire a new public relations firm, Peak Strategies, in March 2020, based on, among other things, their expertise and the primary contact's history with the project. The fee rates for this public relations firm were in line with market rates for these types of services. The fees during the Pre-FAM Period were paid by CAT LLC to Peak Strategies.

(ii) Historical CAT Costs Incurred in Financial Accountability Milestone Period 1

Historical CAT Costs 1 would include costs incurred by CAT and already funded by the Participants during Period 1 of the Financial Accountability Milestones ("FAM

Period 1"),[48] which covers the period from June 22, 2020 – July 31, 2020. Historical CAT Costs 1 would include costs for FAM Period 1 of $6,377,343. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($2,125,781), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($2,125,781) and CEBSs paying one-third ($2,125,781). The following table breaks down Historical CAT Costs 1 for FAM Period 1 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Historical CAT Costs for FAM Period 1**[49]
Capitalized Developed Technology Costs*	$1,684,870
Technology Costs:	$3,996,800
Cloud Hosting Services	$2,642,122
Operating Fees	$1,099,680
CAIS Operating Fees	$254,998
Change Request Fees	-
Legal	$481,687
Consulting	$137,209
Insurance	-
Professional and administration	$69,077
Public relations	$7,700
Total Operating Expenses	**$6,377,343**

* The non-cash amortization of these capitalized developed technology costs of $362,121 incurred during FAM Period 1 have been appropriately excluded from the above table.[50]

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48 Section 11.6(a)(i)(A) of the CAT NMS Plan.

49 The costs described in this table of costs for FAM Period 1 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

50 As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in

By the completion of FAM Period 1, CAT LLC was required to implement the reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of equities transaction data and options transaction data, excluding Customer Account Information, Customer-ID and Customer Identifying Information.[51] CAT LLC completed the requirements of FAM Period 1 by July 31, 2020. The following describes the costs for each of the categories for FAM Period 1.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 1 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 1 Period. Accordingly, the $2,642,122 in technology costs for cloud hosting services represent costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 1. The fee arrangement for AWS described above with regard to the Pre-FAM Period continued in place during FAM Period 1 pursuant to the Plan Processor Agreement. Moreover, CAT LLC continued to believe that AWS's maturity in the cloud services space as well as the

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the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

51 *See* definition of "Initial Industry Member Core Equity and Options Reporting" in Section 1.1 of the CAT NMS Plan.

significant cost and time necessary to move the CAT to a different cloud services provider supported the continued engagement of AWS.

The cost for AWS cloud services for the CAT continued to be a function of the volume of CAT Data. During the FAM 1 Period, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant Data, Phase 2a and Phase 2b Industry Member Data (including certain linkages) as well as SIP Data, reference data and other types of Other Data. The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 1.[52]

	Date Range: 6/22/20-7/31/20
Average Daily Volume in Billions	
Participant - Equities	6
Participant - Options	103
Industry Member - Equities	7
Industry Member - Options	0.31
SIP – Options & Equities	74
Average Total Daily Volume	185
Cumulative Total Events for the Period	5,190
Total Compute Hours for the Period	2,612,082
Storage Footprint at End of Period (Petabytes)	57.47

(b) Technology Costs – Operating Fees

[52] Note that the volume data described in this table does not include CAIS data.

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in its role as the Plan Processor for the CAT during FAM Period 1. Accordingly, the $1,099,680 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 1. The fee arrangement for FCAT described above with regard to the Pre-FAM Period continued in place during FAM Period 1 pursuant to the Plan Processor Agreement. During FAM Period 1, FCAT's activities with respect to the CAT included the following:

- Published iterative drafts of draft Technical Specifications for Phase 2d, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Published iterative drafts of CAIS Technical Specifications, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Facilitated Industry Member reporting of Quote Sent Time on Options Market Maker quotes;
- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with Participants and the SEC and its staff;

- Operated the FINRA CAT Helpdesk;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 1. Accordingly, the $254,998 in technology costs for CAIS operating fees represent costs incurred for services provided by Kingland during FAM Period 1. The fee arrangement for Kingland described above with regard to the Pre-FAM Period continued in place during FAM Period 1 pursuant to the Plan Processor Agreement. During FAM Period 1, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to CCID Alternative, as well as the acceleration of the reporting of LTIDs.

(d) Technology Costs – Change Request Fees

CAT LLC did not incur costs related to change requests during FAM Period 1.

(e) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for FAM Period 1 of $1,684,870 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include: (1) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including separate production and industry test entitlements, and reprocessing of exchange event timestamps; (2) implementation fees; and (3) license fees.

(f) Legal Costs

The legal costs of $481,687 represent the fees paid for legal services provided by two law firms, WilmerHale and Pillsbury during FAM Period 1.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 1 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 1 were paid by CAT LLC to WilmerHale. During FAM Period 1, WilmerHale provided legal assistance to the CAT including with regard to the following:

- Assisted with the development of the CAT funding model and drafted related amendments and fee filings;
- Drafted exemptive requests from CAT NMS Plan requirements regarding, for example, verbal activity, options market maker quote sent time, TRF linkages, and allocations;
- Provided interpretations related to CAT NMS Plan requirements, including the Financial Accountability Milestone amendment;
- Assisted with compliance with Regulation SCI;

- Provided support for the Operating Committee, Compliance Subcommittee, working groups and Leadership Team, including with regard to meetings with the SEC staff;
- Assisted with the drafting of the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;
- Assisted with communications and presentations for the industry regarding CAIS;
- Drafted SRO rule filings related to the CAT Compliance Rule;
- Provided support for Compliance Subcommittee, including with regard to response to OCIE examinations and the annual assessment;
- Provided guidance regarding CAT technical specifications;
- Assisted with third-party vendor agreements; and
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 1 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 1 were paid by CAT LLC to Pillsbury. During FAM Period 1, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During that period, Pillsbury advised CAT LLC regarding applicable legal matters and drafted a proposed amendment to the CAT NMS Plan regarding liability matters. Liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants.

(g) Consulting Costs

The consulting costs of $137,209 represent the fees paid to Deloitte as project manager during FAM Period 1. CAT LLC continued to employ Deloitte during FAM Period 1 based on, among other things, their expertise and cumulative experience with the CAT. The fee rates for Deloitte during FAM Period 1 were negotiated and in line with market rates for this type of specialized consulting work. The consulting fees during FAM Period 1 were paid by CAT LLC to the consulting firm. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 1, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;
- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT;
- Assisted with the transition from the Initial Plan Processor to the successor Plan Processor; and
- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

Although insurance was in effect during FAM Period 1, CAT LLC did not incur costs related to insurance during FAM Period 1.

(i) Professional and Administration Costs

Financial Advisory Firm: Anchin. The professional and administration costs of $69,077 represent the fees paid to Anchin during FAM Period 1. CAT LLC continued to employ Anchin during FAM Period 1 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these type of financial advisory services. The fees for these services during FAM Period 1 were paid by CAT LLC to Anchin. During FAM Period 1, Anchin provided a variety of services, including the following:

- Maintained internal controls;
- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups; and
- Prepared monthly and quarterly financial statements.

(j) Public Relations Costs

The public relations costs of $7,700 represent the fees paid to Peak Strategies during FAM Period 1. CAT LLC continued to employ Peak Strategies during FAM Period 1 based on, among other things, their expertise and history with the project. The fee rates for this firm were reasonable and in line with market rates for these types of services. The fees for these services during FAM Period 1 were paid by CAT LLC to Peak Strategies. During FAM Period 1, Peak Strategies continued to provide professional communications services to CAT LLC, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(iii) Historical CAT Costs Incurred in Financial Accountability Milestone Period 2

Historical CAT Costs 1 would include costs incurred by CAT LLC and already funded by Participants during Period 2 of the Financial Accountability Milestones

("FAM Period 2"),[53] which covers the period from August 1, 2020 – December 31, 2020. Historical CAT Costs 1 would include costs for FAM Period 2 of $42,976,478. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($14,325,493), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($14,325,493) and CEBSs paying one-third ($14,325,493). The following table breaks down Historical CAT Costs 1 for FAM Period 2 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Historical CAT Costs for FAM Period 2**[54]
Capitalized Developed Technology Costs*	$6,761,094
Technology Costs:	$31,460,033
Cloud Hosting Services	$20,709,212
Operating Fees	$9,108,700
CAIS Operating Fees	$1,590,298
Change Request Fees	$51,823
Legal	$2,766,644
Consulting	$532,146
Insurance	$976,098
Professional and administration	$438,523
Public relations	$41,940
Total Operating Expenses	**$42,976,478**

* The non-cash amortization of these capitalized developed technology costs of $1,892,505 incurred during FAM Period 2 have been appropriately excluded from the above table.[55]

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53 Section 11.6(a)(i)(B) of the CAT NMS Plan.

54 The costs described in this table of costs for FAM Period 2 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

55 As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over

By the completion of FAM Period 2, CAT LLC was required to implement the following with regard to the CAT:

> (a) Industry Member reporting (excluding reporting by Small Industry Members that are not OATS reporters) for equities transactions, excluding Customer Account Information, CustomerID, 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.[56]

CAT LLC completed the requirements of FAM Period 2 by December 31, 2020. The following describes the costs for each of the categories for FAM Period 2.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 2 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 2 Period. Accordingly, the $20,709,212 in

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the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

[56] *See* definition of "Full Implementation of Core Equity Reporting Requirements" in Section 1.1 of the CAT NMS Plan.

technology costs for cloud hosting services represent costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 2. The fee arrangement for AWS described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement.

The cost for AWS cloud services for the CAT continued to be a function of the volume of CAT Data. During the FAM 2 Period, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant Data, Phase 2a and Phase 2b Industry Member Data (including certain linkages) as well as SIP Data, and Other Data, including reference data. In addition, Industry Members began reporting LTID account information. The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 2.[57]

	Date Range: 8/1/20 – 12/31/20
Average Daily Volume in Billions	
Participant - Equities	6
Participant - Options	116
Industry Member - Equities	11
Industry Member - Options	0.98
SIP – Options & Equities	80
Average Total Daily Volume	282
Cumulative Total Events for the Period	2,170
Total Compute Hours for the Period	15,660,392

[57] Note that the volume data described in this table does not include CAIS data.

Storage Footprint at End of Period (Petabytes)	114.59

(b) Technology Costs – Operating Fees

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in its role as the Plan Processor for the CAT during FAM Period 2. Accordingly, the $9,108,700 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 2. The fee arrangement for FCAT described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement. During FAM Period 2, FCAT's activities with respect to the CAT included publishing the Technical Specifications for Phase 2d and overseeing the reporting of firm to firm and intrafirm linkages by Industry Members. In addition, FCAT also continued to engage in the following activities during FAM Period 2:

- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the development and implementation of the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with the Participants and the SEC and its staff;
- Operated the FINRA CAT Helpdesk;

- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 2. Accordingly, the $1,590,298 in technology costs for CAIS operating fees represent costs incurred for services provided by Kingland during FAM Period 2. The fee arrangement for Kingland described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement. During FAM Period 2, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to the CCID Alternative, as well as the acceleration of the reporting of LTIDs.

(d) Technology Costs – Change Request Fees

During FAM Period 2, CAT LLC engaged FCAT to pursue certain change requests in accordance with the Plan Processor Agreement. The change request costs were paid by CAT LLC to FCAT. Specifically, during FAM Period 2, CAT incurred costs of $51,823 related to a change request regarding the addition of functionality for exchange Participants to report rejected messages to the CAT.

(e) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for FAM Period 2 of $6,761,094 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as defined in the agreement between CAT LLC and the Plan Processor; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including costs related to separate production and industry test entitlements, market maker reference data, and back-processing of exchange exception logic; (3) implementation fees; and (4) license fees.

(f) Legal Costs

The legal costs of $2,766,644 represent the fees paid for legal services provided by two law firms, WilmerHale and Pillsbury during FAM Period 2.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 2 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 2 were paid by CAT LLC to WilmerHale. During FAM Period 2, the legal assistance provided by WilmerHale included providing legal advice regarding the following:

- Assisted with the development of the CAT funding model and drafting related amendments and rule filings;

- Drafted exemptive requests from CAT NMS Plan requirements regarding, for example, allocations, exchange activity, OTQT, initial data validation, error corrections and recordkeeping;

- Provided interpretations related to CAT NMS Plan requirements, including with regard to the Financial Accountability Milestone amendment, FAQs and technical specifications;

- Provided support for the Operating Committee, Compliance Subcommittees, working groups and Leadership Team, including with regard to meetings with the SEC staff;

- Assisted with the Implementation Plan and Quarterly Progress Reports required pursuant to Section 6.6 of the CAT NMS Plan;

- Drafted SRO rule filings related to the CAT Compliance Rule;

- Provided support for the Compliance Subcommittee, including with regard to responses to OCIE examinations and the annual assessment;

- Provided guidance regarding the SEC's proposed security amendments to the CAT NMS Plan;

- Provided guidance regarding SRO rule filings for the retirement of systems;

- Provided legal support for Operating Committee meetings, including drafting resolutions and other materials and voting advice;

- Assisted with third-party vendor agreements (*e.g.*, with regard to Anchin, Grant Thornton and insurance policies);

- Assisted with change requests; and

- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 2 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal

expertise. The legal fees during FAM Period 2 were paid by CAT LLC to Pillsbury. During FAM Period 2, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During that period, Pillsbury advised CAT LLC regarding applicable legal matters and drafted and filed a proposed amendment to the CAT NMS Plan regarding liability matters. As discussed above, liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants.

(g) Consulting Costs

The consulting costs of $532,146 represent the fees paid to Deloitte as project manager during FAM Period 2. CAT LLC continued to employ Deloitte during FAM Period 2 based on, among other things, their expertise and long history with the project. The fee rates for Deloitte during FAM Period 2 were negotiated and in line with market rates for this type of specialized consulting work. The consulting fees during FAM Period 2 were paid to Deloitte by CAT LLC. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 2, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;

- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;

- Provided support for updating the SEC on the progress of the development of the CAT; and

- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $976,098 represent the fees paid for insurance during FAM Period 2. CAT LLC continued to maintain cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions liability insurance offered by USI. After engaging in a process for renewing the coverage, CAT LLC determined to purchase these insurance policies from USI. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

The professional and administration costs of $438,523 represent the fees paid to Anchin and Grant Thornton for financial services provided during FAM Period 2.

Financial Advisory Firm: Anchin. CAT LLC continued to engage Anchin during FAM Period 2 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these types of financial advisory services. The fees for these services during FAM Period 2 were paid by CAT LLC to Anchin. During FAM Period 2, Anchin provided a variety of services, including the following:

- Updated and maintained internal controls;
- Provided cash management and treasury functions;
- Faciliated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from the Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audit by an independent auditor; and
- Reviewed historical costs from inception.

Accounting Firm: Grant Thornton. CAT LLC continued to employ the accounting firm Grant Thornton during FAM Period 2 based on, among other things, its expertise and cumulative knowledge of CAT LLC. CAT LLC continued to believe that Grant Thornton was well qualified for its role and its fee rates were in line with with market rates for these accounting services. The fees for these services during FAM

Period 2 were paid by CAT LLC to Grant Thornton. During FAM Period 2, Grant Thornton performed a financial statement audit for CAT LLC as an independent accounting firm.

(j) Public Relations Costs

The public relations costs of $41,940 represent the fees paid to Peak Strategies during FAM Period 2. CAT LLC continued to employ Peak Strategies during FAM Period 2 based on, among other things, their expertise and history with the project. The fee rates for this firm were in line with market rates for these types of services. The fees for these services during FAM Period 2 were paid by CAT LLC to Peak Strategies. During FAM Period 2, Peak Strategies continued to provide professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(iv) Historical CAT Costs Incurred in Financial Accountability Milestone Period 3

Historical CAT Costs 1 would include costs incurred by CAT and already funded by the Participants during Period 3 of the Financial Accountability Milestones ("FAM Period 3"),[58] which covers the period from January 1, 2021 – December 31, 2021. Historical CAT Costs 1 would include costs for FAM Period 3 of $144,415,268. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($48,138,423), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($48,138,423) and CEBSs paying one-third ($48,138,423). The following table breaks down Historical CAT Costs 1 for FAM Period 3 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Historical CAT Costs for FAM Period 3**[59]
Capitalized Developed Technology Costs*	$10,763,372
Technology Costs:	$123,639,402
Cloud Hosting Services	$94,574,759
Operating Fees	$23,106,091
CAIS Operating Fees	$5,562,383
Change Request Fees	$396,169
Legal	$6,333,248
Consulting	$1,408,209
Insurance	$1,582,714

58 Section 11.6(a)(i)(C) of the CAT NMS Plan.

59 The costs described in this table of costs for FAM Period 3 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

Professional and administration	$595,923
Public relations	$92,400
Total Operating Expenses	**$144,415,268**

* The non-cash amortization of these capitalized developed technology costs of $5,108,044 incurred during FAM Period 3 have been appropriately excluded from the above table.[60]

By the completion of FAM Period 3, CAT LLC was required to implement the following requirements with regard the CAT:

> (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 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.[61]

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60 As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

61 *See* definition of "Full Availability and Regulatory Utilization of Transactional Database Functionality" in Section 1.1 of the CAT NMS Plan.

CAT LLC completed the requirements of FAM Period 3 by December 31, 2021. The following describes the costs for each of the categories for FAM Period 3.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 3 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 3 Period. Accordingly, the $94,574,759 in technology costs for cloud hosting services represents costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 3. The fee arrangement for AWS described above for the earlier periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement.

The cost for AWS cloud services for the CAT continued to be a function of the volume of CAT Data. During FAM Period 3, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant Data, Phase 2a, Phase 2b, Phase 2c and Phase 2d Industry Member Data (including certain linkages), SIP Data, Other Data, including reference data, and LTID account information.

The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 3.[62]

	Date Range: 1/1/21 to 4/25/21	Date Range: 4/26/21/ to 12/31/21*
Average Daily Volume in Billions		
Participant - Equities	9	9
Participant - Options	135	136
Industry Member - Equities	20	19
Industry Member - Options	2	2
SIP – Options & Equities	129	137
Average Total Daily Volume	297	304
Cumulative Total Events for the Period	7,480	5,310
Total Compute Hours for the Period	15,860,304	33,487,318
Storage Footprint at End of Period (Petabytes)	180.22	284.62

* Start of Participant Equities in CAT format and SIP Equities on 4/26/21

(b) Technology Costs – Operating Fees

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in its role as the Plan Processor for the CAT during FAM Period 3. Accordingly, the $23,106,091 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 3. The fee arrangement for FCAT described above with regard to the prior Periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement. During FAM Period 3, FCAT's activities with respect to the CAT included the following:

62 Note that the volume data described in this table does not include CAIS data.

- Facilitated Phase 2c and Phase 2d testing for Industry Members;
- Oversaw creation of linkages of the lifecycle of order events based on the received data through Phase 2d;
- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with the Participants and the SEC and its staff;
- Operated the FINRA CAT Helpdesk;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement with FCAT discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 3. Accordingly, the $5,562,383 in technology costs for CAIS operating fees represents costs incurred for services provided by Kingland during FAM

Period 3. The fee arrangement for Kingland described above with regard to the prior Periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement. During FAM Period 3, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to the CCID Alternative, as well as the acceleration of the reporting of LTIDs. The full CAIS Technical Specifications were published during FAM Period 3.

(d) Technology Costs – Change Request Fees

During FAM Period 3, CAT LLC engaged FCAT to pursue certain change requests in accordance with the Plan Processor Agreement. The change request costs were paid by CAT LLC to FCAT. Specifically, during FAM Period 3, CAT incurred costs of $396,169 related to change requests, including the following: (1) the addition of functionality for exchange Participants to report rejected messages to the CAT; (2) the migration of MIRS query engine to AWS to reduce operational costs and increase resiliency; and (3) updating the Participant Technical Specifications to allow for two-sided Participant option quote reporting.

(e) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for FAM Period 3 of $10,763,372 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as

defined in the agreement between CAT LLC and the Plan Processor, including the transition from equity data received by FINRA pursuant to various regulatory services agreements between FINRA and Participant exchanges to the equity CAT Data, and the completion of the Industry Member Phase 2d options manual and complex orders go-live requirements; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including costs related to off-exchange volume concentration, Participant 24-hour trading and an external metastore; (3) implementation fees; and (4) license fees.

(f) Legal Costs

The legal costs of $6,333,248 represent the fees paid for legal services provided by three law firms, WilmerHale, Pillsbury and Covington & Burling LLP ("Covington") during FAM Period 3.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 3 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 3 were paid by CAT LLC to WilmerHale. During FAM Period 3, the legal assistance provided by WilmerHale included providing legal advice regarding the following:

- Assisted with the development of the CAT funding model and drafting related amendments and rule filings;
- Drafted exemptive requests from CAT NMS Plan requirements, including, for example, verbal activity regarding Phase 2c cutover, error reports, error corrections, Phase 2d Reporting, unique Order-ID on internal route events, reporting addresses, recordkeeping, and unique CCID for foreign customers;

- Provided interpretations related to CAT NMS Plan requirements, including with regard to the Financial Accountability Milestone amendment, FAQs, CAIS requirements, ADF, and technical specifications;

- Provided support for the Operating Committee, Compliance Subcommittee, working groups and Leadership Team, including with regard to meetings with the SEC staff;

- Assisted with the Implementation Plan and Quarterly Progress Reports required pursuant to Section 6.6(c) of the CAT NMS Plan;

- Drafted SRO rule filings related to the CAT Compliance Rule;

- Provided support for Compliance Subcommittee, including with regard to responses to OCIE examinations and the annual assessment;

- Provided guidance regarding the SEC's proposed security amendments to the CAT NMS Plan;

- Provided guidance regarding SRO rule filings for the retirement of systems;

- Provided legal support for Operating Committee meetings, including drafting resolutions and other materials and voting advice;

- Provided assistance with change requests;

- Provided guidance and regulatory support for litigation regarding the response to the SEC's exemptive orders;

- Assisted with communications with the industry, includng CAT Alerts and presentations;

- Provided guidance regarding the confidentiality of CAT Data, including third-party information requests;

- Assisted with cost management analysis and proposals; and

- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 3 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 3 were paid by CAT LLC to Pillsbury. During FAM Period 3, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During this period, Pillsbury advised CAT LLC regarding applicable legal matters, reviewed and responded to comment letters regarding the proposed Plan amendment, participated in meetings with senior SEC staff, responded to comments submitted following the SEC's April 6, 2021 order instituting proceedings,[63] and assessed legal matters regarding the SEC's October 29, 2021 order denying the proposed Plan amendment.[64]

Law Firm: Covington. CAT LLC hired Covington for litigation with the SEC regarding certain exemptive orders related to the CAT, including orders issued in December 2020.[65] CAT LLC interviewed this law firm as well as other potential law firms, considering a variety of factors in its analysis for choosing legal assistance, including the relevant expertise and fees of the potential lawyers. CAT LLC approved the engagement of Covington in January 2021. The fee rates for this law firm, which were calculated based on hourly rates, were in line with market rates for specialized

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63 Securities Exchange Act Rel. No. 91487 (Apr. 6, 2021), 86 Fed. Reg. 19054 (Apr. 12, 2021).

64 Securities Exchange Act Rel. No. 93484 (Oct. 29, 2021), 86 Fed. Reg. 60933 (Nov. 4, 2021).

65 *See* Securities Exchange Act Rel. No. 90688 (Dec. 16, 2020), 85 Fed. Reg. 83634 (Dec. 22, 2020); and Securities Exchange Act Rel. No. 90689 (Dec. 16, 2020), 85 Fed. Reg. 83667 (Dec. 22, 2020) (collectively, the "2020 Orders").

services. The legal fees for FAM Period 3 for this firm were paid by CAT LLC to Covington.

After Covington was hired in 2021 through the end of 2021, the firm provided legal assistance regarding the litigation with the SEC regarding the 2020 Orders. These services included researching, drafting, and filing motions to stay the 2020 orders and related materials in proceedings before the SEC, as well as researching, drafting, and filing petitions for judicial review of the 2020 Orders in proceedings before the U.S. Court of Appeals for the D.C. Circuit. Covington oversaw ongoing litigation proceedings on these matters, and also supported WilmerHale with respect to settlement negotiations with the SEC staff regarding the 2020 Orders.

In addition to these services, CAT LLC engaged Covington in November 2021 to provide assistance with respect to the SEC's disapproval of CAT NMS Plan amendments concerning a proposed limitation on liability in the event of a data breach or similar event. Covington provided advice concerning CAT's response to the SEC's disapproval order. This work accounted for a minority of Covington's fees in 2021.[66]

(g) Consulting Costs

The consulting costs of $1,408,209 represent the fees paid to Deloitte as project manager during FAM Period 3. CAT LLC continued to employ Deloitte during FAM Period 3 based on, among other things, their expertise and long history with the project.

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[66] As discussed above with regard to Pillsbury's work on liability matters, liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants. Moreover, such activity is a necessary part of the operation of the CAT.

The fee rates for Deloitte during FAM Period 3 were negotiated and in line with market rates for this type of specialized consulting work. The consulting fees during FAM Period 3 were paid to Deloitte by CAT LLC. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 3, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;
- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT; and
- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $1,582,714 represent the fees paid for insurance during FAM Period 3. CAT LLC continued to maintain cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions liability insurance offered by USI. After engaging in a process for renewing the coverage, CAT LLC determined to purchase these insurance policies from USI. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

The professional and administration costs of $595,923 represent the fees paid to Anchin and Grant Thornton for financial services during FAM Period 3.

Financial Advisory Firm: Anchin. CAT LLC continued to employ Anchin during FAM Period 3 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these financial advisory services. The fees for these services during FAM Period 3 were paid by CAT LLC to Anchin. During FAM Period 3, Anchin provided a variety of services, including the following:

- Updated and maintained internal controls;
- Provided cash management and treasury functions;
- Faciliated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;

- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;
- Reviewed historical costs from inception; and
- Provided accounting and financial information in support of SEC filings.

Accounting Firm: Grant Thornton. CAT LLC continued to employ the accounting firm Grant Thornton during FAM Period 3 based on, among other things, their expertise and cumulative knowledge of CAT LLC. CAT LLC determined that Grant Thornton was well qualified for its role and that its fixed fee rates were in line with market rates for these accountant services. The fees for these services during FAM Period 3 were paid by CAT LLC to Grant Thornton. During FAM Period 3, Grant Thornton provided audited financial statements for CAT LLC.

(j) Public Relations Costs

The public relations costs of $92,400 represent the fees paid to Peak Strategies during FAM Period 3. CAT LLC continued to employ Peak Strategies during FAM Period 3 based on, among other things, their expertise and history with the project. The fee rates for this firm were in line with market rates for these types of services. The fees for these services during FAM Period 3 were paid by CAT LLC to Peak Strategies. During FAM Period 3, Peak Strategies continued to provide professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments

related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(v) Excluded Costs

Historical CAT Costs 1 would not include three categories of CAT costs ("Excluded Costs"): (1) $14,749,362 of costs related to the termination of the relationship with the Initial Plan Processor; (2) $48,874,937, which are all CAT costs incurred from November 15, 2017 through November 15, 2018; and (3) $19,628,791, which are costs paid to the the Initial Plan Processor from November 16, 2018 through February 2019 when the relationship with the Initial Plan Processor was concluded. The Participants would remain responsible for 100% of these costs, which total $83,253,090. CAT LLC determined to exclude these Excluded Costs from Historical CAT Costs 1 because these costs relate to the delay in the start of reporting to the CAT and the conclusion of the relationship with the Initial Plan Processor.[67]

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[67] In approving the CAT Funding Model, the Commission states that the proposed exclusion of the first two categories of Excluded Costs "is reasonable in the Commission's view because it would not require all costs incurred by the Participants to be recovered from Industry Members through

(*a*) *Costs related to Conclusion of Relationship with Initial Plan Processor*

First, Historical CAT Costs 1 would not include $14,749,362 of costs related to the conclusion of the relationship with the Initial Plan Processor. Such costs include costs related to the American Arbitration Association, the legal assistance of Pillsbury with regard to the arbitration with the Initial Plan Processor, and the settlement costs related to the arbitration with the Initial Plan Processor. The Participants would remain responsible for 100% of these $14,749,362 in costs.

(b) Costs Incurred from November 15, 2017 through November 15, 2018

Second, Historical CAT Costs 1 would not include all CAT costs incurred from November 15, 2017 through November 15, 2018. CAT LLC determined to exclude all costs during this one-year period of $48,874,937 from fees charged to Industry Members due to the delay in the start of reporting to the CAT. The Participants would remain responsible for 100% of these $48,874,937 in costs. The following table breaks down these costs into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

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the Historical CAT Assessment, specifically excluding those costs related to the delay in the start of reporting to the CAT and costs related to the conclusion of the relationship with the Initial Plan Processor." CAT Funding Model Approval Order at 62663. In addition to the first two categories of Excluded Costs, CAT LLC is now proposing a third category of Excluded Costs that would exclude all costs paid to the Initial Plan Processor after November 15, 2018.

Operating Expense	Excluded Costs for November 15, 2017 – November 15, 2018[68]
Capitalized Developed Technology Costs	$37,852,083
Technology Costs:	-
Cloud Hosting Services	-
Operating Fees	-
CAIS Operating Fees	-
Change Request Fees	-
Legal	$6,143,278
Consulting	$4,452,106
Insurance	-
Professional and administration	$340,145
Public relations	$87,325
Total Operating Expenses	**$48,874,937**

The following provides additional detail regarding the Excluded Costs.

(I) Technology Costs – Cloud Hosting Services, Operating Fees, CAIS Operating Fees and Change Request Fees

CAT LLC did not incur technology costs related to the categories of cloud hosting services, operating fees, CAIS operating fees or change requests during the period from November 15, 2017 through November 15, 2018.

(II) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for the period from November 15, 2017 through November 15, 2018 include capitalizable application development costs of

[68] The costs described in this table of Excluded Costs were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

$37,852,083 incurred in the development of the CAT by the Initial Plan Processor. Such costs include development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as defined in the agreement between CAT LLC and the Initial Plan Processor. Such costs include costs related to Industry Member technical specifications for orders and transactions, the system security plan, testing and production for Participant CAT reporting, third-party security assessment and response, query portal, onboarding of the Chief Information Security Officer, and ingestion of FINRA TRF data and FINRA data related to halts and corporate actions.

(III) Legal Costs

The legal costs of $6,143,278 represent the fees paid to WilmerHale for legal services from November 15, 2017 through November 15, 2018. During this period, WilmerHale provided legal assistance to the CAT including with regard to the following:

- Provided legal support for the governance of the CAT, including governance support for the Operating Committee, Advisory Committee, Compliance Subcommittee, and CAT working groups;
- Assisted with the development of the CAT funding model and drafted related amendments of the CAT NMS Plan;
- Provided assistance related to CAT security;
- Drafted exemptive requests, including requests related to PII;
- Assisted with the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;
- Provided interpretations of and related to the CAT NMS Plan;
- Provided advice with regard to regulator access to the CAT;

- Assisted with the Plan Processor transition;
- Provided assistance regarding communications with the industry regarding the CAT;
- Provided advice regarding Customer Account Information and PII;
- Provided support for litigation related to SEC exemptive orders; and
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretative and implementation issues.

(IV) Consulting Costs

The consulting costs of $4,452,106 represent the fees paid to Deloitte for their role as project manager for the CAT from November 15, 2017 through November 15, 2018. During this period, Deloitte engaged in the following activities with respect to the CAT:

- Implemented program operations for the CAT project;
- Provided governance support to the Operating Committee, including support for Subcommittees and working groups of the Operating Committee (*e.g.*, Compliance Subcommittee, Cost and Funding Working Group, Technical Working Group, Industry Outreach Working Group, Security Working Group and Steering Committee);
- Assisted with cost and funding issues for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT; and
- Provided active planning and coordination with and support for the Initial Plan Processor with regard to the development of the CAT, and reported to the Participants on the progress.

(V) Insurance

CAT LLC did not incur costs related to insurance during the period from November 15, 2017 through November 15, 2018.

(VI) Professional and Administration Costs

The professional and administration costs of $340,145 represent the fees paid to Anchin, Exegy and RSM from November 15, 2017 through November 15, 2018.

Financial Advisory Firm: Anchin. From the commencement of its engagment in April 2018 through November 15, 2018, Anchin engaged in the following activities with respect to the CAT:

- Developed, updated and maintained internal controls;
- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Addressed accounting and financial matters relating to the transition from CAT NMS, LLC to Consolidated Audit Trail, LLC, including supporting the dissolution of CAT NMS, LLC;

- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;
- Reviewed historical costs from inception; and
- Provided accounting and financial information in support of SEC filings.

Market Data Provider: Exegy. From July 2018 through November 15, 2018, CAT LLC purchased market data from Exegy (as described in more detail above).

Security Assessment: RSM. From October 2018 through November 15, 2018, CAT LLC incurred costs for RSM's performance of a security assessment (as described in more detail above).

(VII) Public Relations Costs

The public relations costs of $87,325 represent the fees paid to Sloane from November 15, 2017 through November 15, 2018. From the commencement of its engagment in March 2018 through November 15, 2018, Sloane provided professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, Sloane provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan).

(c) Costs Paid to Initial Plan Processor from November 16, 2018 through February 2019

Third, Historical CAT Costs 1 would not include the $19,628,791 in costs paid to the Initial Plan Processor from November 16, 2018 through February 2019 when CAT LLC's relationship with the Initial Plan Processor concluded. CAT LLC determined that Historical CAT Costs 1 would not include any fees paid to the Initial Plan Processor after November 15, 2017,[69] which was the date by which Participants were required to begin reporting to the CAT.[70] As discussed above, the Participants determined that Historical CAT Costs 1 would not include all CAT costs incurred from November 15, 2017 through November 15, 2018, which includes $37,852,083 in Initial Plan Processor costs incurred from November 15, 2017 through November 15, 2018 (as well as other CAT costs during this period). The remaining Initial Plan Processor costs incurred after November 15, 2018 are the $19,628,791 in costs for the period from November 16, 2018 through February 2019 incurred in the development of the CAT by the Initial Plan Processor, as well as a transition fee for the transition from the Initial Plan Processor to the successor Plan Processor. The Participants would remain responsible for 100% of these $19,628,791 in costs.

(C) Historical Recovery Period 1

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69 As discussed below, CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017. *See* Section 3(a)(10)(E) below.

70 The SEC approved the CAT NMS Plan on November 15, 2016, and Participant reporting was required to begin on the first anniversary of this date, November 15, 2017. *See* Section 6.3 of the CAT NMS Plan and CAT NMS Plan Approval Order.

Under the CAT NMS Plan, the Operating Committee is required to reasonably establish the length of the Historical Recovery Period used in calculating each Historical Fee Rate based upon the amount of the Historical CAT Costs to be recovered by the Historical CAT Assessment, and to describe the reasons for its length.[71] The Historical Recovery Period used in calculating the Historical Fee Rate may not be less than 24 months or more than five years.[72] The Operating Committee has determined to establish a Historical Recovery Period 1 of 24 months for Historical CAT Assessment 1.

The Operating Committee determined that the length of Historical Recovery Period 1 appropriately weighs the need for a reasonable Historical Fee Rate 1 that spreads the Historical CAT Costs over an appropriate amount of time and the need to repay the loans to the Participants in a timely fashion. The Operating Committee determined that 24 months for Historical Recovery Period 1 would establish a fee rate that is lower than other transaction-based fees, including fees assessed pursuant to Section 31.[73] In addition, in establishing a Historical Recovery Period of 24 months, the Operating Committee recognized that the total costs for Historical CAT Assessment 1 were less than the total costs for 2022 and 2023,[74] and therefore it would be reasonable and appropriate to recover costs subject to this filing over an approximate two-year period.

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71 Section 11.3(b)(i)(D)(I) and Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

72 Section 11.3(b)(i)(D)(I) of the CAT NMS Plan. In the CAT Funding Model Approval Order, the SEC stated that "[i]n the Commission's view, it is reasonable for the Operating Committee to establish the length of the Historical Recovery Period to be no less than 24 months and no more than five years." CAT Funding Model Approval Order at 62664.

73 As the SEC noted in the CAT Funding Model Approval Order, recent Section 31 fees ranged from $0.00009 per share to $0.0004 per share. CAT Funding Model at 62682.

74 The total CAT costs for 2022 were approximately $186 million and the total CAT costs for 2023 were approximately $233 million.

The length of the Historical Recovery Period 1 and the reasons for its length are provided in this filing in accordance with the requirement in the CAT NMS Plan to provide such information in a fee filing for a Historical CAT Assessment.[75]

(D) Projected Total Executed Equivalent Share Volume

The calculation of Historical Fee Rate 1 also requires the determination of the projected total executed equivalent share volume of transactions in Eligible Securities for Historical Recovery Period 1. Under the CAT NMS Plan, the Operating Committee is required to "reasonably determine the projected total executed equivalent share volume of all transactions in Eligible Securities for each Historical Recovery Period based on the executed equivalent share volume of all transactions in Eligible Securities for the prior twelve months."[76] The Operating Committee is required to base its projection on the prior twelve months, but it may use its discretion to analyze the likely volume for the upcoming year. Such discretion would allow the Operating Committee to use its judgment when estimating projected total executed equivalent share volume if the volume over the prior twelve months was unusual or otherwise unfit to serve as the basis of a future volume estimate.[77]

The total executed equivalent share volume of transactions in Eligible Securities for the 12-month period from June 2023 through May 2024 was 3,980,753,840,905.21 executed equivalent shares. The Operating Committee has determined to calculate the projected total executed equivalent share volume for the 24 months of Historical

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75 Section 11.3(b)(iii)(B)(II)(C) of the CAT NMS Plan.

76 Section 11.3(b)(i)(E) of the CAT NMS Plan.

77 CAT Funding Model Approval Order at 62664.

Recovery Period 1 by doubling the executed equivalent share volume for the prior 12 months. The Operating Committee determined that such an approach was reasonable as the CAT's annual executed equivalent share volume has remained relatively constant. For example, the executed equivalent share volume for 2021 was 3,963,697,612,395, the executed equivalent share volume for 2022 was 4,039,821,841,560.31, and the executed equivalent share volume for 2023 was 3,868,940,345,680.6. Accordingly, the projected total executed equivalent share volume for Historical Recovery Period 1 is projected to be 7,961,507,681,810.42 executed equivalent shares.[78]

The projected total executed equivalent share volume of all transactions in Eligible Securities for Historical Recovery Period 1 and a description of the calculation of the projection is provided in this filing in accordance with the requirement in the CAT NMS Plan to provide such information in a fee filing for a Historical CAT Assessment.[79]

(E) Historical Fee Rate 1

Historical Fee Rate 1 would be calculated by dividing Historical CAT Costs 1 by the reasonably projected total executed equivalent share volume of all transactions in Eligible Securities for Historical Recovery Period 1, as described in detail above.[80] Specifically, Historical Fee Rate 1 would be calculated by dividing $318,059,819 by 7,961,507,681,810.42. As a result, the Historical Fee Rate 1 would be

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78 This projection was calculated by multiplying 3,980,753,840,905.21 executed equivalent shares by two.

79 Section 11.3(b)(iii)(B)(II)(D) of the CAT NMS Plan.

80 In approving the CAT Funding Model, the Commission stated that "[t]he calculation of the Historical Fee Rate by dividing the Historical CAT Costs by the projected total executed equivalent share volume of all transactions in Eligible Securities for the Historical Recovery Period is reasonable." CAT Funding Model Approval Order at 62664.

$0.00003994969693072937 per executed equivalent share. Historical Fee Rate 1 is provided in this filing in accordance with the requirement in the CAT NMS Plan to provide the Historical Fee Rate in a fee filing for a Historical CAT Assessment.[81]

(3) Past CAT Costs and Participants

Participants would not be required to pay any fees associated with Historical CAT Assessment 1 as the Participants previously have paid all Past CAT Costs. The CAT NMS Plan explains that:

> Because Participants previously have paid Past CAT Costs via loans to the Company, Participants would not be required to pay any Historical CAT Assessment. In lieu of a Historical CAT Assessment, the Participants' one-third share of Historical CAT Costs and such other additional Past CAT Costs as reasonably determined by the Operating Committee will be paid by the cancellation of loans made to the Company on a pro rata basis based on the outstanding loan amounts due under the loans.[82]

The CAT NMS Plan further states that "Historical CAT Assessments are designed to recover two-thirds of the Historical CAT Costs."[83]

(4) Monthly Fees

CEBBs and CEBSs would be required to pay fees for Historical CAT Assessment 1 on a monthly basis for the period in which Historical CAT Assessment 1 is in effect.[84] A CEBB or CEBS's fee for each month would be calculated based on the transactions in

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81 Section 11.3(b)(iii)(B)(II)(A) of the CAT NMS Plan.

82 Section 11.3(b)(ii) of the CAT NMS Plan.

83 *Id*. In approving the CAT Funding Model, the Commission stated that "[t]he proposed allocation of the Historical CAT Assessment solely to CEBSs and CEBBs, and ultimately Industry Members, is reasonable. The Historical CAT Assessment will still be divided into thirds," as the Participants' one-third share of Historical CAT Costs will be paid by the cancellation of loans made to the Company. CAT Funding Model Approval Order at 62666.

84 *See* Section 11.3(b)(iii)(A) of the CAT NMS Plan.

Eligible Securities executed by the CEBB or CEBS from the prior month.[85] Proposed paragraph (a)(1)(A) of the fee schedule would state that each CAT Executing Broker would receive its first invoice in November 2024, and "would receive an invoice each month thereafter in which Historical CAT Assessment 1 is in effect." Proposed paragraph (a)(1)(B) of the fee schedule would state that "Consolidated Audited Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis." In addition, proposed paragraph (b)(1) of the fee schedule states that each CEBB and CEBS is required to pay its CAT fees "each month."

(5) Actual Recovery Period for Historical CAT Assessment 1

The CAT NMS Plan states that, "[n]otwithstanding the length of the Historical Recovery Period used in calculating the Historical Fee Rate, each Historical CAT Assessment calculated using the Historical Fee Rate will remain in effect until all Historical CAT Costs for the Historical CAT Assessment are collected."[86] Accordingly, Historical CAT Assessment 1 will remain in effect until all Historical CAT Costs 1 have been collected. The actual recovery period for Historical CAT Assessment 1 may be shorter or longer than Historical Recovery Period 1 depending on the actual executed equivalent share volumes during the time that Historical CAT Assessment 1 is in effect.[87]

(6) Consolidated Audit Trail Funding Fees

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85 *See* proposed paragraph (a)(1)(B) of the fee schedule.

86 Section 11.3(b)(i)(D)(II) of the CAT NMS Plan.

87 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, it is reasonable for Industry Members to be charged a Historical CAT Assessment until all Historical CAT Costs for the Historical CAT Assessment are collected." CAT Funding Model Approval Order at 62665.

To implement Historical CAT Assessment 1, a new section would be added to the Exchange's fee schedule for "Consolidated Audit Trail Funding Fees", and it would include the proposed paragraphs described below.

(A) Fee Schedule for Historical CAT Assessment 1

The CAT NMS Plan states that:

> Each month in which a Historical CAT Assessment is in effect, each CEBB and each CEBS shall pay a fee for each transaction in Eligible Securities executed by the CEBB or CEBS from the prior month as set forth in CAT Data, where the Historical CAT Assessment for each transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by one-third and by the Historical Fee Rate reasonably determined pursuant to paragraph (b)(i) of this Section 11.3.[88]

Accordingly, based on the factors discussed above, the Exchange proposes to add paragraph (a)(1) to the Consolidated Audit Trail Funding Fees section of its fee schedule. Proposed paragraph (a)(1) would state the following:

> (A) Each CAT Executing Broker shall receive its first invoice for Historical CAT Assessment 1 in November 2024, which shall set forth the Historical CAT Assessment 1 fees calculated based on transactions in October 2024, and shall receive an invoice for Historical CAT Assessment 1 for each month thereafter in which Historical CAT Assessment 1 is in effect.
>
> (B) Consolidated Audit Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis. Each month, such invoices shall set forth a fee for each transaction in Eligible Securities executed by the CAT Executing Broker in its capacity as a CAT Executing Broker for the Buyer ("CEBB") and/or the CAT Executing Broker for the Seller ("CEBS") (as applicable) from the prior month as set forth in CAT Data. The fee for each such transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by the fee rate of $0.000013 per executed equivalent share.

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[88] Section 11.3(b)(iii)(A) of the CAT NMS Plan.

(C) Historical CAT Assessment 1 will remain in effect until $212,039,879.34 (two-thirds of Historical CAT Costs 1) are collected from CAT Executing Brokers collectively, which is estimated to be approximately two years, but could be for a longer or shorter period of time. Consolidated Audit Trail, LLC will provide notice when Historical CAT Assessment 1 will no longer be in effect.

(D) Each CAT Executing Broker shall be required to pay each invoice for Historical CAT Assessment 1 in accordance with paragraph (b).

As noted in the Plan amendment for the CAT Funding Model, "as a practical matter, the fee filing for a Historical CAT Assessment would provide the exact fee per executed equivalent share to be paid for each Historical CAT Assessment, by multiplying the Historical Fee Rate by one-third and describing the relevant number of decimal places for the fee rate.[89] Accordingly, proposed paragraph (a)(1)(B) of the fee schedule would set forth a fee rate of $0.000013 per executed equivalent share. This fee rate is calculated by multiplying Historical Fee Rate 1 of $0.00003994969693072937 by one-third, and rounding the result to 6 decimal places.[90] The Operating Committee determined to use six decimal places to balance the accuracy of the calculation with the potential systems and other impracticalities of using additional decimal places in the calculation.

The proposed language in paragraph (a)(1)(A) of the fee schedule would describe when CAT Executing Brokers would receive their first monthly invoice for Historical CAT Assessment 1. Specifically, CAT Executing Brokers would receive their first monthly invoice for Historical CAT Assessment 1 in November 2024 and the fees set forth in that invoice would be calculated based on transactions executed in the prior

89 CAT Funding Model Approval Order at 62658, n.658.

90 Dividing $0.00003994969693072937 by three equals $0.00001331656564357646. Rounding $0.00001331656564357646 to six decimal places equals $0.000013.

month, that is, transactions executed in October 2024. The payment for the first invoice would be required within 30 days after the receipt of the first invoice (unless a longer period is indicated), as described in paragraph (b)(2) of the fee schedule.

Proposed paragraph (a)(1)(A) of the fee schedule also would describe the monthly cadence of the invoices for Historical CAT Assessment 1. Specifically, after the first invoices are provided to CAT Executing Brokers in November 2024, invoices will be sent to CAT Executing Brokers each month thereafter while Historical CAT Assessment 1 is in effect.

Proposed paragraph (a)(1)(B) of the fee schedule would describe the invoices for Historical CAT Assessment 1. Proposed paragraph (a)(1)(B) of the fee schedule would state that "Consolidated Audit Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis." Proposed paragraph (a)(1)(B) of the fee schedule also would describe the fees to be set forth in the invoices for Historical CAT Assessment 1. Specifically, it would state that "[e]ach month, such invoices shall set forth a fee for each transaction in Eligible Securities executed by the CAT Executing Broker in its capacity as a CAT Executing Broker for the Buyer ("CEBB") and/or the CAT Executing Broker for the Seller ("CEBS") (as applicable) from the prior month as set forth in CAT Data. The fee for each such transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by the fee rate of $0.000013 per executed equivalent share."

Furthermore, proposed paragraph (a)(1)(C) of the fee schedule would describe how long Historical CAT Assessment 1 would remain in effect. It would state that "Historical CAT Assessment 1 will remain in effect until $212,039,879.34 (two-thirds of

Historical CAT Costs 1) are collected from CAT Executing Brokers collectively, which is estimated to be approximately two years, but could be for a longer or shorter period of time." This proposed paragraph would further state that "Consolidated Audit Trail, LLC will provide notice when Historical CAT Assessment 1 will no longer be in effect."

Historical CAT Assessment 1 will be assessed for all transactions executed in each month through the end of the month in which two-thirds of Historical CAT Costs 1 are assessed, and then CAT LLC will provide notice that Historical CAT Assessment 1 is no longer in effect. Since Historical CAT Assessment 1 is a monthly fee based on transaction volume from the prior month, Historical CAT Assessment 1 may collect more than two-thirds of Historical CAT Costs 1. To the extent that occurs, any excess money collected during the final month in which Historical CAT Assessment 1 is in effect will be used to offset future fees and/or to fund the reserve for the CAT.

Finally, proposed paragraph (a)(1)(D) of the fee schedule sets forth the requirement for the CAT Executing Brokers to pay the invoices for Historical CAT Assessment 1. It would state that "[e]ach CAT Executing Broker shall be required to pay each invoice for Historical CAT Assessment 1 in accordance with paragraph (b)."

(B) Manner of Payment

Paragraph (b)(1) to the "Consolidated Audit Trail Funding Fees" section of its fee schedule describes the manner of payment of Industry Member CAT fees. Paragraph (b)(1) states that "[e]ach CAT Executing Broker shall pay its CAT fees as required pursuant to paragraph (a) each month to the Consolidated Audit Trail, LLC in the manner prescribed by the Consolidated Audit Trail, LLC." The CAT NMS Plan requires the

Operating Committee to establish a system for the collection of CAT fees.[91] The Plan Processor has established a billing system for CAT fees.[92] Therefore, the Exchange proposes to require CAT Executing Brokers to pay Historical CAT Assessment 1 in accordance with such system.

(C) Failure to Pay CAT Fees

The CAT NMS Plan further states that:

> Participants shall require each Industry Member to pay all applicable fees authorized under this Article XI within thirty (30) days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If an Industry Member fails to pay any such fee when due (as determined in accordance with the preceding sentence), such Industry Member shall pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal to the lesser of: (a) the Prime Rate plus 300 basis points; or (b) the maximum rate permitted by applicable law.[93]

Accordingly, the Exchange previously has added this requirement to the Exchange's fee schedule. Specifically, paragraph (b)(2) of the fee schedule states:

> Each CAT Executing Broker shall pay the CAT fees required pursuant to paragraph (a) within thirty days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If a CAT Executing Broker fails to pay any such CAT fee when due, such CAT Executing Broker shall pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal to the lesser of (i) the Prime Rate plus 300 basis points, or (ii) the maximum rate permitted by applicable law.

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91 Section 11.4 of the CAT NMS Plan.

92 The billing process and system are described in CAT Alert 2023-02 as well as the CAT FAQs related to the billing of CAT fees, the Industry Member CAT Reporter Portal User Guide, the FCAT Industry Member Onboarding Guide, the FCAT Connectivity Supplement for Industry Members and the CAT Billing Webinars (dated Sept. 28, 2023, and Nov. 7, 2023), each available on the CAT website.

93 Section 11.4 of the CAT NMS Plan.

The requirements of paragraph (b)(2) would apply to Historical CAT Assessment 1.

(7) Historical CAT Assessment Details

The CAT NMS Plan states that:

> Details regarding the calculation of a CAT Executing Broker's Historical CAT Assessment will be provided upon request to such CAT Executing Broker. At a minimum, such details would include each CAT Executing Broker's executed equivalent share volume and corresponding fee by (1) Listed Options, NMS Stocks and OTC Equity Securities, (2) by transactions executed on each exchange and transactions executed otherwise than on an exchange, and (3) by buy-side transactions and sell-side transactions.[94]

Such information would provide CEBBs and CEBSs with the ability to understand the details regarding the calculation of their Historical CAT Assessment.[95] CAT LLC will provide CAT Executing Brokers with these details regarding the calculation of their Historical CAT Assessments on their monthly invoice for the Historical CAT Assessment.

In addition, CAT LLC will make certain aggregate statistics regarding Historical CAT Assessments publicly available. Specifically, the CAT NMS Plan states that, "[f]or each Historical CAT Assessment, at a minimum, CAT LLC will make publicly available the aggregate executed equivalent share volume and corresponding aggregate fee by (1) Listed Options, NMS Stocks and OTC Equity Securities, (2) by transactions executed on each exchange and transactions executed otherwise on an exchange, and (3) by buy-side

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94 Section 11.3(a)(iv)(A) of the CAT NMS Plan.

95 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, providing CAT Execut[ing] Brokers information regarding the calculation of their CAT Fees will aid in transparency and permit CAT Execut[ing] Brokers to confirm the accuracy of their invoices for CAT Fees." CAT Funding Model Approval Order at 62667.

transactions and sell-side transactions."[96] Such aggregate statistics will be available on the CAT website.

Furthermore, CAT LLC will make publicly available on the CAT website the total amount invoiced each month that Historical CAT Assessment 1 is in effect as well as the total amount invoiced for Historical CAT Assessment 1 for all months since its commencement. CAT LLC also will make publicly available on the CAT website the total costs to be collected from Industry Members for Historical CAT Assessment 1. By reviewing statistics regarding how much has been invoiced and how much remains to be invoiced for Historical CAT Assessment 1, Industry Members would have sufficient information to reasonably track how much longer Historical CAT Assessment 1 is likely to be in place.

(8) Implementation Assistance

To assist Industry Members with compliance with the commencement of Historical CAT Assessment 1, CAT LLC has been making available to CAT Executing Brokers mock invoices prior to the commencement of Historical CAT Assessment 1. Specifically, CAT Executing Brokers have received mock invoices based on transaction data each month since November 2023. The mock invoices are in the same form as the actual, payable invoices, including both the relevant transaction data and the corresponding fee. However, no payments have been required in response to such mock

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[96] Section 11.3(a)(iv)(B) of the CAT NMS Plan. In approving the CAT Funding Model, the Commission stated that "[t]he publication of the aggregate executed equivalent share volume and aggregate fee is appropriate because it would allow Participants and CAT Executing Brokers a high-level validation of executed volume and fees." CAT Funding Model Approval Order at 62667.

invoices; they have been used solely to assist CAT Executing Brokers with the development of their processes for paying the CAT fees. Such data has provided CAT Executing Brokers with a preview of the transaction data used in creating the invoices for Historical CAT Assessment 1 fees, as the data will be the same as data provided in actual invoices. Such data preview is intended to facilitate the payment of Historical CAT Assessment 1.

(9) Financial Accountability Milestones

The CAT NMS Plan states that "[n]o Participant will make a filing with the SEC pursuant to Section 19(b) of the Exchange Act regarding any Historical CAT Assessment until any applicable Financial Accountability Milestone described in Section 11.6 has been satisfied."[97] The CAT NMS Plan further states that "in all filings submitted by the Participants to the Commission under Section 19(b) of the Exchange Act, to establish or implement Post-Amendment Industry Member Fees pursuant to this Article, … the Participants shall clearly indicate whether such fees are related to Post-Amendment Expenses incurred during Period 1, Period 2, Period 3, or Period 4."[98] As discussed in detail below, all applicable Financial Accountability Milestones for Historical CAT Assessment 1 – that is, Period 1, Period 2 and Period 3 of the Financial Accountability Milestones – have been satisfied. Furthermore, as discussed below, this filing clearly indicates that Historical CAT Assessment 1 relates to Post-Amendment Expenses incurred during Periods 1, 2 and 3 of the Financial Accountability Milestones.

(A) Period 1 of the Financial Accountability Milestones

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97 Section 11.3(b)(iii)(B)(III) of the CAT NMS Plan.

98 Section 11.6(b) of the CAT NMS Plan.

In accordance with Section 11.6(b) of the CAT NMS Plan, Historical CAT Assessment 1 seeks to recover costs that are related to "all fees, costs, and expenses (including legal and consulting fees, costs, and expenses) incurred by or for the Company in connection with the development, implementation and operation of the CAT from the effective date of [Section 11.6 of the CAT NMS Plan] until such time as Full Implementation of CAT NMS Plan Requirements has been achieved"[99] ("Post-Amendment Expenses") incurred during FAM Period 1. FAM Period 1 began on June 22, 2020, the effective date of Section 11.6 of the CAT NMS Plan, and concluded on July 31, 2020, the date of Initial Industry Member Core Equity and Options Reporting. Section 1.1 of the CAT NMS Plan defines "Initial Industry Member Core Equity and Options Reporting" 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.

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports.[100] As indicated by the Participants' Quarterly Progress Report for the third

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99 Section 11.6 of the CAT NMS Plan.

100 The Quarterly Progress Reports are available at https://www.catnmsplan.com/implementation-plan.

quarter of 2020,[101] Initial Industry Member Core Equity and Option Reporting was completed on schedule on July 22, 2020, which is prior to the July 31, 2020 deadline.

Under the FAM Period 1 requirement of Initial Industry Member Core Equity and Options Reporting, Industry Members – excluding Small Industry Members that are not OATS reporters – were required to report two categories of data to the CAT: equites transaction data and options transaction data (both excluding Customer Account Information, Customer-ID, and Customer Identifying Information) by July 31, 2020. Pursuant to exemptive relief provided by the Commission, the Commission authorized the Participants' Compliance Rules to allow core equity reporting for Industry Members (Phase 2a) to begin on June 22, 2020 and core options reporting for Industry Members (Phase 2b) to begin on July 20, 2020.[102]

In adopting the FAMs, the Commission stated that the equities transaction reporting required for FAM Period 1 "is consistent with the functionality that the Participants describe on the CAT NMS Plan website as 'Production Go-Live for Equities 2a file submission and data integrity validations.'"[103] The Phase 2a Industry Member

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101 *See* Q3 2020 Quarterly Progress Report (Oct. 30, 2020) and Updated Q3 2020 Quarterly Progress Report (Jan. 29, 2021).

102 *See* Phased Reporting Exemptive Relief Order. Under the CAT NMS Plan as adopted, the Participants were required, through their Compliance Rules, to require their Large Industry Members to commence reporting Industry Member Data to the Central Repository by November 15, 2018, and to require their Small Industry Members to commence reporting Industry Member Data to the Central Repository by November 15, 2019. Sections 6.7(a)(v) and (vi) of the CAT NMS Plan. The SEC granted exemptive relief from these provisions of the CAT NMS Plan to allow for the phased implementation of Industry Member reporting via five phases addressing the reporting requirements for Phase 2a Industry Member Data, Phase 2b Industry Member Data, Phase 2c Industry Member Data, Phase 2d Industry Member Data and Phase 2e Industry Member Data.

103 Securities Exchange Act Rel. No. 88890 (May 15, 2020), 85 Fed. Reg. 31322, 31330 n.97 (May 22, 2020) ("FAM Adopting Release").

Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order, and includes the following data related to Eligible Securities that are equities:

- All events and scenarios covered by OATS, which includes information related to the receipt or origination of orders, order transmittal, and order modifications, cancellations and executions;

- Reportable Events for: (1) proprietary orders, including market maker orders, for Eligible Securities that are equities; (2) electronic quotes in listed equity Eligible Securities (*i.e.*, NMS stocks) sent to a national securities exchange or FINRA's Alternative Display Facility ("ADF"); (3) electronic quotes in unlisted Eligible Securities (*i.e.*, OTC Equity Securities) received by an Industry Member operating an interdealer quotation system ("IDQS"); and (4) electronic quotes in unlisted Eligible Securities sent to an IDQS or other quotation system not operated by a Participant or Industry Member;

- Firm Designated IDs ("FDIDs"), which Industry Members must report to the CAT as required by Sections 6.3(d)(i)(A) and 6.4(d)(ii)(C) of the CAT NMS Plan;

- Industry Members would be required to report all street side representative orders, including both agency and proprietary orders and mark such orders as representative orders, except in certain limited exceptions as described in the Industry Member Technical Specifications;

- The link between the street side representative order and the order being represented when: (1) the representative order was originated specifically to represent a single order received either from a customer or another broker-dealer; and (2) there is (a) an existing direct electronic link in the Industry Member's system between the order being represented and the representative order and (b) any resulting executions are immediately and automatically applied to the represented order in the Industry Member's system;

- Manual and Electronic Capture Time for Manual Order Events;

- Special handling instructions for the original receipt or origination of an order during Phase 2a; and

- When routing an order, whether the order was routed as an intermarket sweep order ("ISO").

In Phase 2a, Industry Members were not required to report modifications of a previously routed order in certain limited instances, nor were they required to report a cancellation of an order received from a Customer after the order has been executed.[104]

The Quarterly Progress Report for the third quarter of 2020 states that "Interim Step: Production Go-Live for Equities 2a file submission and data integrity validation (Large Industry Members and Small OATS Reporters)" was completed on June 22, 2020. Accordingly, the FAM Period 1 requirement of reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of "equities transaction data, excluding Customer Account Information, Customer-ID, and Customer Identifying Information" was completed on June 22, 2020.

In adopting the FAMs, the Commission stated that the options transaction reporting required for FAM Period 1 is "consistent with the functionality that the Participants describe on the CAT NMS Plan website as 'Production Go-Live for Options 2b file submission and data integrity validations.'"[105] The Phase 2b Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order, and includes the Industry Member Data related to Eligible Securities that are options and related to simple electronic option orders, excluding electronic paired option orders. A simple electronic option order is an order to buy or sell a single option that is not related to or dependent on any other transaction for pricing and timing of execution that is either received or routed electronically by an Industry Member. Electronic receipt of an order is defined as the initial receipt of an order by an Industry Member in electronic form in

104 Phased Reporting Exemptive Relief Order at 23076-78.

105 FAM Adopting Release at 31330, n.98.

standard format directly into an order handling or execution system. Electronic routing of an order is the routing of an order via electronic medium in standard format from one Industry Member's order handling or execution system to an exchange or another Industry Member. An electronic paired option order is an electronic option order that contains both the buy and sell side that is routed to another Industry Member or exchange for crossing and/or price improvement as a single transaction on an exchange. Responses to auctions of simple orders and paired simple orders would be reportable in Phase 2b. Furthermore, combined orders in options would be treated in Phase 2b in the same way as equity representative orders are treated in Phase 2a. A combined order would mean, as permitted by SRO rules, a single, simple order in Listed Options created by combining individual, simple orders in Listed Options from a customer with the same exchange origin code before routing to an exchange. During Phase 2b, the single combined order sent to an exchange must be reported and marked as a combined order, but the linkage to the underlying orders is not required to be reported until Phase 2d.[106]

The Quarterly Progress Report for the third quarter of 2020 states that "Interim Step: Production Go-Live for Options 2b file submission and data integrity validations" was completed on July 20, 2020. Accordingly, the FAM Period 1 requirement of reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of "options transaction data, excluding Customer Account Information, Customer-ID and Customer Identifying Information" was completed on July 20, 2020.

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[106] Phased Reporting Exemptive Relief Order at 23078.

As discussed above, the Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from June 22, 2020 through July 31, 2020. The total costs for this period, as discussed above, are $6,377,343. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($2,125,781) and CEBSs paying one-third ($2,125,781).

(B) Period 2 of the Financial Accountability Milestones

Historical CAT Assessment 1 seeks to recover costs that are related to Post-Amendment Expenses incurred during FAM Period 2. FAM Period 2 began on August 1, 2020, and concluded on December 31, 2020, the date of the Full Implementation of Core Equity Reporting. Section 1.1 of the CAT NMS Plan defines "Full Implementation of Core Equity Reporting" 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 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. This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports. As indicated by the Participants' Quarterly Progress Report for the fourth quarter of 2020,[107] Full Implementation of Core Equity Reporting was completed on schedule by December 31, 2020.

Specifically, the Full Implementation of Core Equity Reporting requires the satisfaction of two prongs. The first prong requires Participants to have fully implemented the first phase of equities transaction reporting for Industry Members (excluding Small Industry Members that are not OATS reporters) at an Error Rate of less than 5%. In addition, equities transaction data produced by the CAT at this stage must also be sufficiently interlinked so as to permit full analysis of an order's lifecycle across the national market, excluding full linkage of representative orders. As CAT LLC reported on its Quarterly Progress Reports, Phase 2a was fully implemented as of October 26, 2020, including intra-firm, inter-firm, national securities exchange, and trade reporting facilities linkages.[108] In addition to the reporting of Phase 2a Industry Member Data as described above with regard to FAM Period 1, the following linkage data was added to the CAT as described in the Quarterly Progress Reports for the third and fourth quarter of 2020:

- "Production Go-Live for Equities 2a Intrafirm Linkage validations" was completed on 7/27/2020;[109]

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107 Q4 2020 Quarterly Progress Report (Jan. 29, 2021).

108 For a description of the requirements of Phases 2a, *see* Phased Reporting Exemptive Relief Order.

109 Q3 2020 Quarterly Progress Report (Oct. 20, 2021).

- "Production Go-Live for Firm to Firm Linkage validations for Equities 2a (Large Industry Members and Small OATS Reporters)" was completed on October 26, 2020; and

- "Production Go-Live for Equities 2a Exchange and TRF Linkage validations (Large Industry Members and Small OATS Reporters)" was completed on October 26, 2020.

Furthermore, as CAT LLC reported on its Quarterly Progress Report for the fourth quarter of 2020, the average overall error rate for Phase 2a Industry Member Data was less than 5% as of December 31, 2020. The average overall error rate was calculated by dividing the compliance errors by processed records.

The second prong of this FAM requires that the equities transaction data collected by the CAT at this stage be made available to regulators through two basic query tools required by the CAT NMS Plan – a targeted query tool that will enable regulators to retrieve data via an online query screen with a variety of predefined selection criteria, and a user-defined direct query tool that will provide regulators with the ability to query data using all available attributes and data sources.[110] As CAT LLC reported on its Quarterly Progress Reports, the query tool functionality incorporating the data from Phase 2a was available to the Participants and the Commission as of December 31, 2020.[111]

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110 Section 6.10(c)(i)(A) of the CAT NMS Plan requires the Plan Processor to "provide Participants and the SEC with access to all CAT Data stored in the Central Repository" via an "online targeted query tool." Appendix D,

Sections 8.1.1-8.1.3 of the CAT NMS Plan describes the required functionality associated with this regulatory tool. Appendix D, Section 8.2.1 describes the required functionality associated with a user-defined direct query tool that will "deliver large sets of data that can then be used in internal surveillance or market analysis applications."

111 *See* Q3 2020 Quarterly Progress Report (Oct. 30, 2020); Updated Q3 2020 Quarterly Progress Report (Jan. 29, 2021); and Q4 2020 Quarterly Progress Report (Jan. 29, 2021).

The Commission has determined that the Participants have sufficiently complied with the conditions set forth in the 2020 Orders and with the technical requirements for Quarterly Progress Reports set forth in Section 6.6(c) of the CAT NMS Plan for purposes of determining compliance with this FAM.[112]

As discussed above, Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from August 1, 2020 through December 31, 2020. The total costs for this period, as discussed above, are $42,976,478. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be responsible for the remain two-thirds, with CEBBs paying one-third ($14,325,492.70) and CEBSs paying one-third ($14,325,492.70).

(C) Period 3 of the Financial Accountability Milestones

Historical CAT Assessment 1 seeks to recover costs that are related to Post-Amendment Expenses incurred during FAM Period 3. FAM Period 3 began on January 1, 2021, and concluded on December 31, 2021, the date of the Full Availability and Regulatory Utilization of Transactional Database Functionality. Section 1.1 of the CAT NMS Plan defines "Full Availability and Regulatory Utilization of Transactional Database Functionality" as:

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[112] Securities Exchange Act Rel. No. 98848 (Nov. 2, 2023), 88 Fed. Reg. 77128, 77129 n.13 (Nov. 8, 2023) ("Settlement Exemptive Order").

> the point at which: (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 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. This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports. As indicated by the Participants' Quarterly Progress Report for the fourth quarter of 2021,[113] Full Availability and Regulatory Utilization of Transactional Database Functionality was completed on schedule by December 31, 2021.

Specifically, the "Full Availability and Regulatory Utilization of Transactional Database Functionality" requires the satisfaction of five prongs. The first prong requires that reporting to the Order Audit Trail System ("OATS") is no longer required for new

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[113] Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

orders. As CAT LLC reported on its Quarterly Progress Report for the fourth quarter of 2021,[114] FINRA retired OATS effective September 1, 2021.[115] Accordingly, after the retirement of OATS, reporting to OATS was no longer required.

In addition to Phase 2a and Phase 2b Industry Member Data, the second and third prongs of "Full Availability and Regulatory Utilization of Transactional Database Functionality" require Industry Member reporting of Phase 2c Industry Member Data and Phase 2d Industry Member Data. The Phase 2c Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order. That Order states that "Phase 2c Industry Member Data" is Industry Member Data related to Eligible Securities that are equities other than Phase 2a Industry Member Data, Phase 2d Industry Member Data, or Phase 2e Industry Member Data. Specifically, the Phase 2c Industry Member Data includes Industry Member Data that is related to Eligible Securities that are equities and that is related to: (1) Allocation Reports as required to be recorded and reported to the Central Repository pursuant to Section 6.4(d)(ii)(A)(1) of the CAT NMS Plan; (2) quotes in unlisted Eligible Securities sent to an IDQS operated by a CAT Reporter (reportable by the Industry Member sending the quotes) (except for quotes reportable in Phase 2d, as discussed below); (3) electronic quotes in listed equity Eligible Securities (*i.e.*, NMS stocks) that are not sent to a national securities exchange or FINRA's Alternative Display Facility; (4) reporting changes to client instructions regarding modifications to algorithms; (5) marking as a representative order any order originated to work a customer order in price guarantee scenarios, such as a guaranteed VWAP; (6)

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114 *Id.*

115 Securities Exchange Act Rel. No. 92239 (June 23, 2021), 86 Fed. Reg. 34293 (June 29, 2021).

flagging rejected external routes to indicate a route was not accepted by the receiving destination; (7) linkage of duplicate electronic messages related to a Manual Order Event between the electronic event and the original manual route; (8) special handling instructions on order route reports (other than the ISO, which is required to be reported in Phase 2a); (9) quote identifier on trade events; (10) reporting of LTIDs (if applicable) for accounts with Reportable Events that are reportable to CAT as of and including Phase 2c; (11) reporting of date account opened or Account Effective Date (as applicable) for accounts and reporting of a flag indicating the Firm Designated ID type as account or relationship; (12) order effective time for orders that are received by an Industry Member and do not become effective until a later time; (13) the modification or cancellation of an internal route of an order; and (14) linkages to the customer orders(s) being represented for representative order scenarios, including agency average price trades, net trades, aggregated orders, and disconnected Order Management System ("OMS") – Execution Management System ("EMS") scenarios, as required in the Industry Member Technical Specifications.[116]

Phase 2c Industry Member Data also includes electronic quotes that are provided by or received in a CAT Reporter's order/quote handling or execution systems in Eligible Securities that are equities and are provided by an Industry Member to other market participants off a national securities exchange under the following conditions: (1) an equity bid or offer is displayed publicly or has been communicated (a) for listed securities to the ADF operated by FINRA; or (b) for unlisted equity securities to an "interdealer

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116 Phase Reporting Exemptive Relief Order at 23078-79.

quotation system," as defined in FINRA Rule 6420(c); or (2) an equity bid or offer which is accessible electronically by customers or other market participants and is immediately actionable for execution or routing; *i.e.*, no further manual or electronic action is required by the responder providing the quote in order to execute or cause a trade to be executed). With respect to OTC Equity Securities, OTC Equity Securities quotes sent by an Industry Member to an IDQS operated by an Industry Member CAT Reporter (other than such an IDQS that does not match and execute orders) are reportable by the Industry Member sending them in Phase 2c. Accordingly, any response to a request for quote or other form of solicitation response provided in a standard electronic format (*e.g.*, FIX) that meets this quote definition (*i.e.*, an equity bid or offer which is accessible electronically by customers or other market participants and is immediately actionable for execution or routing) would be reportable in Phase 2c.[117]

The Phase 2d Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order. "Phase 2d Industry Member Data" is Industry Member Data that is related to Eligible Securities that are options other than Phase 2b Industry Member Data, Industry Member Data that is related to Eligible Securities that are equities other than Phase 2a Industry Member Data or Phase 2c Industry Member Data, and Industry Member Data other than Phase 2e Industry Member Data. Phase 2d Industry Member Data includes with respect to the Eligible Securities that are options: (1) simple manual orders; (2) electronic and manual paired orders; (3) all complex orders with linkages to all CAT-reportable legs; (4) LTIDs (if applicable) for accounts with

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117 *Id*. at 23079.

Reportable Events for Phase 2d; (5) date account opened or Account Effective Date (as applicable) for accounts with an LTID and flag indicating the Firm Designated ID type as account or relationship for such accounts; (6) Allocation Reports as required to be recorded and reported to the Central Repository pursuant to Section 6.4(d)(ii)(A)(1) of the CAT NMS Plan; (7) the modification or cancellation of an internal route of an order; and (8) linkage between a combined order and the original customer orders. Phase 2d Industry Member Data also would include electronic quotes that are provided by or received in a CAT Reporter's order/quote handling or execution systems in Eligible Securities that are options and are provided by an Industry Member to other market participants off a national securities exchange under the following conditions: a listed option bid or offer which is accessible electronically by customers or other market participants and is immediately actionable (*i.e.*, no further action is required by the responder providing the quote in order to execute or cause a trade to be executed). Accordingly, any response to a request for quote or other form of solicitation response provided in standard electronic format (*e.g.*, FIX) that meets this definition is reportable in Phase 2d for options.[118]

Phase 2d Industry Member Data also includes with respect to Eligible Securities that are options or equities (1) receipt time of cancellation and modification instructions through Order Cancel Request and Order Modification Request events; (2) modifications of previously routed orders in certain instances; and (3) OTC Equity Securities quotes sent by an Industry Member to an IDQS operated by an Industry Member CAT Reporter

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118 *Id.*

that does not match and execute orders. In addition, subject to any exemptive or other relief, Phase 2d Industry Member Data will include verbal or manual quotes on an exchange floor or in the over-the-counter market, where verbal quotes and manual quotes are defined as bids or offers in Eligible Securities provided verbally or that are provided or received other than via a CAT Reporter's order handling and execution system (*e.g.*, quotations provided via email or instant messaging).[119]

The Quarterly Progress Report for the fourth quarter of 2021 states that "Phase 2a was fully implemented as of October 26, 2020;" "Phase 2b was fully implemented as of January 4, 2021;" "Phase 2c was implemented as of April 26, 2021;" and "Phase 2d was fully implemented as of December 13, 2021."[120] The Quarterly Progress Reports for 2021 provide additional detail regarding the implementation of these steps including the following:

- "Production Go-Live for Equities 2c reporting requirements (Large Industry Members)" was completed on April 26, 2021;
- "LTID Account Information Reporting Go-Live for Phases 2a, 2b and 2c (Large Industry Members)" was completed on April 26, 2021;
- "FCAT Plan Processor creates linkages of the lifecycle of order events based on the received data through Phase 2d Production Go-Live for Options 2d reporting requirements (Large Industry Members)" was completed on December 13, 2021;
- "Production Go-Live for Options 2d reporting requirements (Large Industry Members)" was completed on December 13, 2021;

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119 *Id*. at 23079-80.

120 *See* Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

- "Production Go-Live for Options 2b reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;

- "Production Go-Live for Equities 2c reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;

- "Production Go-Live for Options 2d reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;

- "LTID Account Information Reporting Go-Live for Phases 2d (Large Industry Members)" was completed on December 13, 2021; and

- "LTID Account Information Reporting Go-Live for Phases 2a, 2b, 2c and 2d (Small Industry Members)" was completed on December 13, 2021.[121]

The third prong of "Full Availability and Regulatory Utilization of Transactional Database Functionality" also imposes an Error Rate requirement of 5% or less. The Quarterly Progress Report for the fourth quarter of 2021 states the average overall error rate was less than 5% as of December 31, 2021. The average overall error rate was calculated by dividing the compliance errors by processed records.

The fourth prong of "Full Availability and Regulatory Utilization of Transactional Database Functionality" requires that the data collected by the CAT at this stage be made available to regulators through an online targeted query tool and a user-defined direct query tool. As CAT LLC reported on its Quarterly Progress Report for the fourth quarter of 2021, the query tool functionality incorporating the data from Phases 2a, 2b, 2c and 2d was available to the Participants and to the Commission as of December 31, 2021.[122]

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121 *See* Q2 2021 Quarterly Progress Report (July 27, 2021); and Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

122 *See* Q4 2021 Quarterly Progress Report (Jan. 17, 2022)

The fifth prong requires the requirements of Section 6.10(a) of the CAT NMS Plan to have been met. Section 6.10(a) of the CAT NMS Plan requires the Participants to use the tools described in Appendix D to "develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the Central Repository." The Exchange implemented a surveillance system, or enhanced existing surveillance systems, reasonably designed to make use of the consolidated information contained in the Central Repository as of December 31, 2021 in accordance with Section 6.10(a) of the CAT NMS Plan.[123]

The Commission has determined that the Participants have sufficiently complied with the conditions set forth in the 2020 Orders and with the technical requirements for Quarterly Progress Reports set forth in Section 6.6(c) of the CAT NMS Plan for purposes of determining compliance with this FAM.[124]

As discussed above, Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from January 1, 2021 through December 31, 2021. The total costs for this period, as discussed above, are $144,415,268. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be

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123 *See* Q1 2021 Quarterly Progress Report (Apr. 30, 2021); Q2 2021 Quarterly Progress Report (July 27, 2021); Q3 2021 Quarterly Progress Report (Nov. 1, 2021); Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

124 Settlement Exemptive Order at 77129 n.13.

responsible for the remain two-thirds, with CEBBs paying one-third ($48,138,422.70) and CEBSs paying one-third ($48,138,422.70).

(D) Additional Considerations related to the Financial Accountability Milestones

As discussed above, CAT LLC has satisfied the Financial Accountability Milestones ("FAMs") for Periods 1 through 3.[125] As discussed below, none of the circumstances related to NIA Electronic RFQ Responses, the 2023 Verbal Quotes Exemption, the November 2023 Order, or Executing Broker reporting, affect the conclusion that the FAMs for Periods 1 through 3 were satisfied in a timely fashion.

(i) NIA Electronic RFQ Responses

CAT LLC does not believe that the exemptive relief relating to the reporting of electronic responses for quotes ("RFQs") that are not immediately actionable ("NIA Electronic RFQ Responses") affect the conclusion that FAMs 1 through 3 have been satisfied. The only reason CAT LLC pursued this relief is because certain Industry Members introduced concerns that NIA Electronic RFQ Responses could be considered "orders" reportable pursuant to Rule 613(j)(8) and some Industry Members were not prepared to report such orders to CAT. Thus, the relief was requested on behalf of Industry Members. CAT LLC itself has not taken any position on whether NIA Electronic RFQ Responses are "orders," as the definition of "order" is an SEC rule and the trading processes for NIA Electronic RFQ Responses are the Industry Members', not

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125 In May 2020, the Commission adopted amendments to the CAT NMS Plan that establish four Financial Accountability Milestones and set target deadlines by which these milestones must be achieved. These amendments also reduce the amount of any fees, costs, and expenses that may be recovered from Industry Members if the Participants fail to meet the target deadlines. FAM Adopting Release.

those of the Participants or CAT LLC. Accordingly, CAT LLC stated in its letter that "Industry Members must determine whether trading interest falls within the definition of an 'order' for CAT purposes. To the extent an NIA Electronic RFQ Response is not considered an 'order" as defined in Rule 613(j)(8) and the CAT NMS Plan, it would not be reportable to CAT."[126]

Only "orders" as defined in SEC Rule 613(j)(8) are reportable to CAT. There is no agreement across the industry or among regulators as to whether NIA Electronic RFQ Responses are "orders" reportable to CAT. Certain Industry Members have raised the question as to whether NIA Electronic RFQ Responses are orders, but others have argued that they are not orders under Rule 613(j)(8).[127] Indeed, members of the Advisory Committee, which CAT LLC relies upon for guidance with regard to Industry Member issues, have not had a definitive view on whether NIA Electronic RFQ Responses are orders. As Rule 613(j)(8) is an SEC rule, CAT LLC believes that only the SEC can provide a definitive determination as to if, and under what circumstances, an NIA Electronic RFQ Response is considered an "order" reportable to CAT. The issue has persisted for some time. As a result, CAT LLC filed an exemptive request regarding NIA Electronic RFQ Responses for clarity on the interpretive issue. As recently as April 2024, Industry Members have re-raised this issue stating that the SEC agrees that it must provide additional guidance on this interpretive issue to resolve the CAT reporting issue for NIA Electronic RFQ Responses:

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126 *See* Letter from Brandon Becker, Chair, CAT NMS Plan Operating Committee to Vanessa Countryman, Secretary, Commission (Feb. 13, 2024) at 2.

127 *See, e.g.*, Letter from Howard Meyerson, Managing Director, FIF, to Sai Rao, Counsel for Trading and Markets, Office of the Chair (Apr. 25, 2024).

> As further discussed in the prior FIF letters, even if the Commission had the legal authority to require the reporting of NIA RFQ responses to CAT without an amendment to Rule 613, the Commission has not provided guidance to industry members as to the conditions under which NIA RFQ responses would be reportable to CAT. In subsequent discussions with industry members, Commission representatives have agreed that, prior to NIA RFQ responses being reportable to CAT, it would be necessary for the Commission to provide further guidance to industry members as to the conditions under which NIA RFQ responses would be reportable to CAT.[128]

On May 20, 2024, the Commission granted CAT LLC's request for exemptive relief from certain CAT reporting requirements pertaining to NIA Electronic RFQ Responses to the extent such responses are considered "orders" reportable pursuant to Rule 613(j)(8).[129] The Commission, however, did not provide additional guidance regarding the conditions under which NIA Electronic RFQ Responses would be reportable to CAT. The Commission stated in its exemptive order that "[t]o the extent that the Participants are availing themselves of exemptive relief from a CAT NMS Plan requirement, such requirement shall not be included in the requirements for the Financial Accountability Milestones, provided that any conditions of the exemption are satisfied."[130]

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128 *Id.*

129 Securities Exchange Act Rel. No. 100181 (May 20, 2024), 89 Fed. Reg. 45715 (May 23, 2024).

130 *Id.* at n.11.

When the Commission proposed the FAMs, the Participants expressed concern that, "by conditioning the ability of CAT LLC and the Participants to collect Post-Amendment Industry Member Fees on factors dependent on the efforts of Industry Members, the Commission's proposals inadvertently establish a perverse incentive for Industry Members to devote less than maximum efforts to comply with their obligations related to the CAT as they will pay less fees in such instances."[131] The Participants further warned that "Industry Members may request or require unanticipated reporting delays to address Industry Member implementation issues or concerns," but that, "[f]aced with financial penalties for missed deadlines, the Participants may not be able to fully address legitimate industry concerns or accommodate requests for delays with respect to future deadlines."[132] CAT LLC has engaged in good faith to help address NIA Electronic RFQ Responses and other concerns relevant to the ability of Industry Members to meet their CAT reporting obligations. CAT LLC should not be penalized financially for seeking in good faith to resolve a difficult interpretive issue for the benefit of Industry Members.

(ii) 2023 Verbal Quotes Exemption

CAT LLC does not believe that the Commission's May 19, 2023 order granting temporary exemptive relief relating to certain verbal floor activity and unstructured verbal and electronic upstairs activity (the "2023 Verbal Quotes Exemption") affects the conclusion that FAMs 1 through 3 have been satisfied. The 2023 Verbal Quotes

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131 *See* Letter from Michael Simon, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission at 9 (Oct. 28, 2019).

132 *Id.* at 10.

Exemption, which was issued on May 19, 2023, is not relevant for purposes of FAM Periods 1 through 3, which only cover the period through December 31, 2021. The relevant exemption for this time period is the Commission's November 12, 2020 order, which granted relief for the same activity through July 31, 2023 (the "2020 Verbal Quotes Order").[133] The Commission has stated that, "to the extent that the Participants are availing themselves of exemptive relief from a CAT NMS Plan requirement, such requirement shall not be included in the requirements for a Financial Accountability Milestone, provided that the conditions of the exemption are satisfied."[134] Here, the 2020 Verbal Quotes Order was in effect and the conditions of the exemption were satisfied as of December 31, 2021, and therefore may be relied upon for purposes of determining compliance with FAM Periods 1 through 3.[135]

(iii) November 2023 Order

CAT LLC does not believe that the Commission's November 2, 2023 order granting relief from certain CAT NMS Plan requirements (the "November 2023 Order") affects the conclusion that FAMs 1 through 3 have been satisfied. The November 2023

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133 Securities Exchange Act Rel. No. 90405, 85 Fed. Reg. 73544 (Nov. 18, 2020) (the "2020 Verbal Quotes Exemption").

134 *See, e.g.*, Securities Exchange Act Rel. No. 89051 (June 11, 2020), 85 Fed. Reg. 36631, 36633 (June 17, 2020). The straightforward reading of the Commission's statement is that compliance with the conditions of an exemption will be measured as of the deadline for a particular FAM Period.

135 As a condition to the 2020 Verbal Quotes Exemption, the Commission required that the Participants provide a written status update on the reporting of these quotes and orders by July 31, 2022, including the estimated costs of reporting these quotes and orders and an implementation plan for the reporting of these quotes and orders. As noted, the 2020 Verbal Quotes Order was in effect and the conditions of the exemption were satisfied as of December 31, 2021, and therefore may be relied upon for purposes of determining compliance with FAM Periods 1 through 3. In any event, on June 3, 2022, the Participants provided the required written status update. *See* Letter from Michael Simon, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission (June 3, 2022).

Order is not relevant for purposes of FAM Periods 1 through 3, which only cover the period through December 31, 2021. As described in the November 2023 Order, the relevant exemptive orders for this time period were issued on December 16, 2020, which also states that "the Commission has determined that the Participants have sufficiently complied with the conditions set forth in the prior Orders and with the technical requirements for Quarterly Progress Reports set forth in section 6.6(c) of the CAT NMS Plan, including for purposes of determining compliance with any applicable Financial Accountability Milestones."[136] The November 2023 Exemption Order is consistent with the Commission's repeated statements in the FAM adopting release that it would have "authority to grant exemptive relief from any requirement associated with a particular Financial Accountability Milestone," citing Section 36 of the Exchange Act and Rule 608.[137] Similarly, the CAT NMS Plan expressly contemplates the Commission's ability to grant exemptive relief from any CAT NMS Plan requirement.[138]

(iv) Executing Broker Reporting

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136 *Id.* at 77129 n.12.

137 FAM Adopting Release at 31335 (May 22, 2020). Section 36 of the Exchange Act grants the Commission the authority to "conditionally or unconditionally exempt any person, security, or transaction . . . from any provision or provisions of [the Exchange Act] or of any rule or regulation thereunder, to the extent that such exemption is necessary or appropriate in the public interest, and is consistent with the protection of investors." 15 U.S.C. 78mm(a)(1). Under Rule 608(e) of Regulation NMS, the Commission may "exempt from [Rule 608], either unconditionally or on specified terms and conditions, any self-regulatory organization, member thereof, or specified security, if the Commission determines that such exemption is consistent with the public interest, the protection of investors, the maintenance of fair and orderly markets and the removal of impediments to, and perfection of the mechanism of, a national market system." 17 C.F.R. 242.608(e).

138 Section 12.3 of the CAT NMS Plan ("[T]o the extent the SEC grants exemptive relief applicable to any provision of this Agreement, Participants and Industry Members shall be entitled to comply with such provision pursuant to the terms of the exemptive relief so granted at the time such relief is granted irrespective of whether this Agreement has been amended.")

CAT LLC also completed the requirements of FAM Period 2, including the required linkages, by December 31, 2020. Although Participant exchanges may report the Executing Broker to CAT differently in certain situations, these reporting differences are irrelevant for linkage purposes as the fields used for CAT Executing Broker are not used for linkage.

(10) Additional Support for Reasonableness of Historical CAT Costs

The CAT Funding Model approved by the Commission permits the recovery of reasonable costs in each of the categories of CAT costs sought to be recovered via Historical CAT Assessment 1.[139] As described in detail above and in further detail below, the CAT costs to be recovered for each category are reasonable. The following discusses in further details how each of the following costs are reasonable: (1) costs incurred prior to the effective date of the CAT NMS Plan; (2) cloud hosting services costs; (3) costs related to funding model filings; (4) costs related to litigation with the SEC regarding the CAT NMS Plan; (5) costs related to the Initial Plan Processor; (6) CAIS implementation costs; (7) public relations costs; (8) legal costs related to the limitation of liability provision in the CAT Reporter agreements; and (9) costs for the Chair of CAT Operating Committee. As discussed in detail below, each of these costs is reasonable and should be recoverable in accordance with the CAT Funding Model.

(A) Costs Incurred Prior to the Effective Date of CAT NMS Plan

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139 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

CAT LLC believes that it is reasonable to seek recovery of costs incurred prior to when the CAT NMS Plan became effective in November 2016, such as legal and consulting fees incurred to create the CAT NMS Plan. Rule 613 specifically mandates that the CAT be created, implemented and maintained, and further provides that the CAT NMS Plan include a proposed allocation of estimated costs to fund the creation, implementation and maintenance of the CAT among the Participants (referred to as "plan sponsors"), and between the Participants and Industry Members (referred to as "members of the plan sponsors").[140] Consistent with Rule 613, the CAT NMS Plan, as approved by the Commission, specifically authorizes charging Industry Members fees for costs reasonably incurred prior to the date of the approval of the CAT NMS Plan by the Commission in November 2016, including legal and consulting costs. Section 11.1(c) of the CAT NMS Plan states that:

> [i]n determining fees on Participants and Industry Members the Operating Committee shall take into account fees, costs and expenses (including legal and consulting fees and expenses) reasonably incurred by Participants on behalf of the Company prior to the Effective Date in connection with the creation and implementation of the CAT.

Accordingly, the CAT NMS Plan specifically permits the recovery of costs, including legal and consulting costs, reasonably incurred prior to November 2016 in connection with the creation and implementation of the CAT.

Furthermore, the costs incurred to create and implement the CAT prior to the effective date of the CAT NMS Plan ("Pre-Formation Costs") were reasonable both in scope and amount, in accordance with the requirements of Section 11.1(c) of the CAT

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140 *See, e.g.*, Rule 613(a)(1)(vii)(D) of the CAT NMS Plan.

NMS Plan. During the four-year period from 2012 to 2016, a total of $13,842,881 in Pre-Formation Costs were incurred. This is an average of approximately $3.5 million per year over this period. The Pre-Formation Costs fell into three categories: legal costs, consulting costs and public relations costs. This includes legal costs of $3,196,434; consulting costs of $10,589,273; and public relations costs of $57,174. The legal, consulting and public relations services were performed by WilmerHale, Deloitte and Peppercomm, respectively. The selection considerations and fees for these three firms are described in detail above and are described further below. The Pre-Formation Costs are direct costs of CAT, which have been funded entirely by the Participants through non-interest-bearing notes. The Pre-Formation Costs do not include the significant costs incurred by each of the individual Participants in responding to the adoption of Rule 613.

The Pre-Formation Costs are reasonable and appropriate as they reflect the extensive efforts that were necessary to create the CAT NMS Plan as mandated after the SEC's adoption of Rule 613. As described in more detail below, these efforts included, among other things, developing a plan for selecting the Plan Processor, soliciting and evaluating bids, engaging a diverse set of market participants and the SEC in the development of the Plan, interacting with the SEC in their oversight of the development of the Plan, and seeking appropriate exemptive relief to address areas of concern in Rule 613.[141]

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[141] The Participants described in detail the process for drafting the CAT NMS Plan in its original filing of the CAT NMS Plan. *See* Letter from Mike Simon, on behalf of the Participants of the CAT NMS Plan, to Brent J. Fields, Secretary, Commission (Sept. 30, 2014). A non-exclusive list of filings and activities associated with CAT, including certain pre-2016 filings, are available on the SEC's website: https://www.sec.gov/divisions/marketreg/rule613-info.

(i) Request for Proposal ("RFP")

The Participants determined to utilize an RFP to ensure that potential alternative solutions for creating the Plan could be presented and considered, and that a detailed and meaningful cost-benefit analysis could be performed. The SEC supported the use of an RFP, and approved its use as it is described in extensive detail in the CAT NMS Plan.[142]

In the context of the SEC's adoption of Rule 613, commenters urged the Commission to utilize an RFP process to assist in the planning and design of the NMS plan.[143] Specifically, the Commission explained:

> In this regard, several commenters suggested that the Commission undergo a RFP or request for information ("RFI") process to create and implement a consolidated audit trail. Specifically, FIF urged the Commission to perform a RFP process "to determine the best technical solution for developing a consolidated audit trail." FIF suggested that the Commission ''should outline a set of goals and guiding principles they are striving to achieve as part of the adopted CAT filing and leave the determination of data elements and other technical requirements to [an] industry working group." Similarly, Direct Edge suggested that Commission staff should form and engage in a working group to develop an RFP for publication by the Commission. DirectEdge explained that an RFP process would facilitate the identification of the costs and benefits of the audit trail, as well as the consideration of a wider range of technological solutions. Further, commenters, including Broadridge Financial Solutions, Inc., a technology provider, also requested more specific information about the audit trail system to better assess the Commission's initial cost estimates and to determine the best approach to the consolidated audit trail.[144]

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142 *See* detailed discussion of RFP questions in Appendix C of the CAT NMS Plan, and incorporation of RFP requirements in Appendix D at D-2.

143 For example, in its comments on proposed Rule 613, FIF suggested "that the SROs should select the processor through a 'request for proposal.'" Rule 613 Adopting Release at 45785.

144 Rule 613 Adopting Release at 45738-39.

In response to these comments, the Commission modified Rule 613 to require the Participants to address certain important considerations regarding the features and details of the NMS plan and to extend the timeframe for submission of the CAT NMS Plan by the Participants from the 90 days as originally proposed to 270 days, in part, to accommodate a process that would address these considerations.[145] As the SEC noted, "[i]n light of the numerous specific requirements of Rule 613, the Participants concluded that publication of a request for proposal ('RFP') was necessary to ensure that potential alternative solutions to creating the consolidated audit trail can be presented and considered by the Participants and that a detailed and meaningful cost/benefit analysis can be performed, both of which are required considerations to be addressed in the CAT NMS Plan."[146]

The SEC specifically recognized that the Participants planned to use an RFP when it approved the Selection Plan, and stated that the RFP was a reasonable approach.[147] As the SEC described in its approval order for the Selection Plan, "[t]he Participants filed the [Selection] Plan to govern how the SROs will proceed with formulating and submitting the CAT NMS Plan—and, as part of that process, how to review, evaluate, and narrow down the bids submitted in response to the RFP ('Bids')—and ultimately choosing the plan processor that will build, operate, and maintain the consolidated audit trail ('Plan Processor')."[148] After evaluating the Selection Plan, including the use of an RFP process,

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145 Rule 613 Adopting Release at 45739.

146 Securities Exchange Act Rel. No. 71596 (Feb. 21, 2014), 79 Fed. Reg. 11152, 11152 (Feb. 27, 2014) ("Selection Plan Approval Order").

147 *Id.*

148 *Id*. at 11153

the Commission stated that it "believes the [Selection] Plan is reasonably designed to govern the process by which the SROs will formulate and submit the CAT NMS Plan, including the review, evaluation, and narrowing down of Bids in response to the RFP, and ultimately choosing the Plan Processor that will build, operate, and maintain the consolidated audit trail."[149]

On February 26, 2013, the Participants published an RFP soliciting bids from parties interested in serving as the plan processor for the CAT. Initially, 31 firms submitted intentions to bid. In the following months, the Participants engaged with potential bidders with respect to, among other things, the selection process, selection criteria, and potential bidders' questions and concerns. On March 21, 2014, the Participants received ten bids in response to the RFP.

(ii) Selection Plan

On September 4, 2013, the Participants filed with the Commission a national market system plan to govern the process for Participant review of the bids submitted in response to the RFP, the procedures for evaluating the bids, and, ultimately, selection of the plan processor (the "Selection Plan").[150] The Commission approved the Selection Plan as filed on February 21, 2014.[151] In approving the Selection Plan, the Commission

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149 *Id*. at 11159.

150 *See* Securities Exchange Act Rel. No. 70892 (Nov. 15, 2013), 78 Fed. Reg. 69910 (Nov. 21, 2013).

151 *See* Selection Plan Approval Order.

concluded that "it is reasonably designed to achieve its objective of facilitating the development of the CAT NMS Plan and the selection of the Plan Processor."[152]

The Selection Plan divided the review and evaluation of bids, and the selection of the plan processor, into various stages. Specifically, pursuant to the Selection Plan, a selection committee reviewed all bids and determined which bids contained sufficient information to allow the Participants to meaningfully assess and evaluate the bids. The ten submitted bids were deemed "Qualified Bids," and so passed to the next stage, in which each bidder presented its bids to the Participants on a confidential basis. On July 1, 2014, after conducting careful analysis and comparison of the bids, the Selection Committee voted and selected a shortlist of six eligible bidders. The Selection Committee determined which shortlisted bidders would be provided the opportunity to revise their bids. After the Selection Committee assessed and evaluated the revised bids, the Selection Committee selected the plan processor via two rounds of voting by the Participants, as described in the Selection Plan.

The Selection Plan established an Operating Committee responsible for formulating, drafting, and filing with the Commission the CAT NMS Plan and for ensuring that the Participants' joint obligations under Rule 613 were met in a timely and efficient manner. In formulating the CAT NMS Plan, the Participants also engaged multiple persons across a wide range of roles and expertise, engaged the consulting firm Deloitte as project manager, and engaged the law firm WilmerHale to serve as legal counsel in drafting the Plan. Within this structure, the Participants focused on, among

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152 Selection Plan Approval Order at 11160.

other things, comparative analyses of the proposed technologies and operating models, development of funding models to support the building and operation of the CAT, and detailed review of governance considerations. Given the complexity and scope of developing the CAT NMS Plan, these efforts were extensive.

When it approved the CAT NMS Plan in 2016, the Commission reiterated its belief that the Selection Plan remains a "reasonable approach," that "the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor," and that "the process set forth in the Selection Plan should be permitted to continue":

> In approving the Selection Plan, the Commission stated that the Selection Plan is reasonably designed to achieve its objective of facilitating the development of the CAT NMS Plan and the selection of the Plan Processor. The Commission also found that the Selection Plan is reasonably designed to govern the process by which the SROs will formulate and submit the CAT NMS Plan, including the review, evaluation, and narrowing down of Bids in response to the RFP, and ultimately choosing the Plan Processor that will build, operate, and maintain the consolidated audit trail. The Commission believes that the process set out in the Selection Plan for selecting a Plan Processor remains a reasonable approach, which will facilitate the selection of Plan Processor through a fair, transparent and competitive process and that no modifications to the Selection Plan are required to meet the approval standard. . . . In response to the comment that offered support for a specific Bidder, the Commission agrees with the Participants that the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor and thus believes that the process set forth in the Selection Plan should be permitted to continue.[153]

(iii) Engagement with Market Participants and SEC

During the process of developing the CAT NMS Plan, the Participants engaged in extensive and meaningful dialogue with market participants and the SEC. To this end,

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153 *See* CAT NMS Plan Approval Order at 84737.

the Participants created a website to update the public on the progress of the CAT NMS Plan, published a request for comment on multiple issues related to the Plan, held multiple public events to inform the industry of the progress of the CAT and to address inquiries, and formed, and later expanded, a DAG to solicit more input from a representative industry group.[154]

The DAG included representatives of Participants and Industry Members and conducted meetings to discuss, among other things, technical and operational aspects the Participants were considering for the Plan. The Participants issued press releases soliciting participants for the DAG, and a wide spectrum of firms was deliberately chosen to provide insight from various industry segments affected by CAT. The DAG meetings included discussions of topics such as option market maker quote reporting, requirements for capturing Customer IDs, timestamps and clock synchronization, reporting requirements for order handling scenarios, costs and funding, error handling and corrections, and potential elimination of systems made redundant by the CAT. From the inception of the DAG through September 2014, the DAG participated in 36 meetings, as well as a variety of DAG subcommittee meetings.

(iv) Request for Exemption from Certain Requirements under Rule 613

Following multiple discussions between the Participants and both the DAG and the bidders, as well as among the Participants themselves, the Participants recognized that some provisions of Rule 613 would not permit certain solutions to be included in the Plan

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154 *See* Section D(11) of Appendix C of the CAT NMS Plan.

that the Participants, in coordination with the DAG, determined advisable to effectuate the most efficient and cost-effective CAT. Specifically, "the SROs reached the conclusion that additional flexibility in certain of the minimum requirements specified in Rule 613 would allow them to propose a more efficient and cost-effective approach without adversely affecting the reliability or accuracy of CAT Data, or its security and confidentiality."[155] Consequently, the Participants submitted a request for exemptive relief from certain provisions of Rule 613 regarding: (1) options market maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) CAT-Order-IDs on allocation reports; and (5) timestamp granularity.[156] The Participants filed two supplements to the request for exemptive relief.[157]

After reviewing the exemptive request, the Commission determined that it was appropriate in the public interest and consistent with the protection of investors to grant the requested exemptive relief.[158] In granting the exemptive relief, the Commission stated:

> [T]he Commission is persuaded to provide flexibility in the discrete areas discussed in the Exemption Request so that the alternative approaches can be included in the CAT NMS Plan and subject to notice and comment. Doing so could allow for more efficient and cost-effective approaches than otherwise would be permitted. The Commission at this stage is not deciding whether the proposed approaches detailed below are more efficient or effective than those in Rule 613. However, the Commission

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155 Securities Exchange Rel. No. 77265 (Mar. 1, 2016), 81 Fed. Reg. 11856 (Mar. 7, 2016) ("2016 Exemptive Order").

156 Letter from Robert Colby, FINRA, on behalf of the SROs, to Brent J. Fields, Secretary, Commission (Jan. 30, 2015).

157 *See* Letter from Robert Colby, FINRA, on behalf of the SROs, to Brent J. Fields, Secretary, Commission (Apr. 3, 2015); Letter from the SROs to Brent J. Fields, Secretary, Commission (Sept. 2, 2015).

158 *See* 2016 Exemptive Order.

> believes the proposed approaches should be within the permissible range of alternatives available to the SROs.[159]

The Commission further stated that the requested exemptive relief is consistent with the protection of investors. The Commission noted that:

> Doing so will provide the public an opportunity to consider and comment on whether these proposed alternative approaches would indeed be more efficient and cost-effective than those otherwise required by Rule 613, and whether such approaches would adversely affect the reliability or accuracy of CAT Data or otherwise undermine the goals of Rule 613. Moreover, if—as the SROs represent—efficiency gains and cost savings would result from including the proposed approaches in the CAT NMS Plan without adverse effects, then the resultant benefits could potentially flow to investors (*e.g.*, lower broker-dealer reporting costs resulting in fewer costs passed on to Customers).[160]

The Participants incorporated the exemptive relief into the proposed CAT NMS Plan, which was noticed for comment, and the Commission ultimately approved the CAT NMS Plan with the more efficient and cost-effective alternative approaches described in the exemptive relief. Accordingly, the Participants believe that the costs incurred in developing the exemptive request were critical to the creation of a better CAT than was originally contemplated by Rule 613, and therefore should be recoverable as part of Historical CAT Assessment 1.

(v) Request for Extensions for Filing the CAT NMS Plan

Rule 613(a)(1) under Regulation NMS required the Participants to jointly file the CAT NMS Plan on or before April 28, 2013, less than a year after the adoption of Rule

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159 *Id.* at 11857.

160 *Id.*

613. In recognition of the complexity of the project to create the CAT NMS Plan as well as industry interest in limiting or eliminating certain requirements of Rule 613 (*e.g.*, addressing the reporting of options market maker quotes), the Participants requested two extensions of the deadline to file the CAT NMS Plan. The Participants described the need for additional time as follows:

> The SROs stated in their Request Letter that they do not believe that the 270-day time period provided for in Rule 613(a)(1) provides sufficient time for the development of the RFP, formulation and submission of bids, and review and evaluation of such bids. The SROs also stated that they believe additional time beyond the 270 days provided for in Rule 613(a)(1) is necessary in order to provide sufficient time for effective consultation with and input from the industry and the public on the proposed solution chosen by the SROs for the creation of the consolidated audit trail at the conclusion of the RFP process and the NMS plan itself.[161]

In recognition of the need for additional time to refine the technical description of and requirements for the CAT and to allow for additional evaluation of the proposed cost and funding considerations, the SEC granted two extensions of this deadline.[162] The SEC determined that both extensions were appropriate, in the public interest, and consistent with the protection of investors.[163] In reaching this conclusion, the Commission stated that "it understands that the creation of a consolidated audit trail is a significant undertaking and that a proposed NMS plan must include detailed information and discussion about many things."[164] The SEC also noted the following:

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161 Securities Exchange Act Rel. No. 69060 (Mar. 7, 2013),78 Fed. Reg. 15771, 15772 (Mar. 12, 2013) ("March 2013 Exemptive Order").

162 *See* March 2013 Exemptive Order; Securities Exchange Act Rel. No. 71018 (Dec. 6, 2013), 78 Fed. Reg. 75669 (Dec. 12, 2013) ("December 2013 Exemptive Order").

163 March 2013 Exemptive Order at 15772; December 2013 Exemptive Order at 75670.

164 March 2013 Exemptive Order at 15772.

> This additional time to complete the RFP process should allow the SROs to engage in a more thoughtful and comprehensive process for the development of an NMS plan. In this regard, the Commission notes that the additional time to solicit comment from the industry and the public at certain key points in the development of the NMS plan could identify issues that can be resolved earlier in the development of the consolidated audit trail and prior to filing the NMS plan with the Commission.[165]

Given the Commission's recognition of the reasonableness and value of the extension of the deadline to file the CAT NMS Plan, the Participants believe that the costs incurred in developing the extension request were important to the process of developing the CAT NMS Plan, and therefore should be recoverable as part of Historical CAT Assessment 1.

(vi) Submission and Approval of the CAT NMS Plan

After extensive analyses and discussions with the DAG, bidders, market participants and the SEC staff, the Participants finalized the draft of the CAT NMS Plan and filed the CAT NMS Plan with the SEC on September 30, 2014. Following additional discussions, the Participants filed several amendments to the CAT NMS Plan during 2015 and 2016. With these additional changes, the SEC published the CAT NMS Plan for notice and comment in May 2016.[166] Following the comment period, the SEC approved the Plan in November 2016.[167]

(vii) Legal Costs Incurred Prior to the Effective Date of the CAT NMS Plan

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165 *Id.* at 15773.

166 *See* Securities Exchange Act Rel. No. 77724 (Apr. 27, 2016), 81 Fed. Reg. 30614 (May 17, 2016).

167 *See* CAT NMS Plan Approval Order.

The Pre-Formation Costs include legal costs of $3,196,434. The legal services were performed by WilmerHale. The selection considerations and fees for WilmerHale were described in detail above. Prior to the creation of CAT LLC, WilmerHale was engaged to represent the consortium of SROs, not the individual Participants. For administrative purposes, FINRA agreed to receive such legal bills, although such costs were shared among the Participants. Therefore, the legal costs incurred with respect to WilmerHale do not include legal costs incurred by the individual Participants. These pre-formation legal costs are described in detail above and are further described below:

- Analyzed various legal matters associated with the Selection Plan and drafted an amendment to Selection Plan;
- Assisted with the RFP and bidding process for the CAT Plan Processor;
- Analyzed legal matters related to the DAG;
- Drafted the CAT NMS Plan, analyzed various items related to the CAT NMS Plan, and responded to comment letters on the CAT NMS Plan;
- Provided legal support for the formation of the legal entity, the governance of the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding, and Other Products) and the DAG, and governance support during the transition to the new governance structure under the CAT NMS Plan;
- Drafted exemptive requests;
- Provided interpretations related to the CAT NMS Plan;
- Provided support with regard to discussions among the exchanges, FINRA and other third parties, such as Deloitte;
- Provided tax advice with regard to CAT's status as a tax-exempt organization; and

- Provided support with regard to discussions with the SEC and its staff, including with
respect to addressing interpretive and implementation issues.

(viii) Consulting Costs Incurred Prior to the Effective Date of the CAT NMS Plan

The Pre-Formation Costs include consulting costs of $10,589,273. The consulting services were performed by Deloitte. The selection considerations and fees for Deloitte were described in detail above. Prior to the creation of CAT LLC, for administrative purposes, Deloitte was engaged by FINRA to provide consulting services related to CAT, but the costs were shared by the consortium of SROs per agreement. Therefore, the consulting costs incurred with respect to Deloitte do not include consulting costs incurred by the individual Participants. The pre-formation consulting costs include the following:

- Established and implemented program operations for the CAT project, including the program management office and workstream design;

- Assisted with the Plan Processor selection process, including but not limited to, the development of the RFP and the bidder evaluation process, and facilitation and consolidation of the Participants' independent reviews;

- Assisted with the development and drafting of the CAT NMS Plan, including conducting cost-benefit studies, reviewing technical requirements of other NMS plans, analyzing OATS and CAT requirements, and drafting appendices to the Plan;

- Provided governance support to the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding, and Other Products) and the DAG;

- Provided support for updating the SEC on the progress of the development of the CAT;

- Provided support for industry outreach sessions, including with regard to program design and agenda development, program support and logistics and coordination; and

- Provided support in fact finding, drafting content and meeting coordination for WilmerHale with regard to the CAT and the development of the CAT NMS Plan.

Such Pre-Formation Costs did not include costs related to the Chair of the CAT NMS Plan Operating Committee, as the CAT NMS Plan had not yet been adopted.

(ix) Public Relations Costs Incurred Prior to the Effective Date of the CAT NMS Plan

The Pre-Formation Costs include public relations costs of $57,174. The public relations services were performed by Peppercomm. The selection considerations and fees for Peppercomm are described in detail above. The costs related to Peppercomm were shared among the SROs. Therefore, the public relations costs do not include public relations costs incurred by the individual Participants. The pre-formation public relations costs include services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT.

(B) Cloud Hosting Services

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs related to cloud hosting services as a part of Historical CAT Assessments. CAT LLC believes that the costs related to cloud hosting

services described in detail above are reasonable and appropriate given the strict data processing timelines and storage requirements imposed by the Commission-approved CAT NMS Plan and should be recoverable as a part of Historical CAT Assessment 1.

(i) Reasonableness of AWS Costs Given the Requirements of the CAT NMS Plan

CAT LLC believes that the costs for the cloud hosting services are reasonable, both in terms of the level of the fees paid by CAT LLC for cloud hosting services provided by AWS and the scope of the services performed by AWS for CAT LLC. CAT LLC believes that both the scope and amount of the costs for cloud hosting services are reasonable given the current requirements of the CAT NMS Plan adopted pursuant to Rule 613, including the strict data processing timeline, storage and other technical requirements under the Commission-approved CAT NMS Plan.

CAT LLC believes that the level of fees for the cloud hosting services is reasonable, taking into consideration a variety of factors, including the expected volume of data and the breadth of services provided and market rates for similar services.

CAT LLC also believes that the scope of services provided by AWS for the CAT are appropriate given the current requirements of the Commission-approved CAT NMS Plan. As described above, the cloud hosting services costs reflect a variety of factors including, among other things:

- Breadth of Cloud Activities. AWS was engaged by FCAT, the Plan Processor, to provide a broad range of services to the CAT, including data ingestion, data management, and analytic tools. Services provided by AWS necessary to the CAT include storage services, databases, compute services, and other services (such as networking, management tools and development operations ("DevOps") tools). AWS also was engaged to provide the various environments for CAT,

such as the development, performance testing, test and production environments, which are required by the CAT NMS Plan.

- High Data Volume. The cost for AWS services for the CAT is a function of the volume of CAT Data. While it is not linear, the greater the amount of CAT Data, the greater the cost of AWS services to the CAT. The data volume handled by AWS now far exceeds the original volume estimates for the CAT.

- Plan Requirements. The cost for AWS services also reflects the technical requirements necessary to meet the stringent performance and other requirements for processing CAT Data. These Plan-dictated processing timelines, storage, testing, security and other technical requirements are significant drivers of AWS costs.

- Cost Avoidance Efforts. CAT LLC and FCAT have engaged in ongoing efforts to seek to avoid and minimize AWS costs where permissible under the Plan. Accordingly, these cost avoidance efforts have limited the extent of AWS costs.

In addition, various requirements of the CAT NMS Plan adopted pursuant to Rule 613 contribute to the significant cloud hosting services costs, and that various Plan requirements could be amended or removed without affecting the regulatory purpose of the CAT. Indeed, CAT LLC has repeatedly sought exemptive relief and filed amendments to the CAT NMS Plan, and has even filed suit against the Commission, to seek to revise or eliminate certain costly requirements related to the CAT. However, despite these efforts, absent the Commission granting exemptive relief or approving cost savings amendments to the CAT NMS Plan, CAT LLC, the Participants and Industry Members are all required to comply with such requirements.

(ii) Effect of CAT Design on CAT Costs

(a) Efficient CAT Design

CAT is reasonably designed to efficiently and effectively utilize cloud computing and storage services, given the requirements of the Commission-approved CAT NMS

Plan, including requirements related to security, operational reliance and quality assurance, and maintainability.

The Plan Processor uses state-of-the-art software that meets the strict security standards of the CAT NMS Plan. CAT utilizes a big data processing framework that is extensively used by large data processing companies, such as Apple, Meta, Netflix, IBM and Google. As such, it has substantial commercial support and support in the open-source community. It is also well suited for use with regard to iterative types of algorithms and query functions and analytics that the CAT requires, and it provides the heightened security necessary for the CAT.

The development and implementation of the design of CAT is not and has not been static. CAT LLC and the Plan Processor are always evaluating new innovations and service offerings from AWS and other providers to seek to maximize efficiency and cost avoidance while still satisfying the requirements of the CAT NMS Plan. These efforts have led to substantial savings to date. The cloud hosting costs for 2023 were less than the cloud hosting costs for 2022 by $8 million despite processing seven trillion more events in 2023 due to the efficiency and cost avoidance efforts for cloud hosting services. For example, when AWS introduced new storage options, FCAT adopted the cost-efficient new storage option after establishing that the new offering would satisfy the security and other standards of the CAT NMS Plan. This change led to millions of dollars of savings in storage costs. Similarly, when AWS introduced a new compute processor, FCAT adopted this new compute processor, which lead to millions of dollars in savings in compute costs. However, in other cases, new cloud technology

developments could not be implemented in CAT because they would not satisfy the security or other requirements of the CAT NMS Plan.

When evaluating the design of the CAT, it must be kept in mind that the CAT is not a typical commercial technology project. The ability to make use of technology approaches that may lead to cost avoidance is also subject to the restrictive requirements of the CAT NMS Plan, such as processing timeframes, requirements for retention of data versions, query requirements, and security standards. Because such requirements are set forth in the CAT NMS Plan, any modification of such requirements are subject to the time-consuming process of amending the CAT NMS Plan or seeking an exemption from the relevant requirement. For example, CAT LLC recently has filed an amendment to address several of these expensive Plan requirements.[168]

(b) CAT Was Designed to Minimize Industry Member Effort

The CAT System also was designed to minimize the extent to which Industry Members would need to alter their systems to report to CAT. During the design process, Industry Member groups argued that it would make more sense financially for the CAT to accommodate differences in industry systems, than for all Industry Members to change their systems. Moreover, such design choices would facilitate consistency, uniformity and accuracy in reporting. Requiring the CAT to make such accommodations may increase CAT costs while accommodating CAT Reporters.

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168 *See, e.g.*, Securities Exchange Act Rel. No. 99938 (Apr.10, 2024), 89 Fed. Reg. 26983 (Apr. 16, 2024); Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission (Mar. 27, 2024) (proposing amendments to the CAT NMS Plan for $23 million in annual savings).

Based on the requirements in the CAT NMS Plan and/or in response to industry requests for functionality to be embedded with the Plan Processor to streamline or limit Industry Member system changes, the CAT has been designed to limit the effect on Industry Members. The following provides examples of such accommodations:

- Industry Member Reporting. In light of the complexity of Industry Member market activity, the CAT's order reporting and linkage scenarios document for Industry Members is over 800 pages in length, addressing nearly 200 scenarios.[169] The Industry Member Technical Specifications allow for dozens of specific event types, which drive complexity for the Plan Processor, but streamline reporting for Industry Members. Furthermore, the Plan Processor greatly expanded Industry Member linkage requirements to support, among other things, child events and supplemental events, allowing for "stateless as-you-go" and "batch end-of-day" reporting when all data is available. Accordingly, CAT takes on the significant cost and effort of providing the required linkages between CAT events; correspondingly, Industry Members are not required to perform this costly task.

- File Submission Process. The CAT was designed to accommodate the varying needs of CAT Reporters with regard to the file submission process. For example, in a 2018 letter, FIF stated that "[t]he SFTP-based submission process is cumbersome, exposes industry members to unnecessary complexity, and puts the burden of support on the CAT Reporter rather than imbedding more functionality into the Plan Processor."[170] Currently, FCAT provides two mechanisms for submitting files: SFTP via a private network, and the Web via Reporter Web Portal.

- Error Corrections. The industry also emphasized the need for the CAT to provide error correction tools and functionalities to identify, rectify and re-submit corrections within the required timeframe. For example, FIF stated in a 2018 letter the following:

> To be clear, if OATS-like error correction tools are not made available on Day 1, hundreds of firms will be required to create and test their own tools or obtain vendor alternatives prior to the CAT Go-Live Date. Proprietary tools will require additional system builds, access to and ingestion of CAT data to perform

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169 *See* CAT Industry Member Reporting Scenarios v.4.10 (Oct. 21, 2022).

170 Letter from Janet Early, FIF, to Thesys CAT (Mar. 29, 2018).

> system validation, and testing which will further stress the limited number of subject matter experts ("SMEs") dedicated to the implementation of CAT reporting. Should this occur, inevitably firms (especially small firms who lack the necessary IT staff to write code and develop proprietary systems), may be put in the position of passing onto investors the cost required to build hundreds of redundant systems.[171]

CAT provides various tools to help Industry Members identify and rectify errors.

- Data Ingestion Format. The industry also recommended that CAT adopt a flexible input format that provides an option for Industry Members to submit data in formats that are already in use to reduce costs and potential reporting errors. For example, FIF argued the following:

> FIF CAT WG is not proposing a specific format; rather, we are proposing flexibility of input formats which includes support of existing formats (*e.g.*, OATS, FIX) as well as a baseline specification where all fields are defined, and normalized. The input formats must be clearly and thoroughly defined in Technical Specifications, including FAQs.
>
> Mandating a uniform format for reporting data to the CAT simplifies the task for the Central Repository of consolidating/storing data, but it puts the burden on each CAT Reporter to accurately translate their current (*e.g.*, OATS) reporting information into a uniform CAT interface. However, that is likely to yield more errors because it is very dependent on accurate, complete and timely information (Technical Specifications, FAQs, meta-data, competent CAT help desk) available to CAT Reporters, availability of sophisticated CAT test tools to validate interface protocols, and the skill levels of the estimated 300+ unique CAT Reporters/Submitters during Phase 1 of CAT. Concentrating the responsibility of data conversions with the Central Repository is a reasonable trade-off that should yield fewer errors, and greater accuracy.[172]

CAT provides such a flexible input format.

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171 Letter from Christopher Bok, FIF, to Jay Clayton, Chair, Commission, at 4 (Dec. 11, 2018).

172 Letter from Mary Lou Von Kaenel, Managing Director, FIF, to Brent Fields, Secretary, Commission at 92 (July 18, 2016), https://www.sec.gov/comments/4-698/4698-13.pdf.

(c) Effect of Initial Plan Processor Design

The costs for cloud hosting services are appropriate and have not been adversely affected by the original design and approaches of the Initial Plan Processor. FCAT's design costs are the result of the requirements of the Commission-approved CAT NMS Plan.

When FCAT took over as the Plan Processor from Thesys, it utilized certain aspects of the technical specifications created by Thesys in its design. However, FCAT has not maintained aspects of the original design that would not be appropriate for the CAT. FCAT revised and enhanced the original technical specifications of the CAT System to increase its efficiency and efficacy, and to ensure its compliance with the CAT NMS Plan. For example, the Initial Plan Processor's approach utilized many more fields than FCAT's approach, which relies on additional linkages. With the additional linkages, the CAT System takes on more of the CAT-related burdens than the Industry Members. Such an approach serves to facilitate consistency, uniformity and accuracy in reporting.

Moreover, FCAT did not utilize the system built by the Initial Plan Processor; it rebuilt the CAT System based on revised technical specifications. For example, the Initial Plan Processor used an on-premises processing approach which was not geared toward the huge amounts of data stored in the CAT, while FCAT adopted a cloud-based solution in response to such data demands.

Furthermore, given the very short timeframe to develop the CAT System and the prior optimization of certain query tools (*e.g.*, Diver) for regulatory use with significant amounts of data, FCAT determined to rely upon certain existing FINRA tools and adapt them for use with the CAT.

(iii) Consideration of AWS Alternatives

CAT LLC continues to support the selection of AWS as the cloud hosting services provider for CAT given the compliance, operational, and security requirements of the CAT. Independent analyses confirm these conclusions, noting that "AWS is an excellent choice for either strategic or tactical use and recommends considering AWS for almost all cloud IaaS or IaaS+PaaS scenarios."[173] AWS provides the following benefits to CAT, among others:

- Broad Suitability. AWS has a long track record of successfully serving cloud customers with mission-critical projects.
- Proven Scalability. AWS has demonstrated that it is capable of building and delivering services on a large scale.
- Track Record of Innovation. AWS continues to rapidly innovate, both in terms of new domains of capability and at a fundamental level, thereby facilitating innovation for its customers.
- Resiliency/Dependability. Another benefit of AWS is its resiliency; it has a strong track record of stable services. As noted in a review of cloud service providers, "[c]ustomers like to have a broad set of options for resilience and for their cloud providers to have a strong track record of stable services (continuously available, without operational quirks). Only AWS fulfills both desires."[174]
- Technical and Customer Support. AWS consistently provides high-quality technical and customer support and engagement. Given the size, scope and regulatory importance of CAT, customer support and engagement that CAT has with the highest levels of AWS are very important to the success of the CAT.
- Scale. AWS is capable of supporting large-scale solutions, which is critical given the size and magnitude of the CAT.

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173 *See, e.g.*, Lydia Leong and Adrian Wong, Solution Comparison for Strategic Cloud Integrated IaaS and PaaS Providers (July 28, 2023) ("Strategic Cloud Assessment Article").

174 Strategic Cloud Assessment Article.

- Security. AWS provides the security features necessary for the CAT.

In addition, the nature of the CAT, including the amount of data it must process and the size of its data footprint, does not allow for a multi-cloud solution as this would be cost prohibitive and greatly increase the security boundary and associated risk profile of the CAT. For example, a multi-cloud hosting option would increase costs, complexity, and risk for operations with regard to, for example, DevOps, production support, and networking. Similarly, with regard to security, a multi-cloud solution would increase risk, including with regard to the need for data transfers between cloud providers and the expansion of the security boundary. With regard to labor, a multi-cloud solution would lose economies of scale due to the need to support unique cloud requirements. Accordingly, the use of single-cloud solution continues to provide advantages with regard to cost, complexity, and risk. Indeed, "[t]he best practice is to focus on a single primary strategic provider."[175]

Furthermore, if another cloud service provider were determined to be a better match for the CAT at some future date, switching cloud service providers would be a very significant, expensive and time-consuming effort. Such an effort would likely be a 10-to-15-year commitment at a substantial expense. Such a move would require the replication or redesign of the underlying cloud environments (*e.g.*, organizational setup, identify management, accounts, environments, DevOps tooling likes release management/config management/network management), as the new provider likely would not have the same infrastructure and software. Once that process has been

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175 *Id.*

completed, an exabyte of CAT data would need to be securely migrated to the new platform.

(C) Funding Model Filings

CAT LLC believes that the recovery of costs related to the development of the funding model is appropriate, and that the amount and scope of such costs, as described above, are reasonable.

Funding the CAT is a critical aspect of Rule 613 and the CAT NMS Plan. Article XI of the CAT NMS Plan describes in detail the requirements for funding the CAT, and the Participants are required to comply with and enforce compliance with the funding requirements of the CAT NMS Plan, just as with other aspects of the Plan. Accordingly, the development and implementation of a funding model for the CAT is as much a part of the requirements of the CAT NMS Plan as the development and operation of the CAT System. CAT LLC sees no reason to distinguish the efforts to develop a funding model from, for example, efforts to develop the CAT System, in seeking to recover reasonable CAT costs.

Moreover, in approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . legal costs."[176] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of

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[176] Section 11.1(a)(i) of the CAT NMS Plan.

the amount and type of the Historical CAT Costs, including . . . legal . . . costs."[177] In keeping with these provisions, this filing provides a brief description of reasonably budgeted legal costs above. These legal costs include costs related to the development of the CAT Funding Model.

In addition, the legal costs incurred for the assistance in developing the CAT Funding Model are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. As described above, the specialized services were performed by experienced counsel at negotiated rates for such services that reflect both the extent of the services and market rates. Moreover, the scope of the legal costs associated with the development of the funding model reflect the complexity of the task in satisfying the detailed requirements of the CAT NMS Plan, the standards of the Exchange Act, and the many perspectives of the different market constituents potentially affected by or interested in the funding model, including Industry Members, Participants and investors. The many and varied comments by market participants on CAT funding over the years demonstrate the complexity of the task.

(D) Costs Related to Litigation with the SEC

CAT LLC believes that the recovery of legal costs related to the litigation with the SEC regarding the CAT NMS Plan is appropriate, and that the amount and scope of such costs, as described above, are reasonable.

As a preliminary matter, as discussed above, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT

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[177] Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Assessments.[178] Moreover, CAT LLC initiated such litigation, and incurred the related legal costs, because it was critical to address the Commission's interpretations of the CAT NMS Plan. Among other things, such interpretations threatened to impose unnecessary costs on the CAT, which would be borne by the Participants and Industry Members. Indeed, in response to the litigation, the Commission provided exemptive relief that allowed alternative, more cost-effective approaches to the implementation of the CAT. Specifically, in the 2023 exemptive order, the Commission stated:

> The conditional exemptive relief in this Order allows for the implementation of alternative regulatory solutions that continue to advance the regulatory goals that Rule 613 and the CAT NMS Plan were intended to promote, while reducing the implementation and operational costs, burdens, and/or difficulties that would otherwise be incurred by the Participants and Industry Members that must fund the CAT.[179]

CAT LLC believes it is reasonable and appropriate to incur costs to limit the need to incur even greater costs due to certain interpretations of the Plan.

In addition, the legal costs incurred during the litigation are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. As described above, the specialized services were performed by experienced counsel at market rates for such services. As such, the legal costs related to this litigation incurred during the period covered by Historical CAT Assessment 1 were reasonable.

Finally, Industry Members will directly benefit from the result of the litigation because it has addressed CAT NMS Plan requirements that would have imposed

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178 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

179 Settlement Exemptive Order at 77129-30.

significantly greater costs on the CAT. Accordingly, it is reasonable and appropriate that the costs of such litigation be included in the Historical CAT Costs 1.

(E) Costs Related to the Initial Plan Processor

CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017, which was the date by which Participants were required to begin reporting to the CAT, due to the delay in the commencement of reporting to the CAT. As discussed above, the Participants determined to exclude all CAT costs incurred from November 15, 2017 through November 15, 2018, which includes $37,852,083 in Thesys costs incurred from November 15, 2017 through November 15, 2018 (as well as other CAT costs during this period). The remaining Thesys costs incurred after November 15, 2018 are the $19,628,791 in capitalized developed technology costs for the period from November 16, 2018 through February 2019 incurred in the development of the CAT by the Initial Plan Processor, as well as a transition fee for the transition from the Initial Plan Processor to the successor Plan Processor. The Participants would remain responsible for 100% of these $19,628,791 in costs.

CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017. CAT LLC notes that the development and implementation of the CAT System, while unprecedented in scope and design, is like any other large and innovative technology project in that, inevitably, there were adjustments and refinements in the technical approach as the project developed, even with substantial planning efforts and oversight prior to the build.

This is even more likely when the project faces a very tight implementation schedule, such as the one imposed by the Commission in Rule 613 and the CAT NMS Plan. However, an adjusted approach does not mean that the funds were not valid expenditures and should not be recovered.

The reasonableness of Thesys costs should be evaluated by the Commission as of the time they were incurred, not in hindsight. As detailed above, the Commission concluded in 2016 that "the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor," and that "the process set forth in the Selection Plan should be permitted to continue."[180] Following this process, the Participants notified the Commission of the selection of Thesys as the Initial Plan Processor on January 17, 2017.[181] At the time, neither the Commission nor the industry argued that the selection of the Initial Plan Processor was unreasonable or otherwise inconsistent with the CAT NMS Plan, nor did they predict the selection would result in unanticipated delays in the implementation of the CAT System. On the contrary, on April 4, 2017, the President of SIFMA wrote that "SIFMA looks forward to commencing work with the SROs and Thesys."[182]

As noted in the CAT Funding Model Approval Order, "[i]n Rule 613, the Commission made the determination that the costs of the CAT should be shared by the

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180 CAT NMS Plan Approval Order at 84737.

181 Letter from the Participants to Brent J. Fields, Secretary, SEC (Jan. 18, 2017), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf.

182 Letter from Kenneth E. Bentsen, Jr., SIFMA, to Participants re: Selection of Thesys as CAT Processor (Apr. 4, 2017), https://www.sifma.org/wp-content/uploads/2017/05/SIFMA-Submits-Comment-Letter-to-SRO-on-the-selection-of-Thesys-as-the-CAT-Processor.pdf.

Participants and Industry Members."[183] If the CAT Funding Model had existed on Day 1, the risk of any unanticipated costs or challenges associated with the Initial Plan Processor would have been fairly and reasonably shared among the Participants and Industry Members on an ongoing basis. Given that the Commission concluded in 2012 that the costs of the CAT would be shared by the Participants and Industry Members, it is not fair or reasonable to determine in hindsight that all of the risk involved in developing the CAT should be allocated entirely to the Participants.

(F) CAIS Implementation Costs

CAT LLC believes that the recovery of CAIS-related costs is appropriate, and that the amount and scope of such costs, as described above, are reasonable, and that the reasonableness of historical costs should be evaluated by the Commission as of the time they were incurred, not in hindsight.

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable CAIS operating costs as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . CAIS operating fees."[184] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . CAIS operating fees."[185]

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183 CAT Funding Model Approval Order at 62650.

184 Section 11.1(a)(i) of the CAT NMS Plan.

185 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

In keeping with these provisions, this filing provides a brief description of reasonably budgeted CAIS operating fees.

In addition, CAT LLC determined that the CAIS operating fees described above are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. The "CAIS Operating Costs" for Historical CAT Assessment 1 total $9,480,587, with Pre-FAM costs of $2,072,908, FAM 1 costs of $254,998, FAM 2 costs of $1,590,298, and FAM 3 costs of $5,562,383. As described above, the CAIS operating fees were incurred with regard to two categories of CAIS-related efforts: (1) the acceleration of the reporting of LTIDs; and (2) the development of the CAIS Technical Specifications and the building of CAIS. These two categories of costs are discussed in more detail below.

(i) LTID Reporting

During the period covered by Historical CAT Assessment 1, the CAIS operating costs included costs related to the acceleration of the reporting of LTIDs earlier than originally contemplated during this period at the request of the SEC and in accordance with exemptive relief granted by the SEC.[186] As the SEC approved in this exemptive relief, the Participants proposed "to require the reporting of LTIDs to the CAT in Phases 2c and 2d, instead of with the rest of Customer Account Information in Phase 2e, which potentially could result in an earlier elimination of broker-dealer recordkeeping, reporting and monitoring requirements of the Large Trader Rule."[187] To implement the reporting

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186 *See* Phased Reporting Exemptive Relief Order at 23079-80.

187 *Id.* at 23078-79, n.70.

of LTIDs to the CAT, the following steps were taken during the period covered by Historical CAT Assessment 1:

- After FCAT developed the LTID Technical Specifications, the LTID Technical Specifications were published on January 31, 2020, with additional updates provided to the LTID Technical Specifications through April 2021.[188]
- The LTID account information testing environment opened on August 24, 2020.
- The LTID account information reporting production environment opened on December 14, 2020.
- CAT Reporters were required to request their production readiness certification for account information related to LTIDs by the deadline of April 9, 2021.
- The LTID account information reporting for Phases 2a, 2b and 2c for Large Industry Members went live on April 26, 2021.
- The LTID account information reporting for Phases 2d for Large Industry Members went live on December 13, 2021.
- The LTID account information reporting for Phases 2a, 2b, 2c and 2d for Small Industry Members went live on April 26, 2021.

Throughout this project, FCAT and CAT LLC worked closely with the industry on LTID and CAIS reporting. Between December 2019 and December 2021, at least 57 checkpoint calls, webinars, and technical working group meetings with industry representatives were hosted to address issues and to educate CAT Reporters regarding LTID and CAIS reporting.[189]

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188 The LTID Technical Specifications, including original drafts and updated versions, are available on the Industry Member Specifications page of the CAT website (https://www.catnmsplan.com/specifications/im).

189 Such contact points with the industry are described in detail on the Events webpage of the CAT website (https://www.catnmsplan.com/events).

The LTID reporting project was successfully completed in a timely fashion, and the fees related to the project were reasonable. Accordingly, CAT LLC appropriately seeks to recover such costs via Historical CAT Assessment 1.

(ii) CAIS Reporting

During the period covered by Historical CAT Assessment 1, FCAT began the development of the full CAIS Technical Specifications and the building of CAIS. The CAIS Technical Specifications were developed during this period as follows:

- Iterative drafts of the CAIS Technical Specifications were published on June 30, 2020, December 1, 2020, and January 1, 2021.[190]
- The full, final CAIS Technical Specifications were published on January 29, 2021.
- Updated versions of the CAIS Technical Specifications were published throughout 2021.[191]

As discussed above, FCAT and CAT LLC frequently engaged with the industry regarding the development of CAIS, hosting regular checkpoint calls, webinars, and technical working group meetings with industry representatives to address any issues, including addressing the interplay between Industry Members' existing customer systems and CAIS, and to educate CAT Reporters regarding LTID and CAIS reporting. Such engagement was critical to the CAIS development process as the CAIS project was unprecedented in terms of its content, scope and complexity.

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190 The CAIS Technical Specifications, including original drafts and updated versions, are available on the Industry Member Specifications page of the CAT website (https://www.catnmsplan.com/specifications/im).

191 Six updated versions of the CAIS Technical Specifications were published during 2021, in March, May, June, August, October and December.

During this period, FCAT also commenced the building of the CAIS system in accordance with the CAIS Technical Specifications during the period covered by Historical CAT Assessment 1. The CAIS system was ready for industry testing shortly after the end of this period in January 2022.

The CAIS Technical Specifications and the CAIS system, as developed during this period, continue to be in use today. Industry Members have been required to report, and have continuously reported, required data to CAIS on a daily basis since November 7, 2022, consistent with interim reporting obligations. The CAIS system accepts and validates the CAIS data submitted by Industry Members and provides Industry Members with initial feedback on data errors. In light of the unprecedented nature of the CAIS system, certain changes to the system, such as changes related to error corrections and the CAIS regulatory portal, were necessary to finalize CAIS reporting. FCAT worked to address these remaining issues,[192] and, as of May 31, 2024, FCAT indicated that it had achieved the final CAIS reporting milestone. Accordingly, CAT LLC appropriately seeks to recover CAIS operating costs via Historical CAT Assessment 1.

(G) Public Relations Costs

CAT LLC believes that the recovery of public relations costs is appropriate and that the amount and scope of such costs, as described above, are reasonable.

The Commission has long recognized that external public relations costs are reasonably associated with creating, implementing and maintaining the CAT. In the CAT

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192 *See, e.g.*, CAT Q4 2023 Quarterly Progress Report (Jan. 30, 2024) (https://www.catnmsplan.com/sites/default/files/2024-01/CAT-Q4-2023-QPR.pdf).

NMS Plan Approval Order, the Commission estimated that the Participants had collectively spent approximately $2,400,000 in preparation of the CAT NMS Plan on external public relations, legal, and consulting costs, and estimated that the Participants would continue to incur external public relations costs associated with maintaining the CAT upon approval of the CAT NMS Plan.[193]

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for public relations services as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . public relations costs."[194] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . public relations costs."[195] In keeping with these provisions, a brief description of reasonable public relations costs are described above.

In addition, CAT LLC determined that the public relations costs described above are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. The services performed by the public relations firms through 2021 were limited in scope to assist CAT LLC, which has no employees of its own, to be better positioned to understand and address CAT matters to the benefit of all market participants and to communicate on important CAT topics with the public. In addition, the costs for these services were appropriately limited. During the 10-year period

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193 CAT NMS Plan Approval Order at 84917-18.

194 Section 11.1(a)(i) of the CAT NMS Plan.

195 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

covered by Historical CAT Assessment 1, the average cost per year for these services was approximately $36,000.

(H) Legal Costs Related to the Limitation of Liability Provision in CAT Reporter Agreements

CAT LLC believes that the recovery of legal costs related to the limitation of liability provision, including costs related to the proceedings before the SEC and costs related to the proposed amendment to the Consolidated Audit Trail Reporter Agreement and the Consolidated Audit Trail Reporting Agent Agreement (the "Reporting Agreements") is appropriate and that the amount and scope of such costs as described above are reasonable.

As a preliminary matter, as discussed above, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT Assessments.[196] In addition, CAT LLC determined that the legal costs incurred for the assistance with regard to the limitation of liability provisions are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1.

Moreover, it is critical that CAT LLC, which has no employees of its own, have the ability to fund a legal defense in litigation and other legal proceedings against it. In response to CAT LLC requiring Industry Members to agree to the limitation of liability provision to submit data to the CAT, SIFMA filed an application for review of actions taken by CAT LLC and the Participants pursuant to Sections 19(d) and 19(f) of the Exchange Act. Contemporaneously with the filing of this proceeding, SIFMA moved for

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196 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

a stay of the requirement that Industry Members sign a Reporter Agreement, or in the alternative, asked the Commission to further delay the launch of CAT reporting on June 22, 2020. CAT LLC must have the resources to defend itself from litigious actions by others, like these.

Although a limitation of liability provision ultimately was not adopted as proposed, it was a reasonable provision to propose for the CAT Reporter Agreements, given that such provisions are in accordance with industry norms. Limitations of liability are ubiquitous within the securities industry and have long governed the economic relationships between self-regulatory organizations and the entities that they regulate. For example, U.S. securities exchanges have adopted rules to limit their liability for losses that Industry Members incur through their use of exchange facilities.[197] Similarly, FINRA's former order audit trail, OATS, which has functioned as an integrated audit trail of order, quote, and trade data for equity securities, required FINRA members to acknowledge an agreement that includes a limitation of liability provision.[198] In addition, such a provision was intended to ensure the financial stability of the CAT. Accordingly, it was reasonable for CAT LLC to propose the use of such a provision.[199]

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197 *See, e.g.*, NASDAQ Equities Rule 4626.

198 FINRA Rule 1013(a)(1)(R) requires all applicants for FINRA Membership to acknowledge the FINRA Entitlement Program Agreement and Terms of Use, which applies to OATS. Industry Members click to indicate that they agree to its terms—including its limitation of liability provision—every time they access FINRA's OATS system to report trade information (*i.e.*, repeatedly over the course of a trading day for many Industry Members).

199 *See* Letter from Michael Simon, Chair, CAT Operating Committee, to Vanessa Countryman, Secretary, Commission (Dec. 18, 2020).

Furthermore, as described above, the specialized services were performed by experienced counsel at market rates for such services. Accordingly, the legal costs for the efforts related to the limitation of liability provision were reasonable.

(I) Costs for the Chair of CAT Operating Committee

CAT LLC believes that the recovery of consulting costs related to the Chair of the CAT Operating Committee is appropriate and that the amount and scope of such costs are reasonable.

As a preliminary matter, the selection of the Chair of the Operating Committee complies with the requirements of Section 4.2 of the CAT NMS Plan. The initial Chair that served during the period covered by Historical CAT Assessment was designated by a Participant as the Participant's alternate voting member. Accordingly, the Chair is a representative of the Participants, as required by the CAT NMS Plan.

In addition, in approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for consulting as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . consulting . . . " costs.[200] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . consulting"[201] costs. In keeping with these provisions, a brief description of reasonable

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200 Section 11.1(a)(i) of the CAT NMS Plan.

201 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

consulting costs is included in this filing, and such reasonable consulting costs include the costs related to the Chair position.

The Participants determined that the position of the Chair was a critical role for the implementation of the CAT, and an independent Chair would appropriately consider and address the views of each of the Participants. The Participants also determined that it was important to have a Chair with a strong background regarding issues related to the regulatory obligations of self-regulatory organizations, including their obligations under national market system plans. The compensation paid to the Chair is appropriate for a person with such background and skills. The average annual amount paid to the Chair from 2017 through the end of FAM 3 was $292,733.30. Separate from the Chair, CAT LLC relies upon a Leadership Team of representatives of the SROs to oversee the day-to-day implementation of the CAT NMS Plan. CAT LLC does not compensate any member of the Leadership Team.

(11) Fee Implementation Assistance for Industry Members

(A) Reconciliation of CAT Invoices

(i) Reconciliation of CAT Invoices to Underlying Trades Provided by CAT

CAT LLC understands that there are three types of reconciliation processes related to the invoices:

- Reconciliation of CAT Invoices to Underlying Trades: Reconciling the CAT invoice amount to the underlying trades provided by CAT;
- Matching Trades to Books and Records: Providing the means to match the underlying trades provided by CAT with CAT invoices to other books and records independently maintained by individual CAT Reporters (*e.g.*,

exchange trade journals/acknowledgements) and data sources of self-regulatory organizations independent of CAT; and

- Order Originator Identification: Providing the ability to identify the order originator for the underlying trades provided by CAT with CAT invoices, which would facilitate firms' ability to pass through CAT Fees to their customers.

As discussed further below, CAT LLC only considers the first type of process to be a "reconciliation" and the only type of process that is required under the CAT NMS Plan. CAT LLC provides the means to reconcile the CAT invoice amount to the underlying trades provided by CAT.

The CAT NMS Plan does not require CAT LLC to facilitate the second type of process: matching underlying trades for a CAT invoice with a firm's internal books and records. CAT LLC has access only to the underlying trades provided by CAT; it does not have access to a firm's internal books and records. Although beyond the requirements of the CAT NMS Plan and involving firm specific considerations, CAT LLC voluntarily has provided guidance and processes to assist CAT Reporters in their efforts to match the underlying trades with their own books and records.

The CAT NMS Plan also does not require CAT LLC to provide the ability to identify the order originator for the underlying trades for the CAT invoices. Accordingly, the billing guidance and processes do not provide CAT Reporters with the ability to identify the order originator for the underlying trades provided by CAT with CAT invoices. CAT LLC has been working closely with CAT Reporters to explain its billing approach and to address any outstanding billing questions. But, it should not be lost that CAT LLC provides information sufficient to allow CAT Reporters to reconcile CAT invoice amounts with the underlying trades provided by CAT LLC.

(ii) Match the Underlying Trades Provided by CAT with CAT Invoices to Firms' Internal Books and Records Independent of CAT

The CAT NMS Plan does not require CAT LLC to facilitate the matching of underlying trades for a CAT invoice with a firm's internal books and records, which may consist of trading data from various sources external to CAT. Although beyond the requirements of the CAT NMS Plan and involving firm specific considerations, CAT LLC voluntarily has provided guidance and processes to assist CAT Reporters in their efforts to match the underlying trades with their own books and records.

In this regard, it is important to recognize that CAT LLC has developed a billing approach that greatly improves upon existing billing practices for similar regulatory fees (*e.g.*, fees related to Section 31). Accordingly, with the additional information voluntarily provided by CAT LLC, CAT Reporters generally will have sufficient information to match their underlying trades provided by CAT with their own internal books and records that are independent of CAT or to SRO data that is independent of CAT data. However, CAT LLC emphasizes that providing such additional information is not required by the CAT NMS Plan.

To facilitate the introduction of CAT fees, CAT LLC has worked with FCAT to develop an approach to CAT billing that is consistent with existing billing constructs used with regard to Section 31-related sales values fees, subject to certain enhancements. Under this billing approach, FCAT is providing additional linkage elements, not necessarily provided in the Section 31-sales value fee context, to facilitate CAT Reporters' ability to match the underlying trades provided by CAT with their internal

books and records and to reduce the complexity of that process. Specifically, FCAT is providing various key elements of the trade itself, such as the tradeID and branch sequence,[202] to CAT Reporters in the trade billing details provided with their CAT invoices ("Additional Trade Details"). As a result, CAT Reporters now have numerous alternative methods for matching a trade with their internal books and records where they previously did not have such matching methods in other fee contexts.

With the Additional Trade Details, CAT LLC and FCAT believe that the overwhelming majority of underlying trades provided by CAT bills can be matched with a CAT Reporter's internal books and records. CAT LLC recognizes that there may be certain cases in which such matching is more difficult given various firm-specific considerations, but believes that such instances are significantly more limited than with regard to the SRO fees charged in relation to Section 31.[203] By providing Additional Trade Details that are not available in other fee contexts, FCAT enhances the Industry Members' ability to match the underlying trades provided with CAT invoices with books and records and SRO data, both of which are independent of CAT data.

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202 *See* CAT Technical Specifications for Billing Trade Details; Trade Details Schema (https://catnmsplan.com/sites/default/files/2024-02/02.05.24-Billing-Trade-Details-Schema.json); CAT Billing Scenarios, Version 1.0 (Nov. 30, 2023) (https://www.catnmsplan.com/sites/default/files/2024-01/01.12.2024-CAT-Billing-Scenarios-v1.0.pdf).

203 For years, broker-dealers have faced similar reconciliation issues with regard to SRO fees related to Section 31. Broker-dealers have responded to this issue in the Section 31 context by exercising their discretion as to whether and the manner and extent to which they pass on those fees (*e.g.*, by rounding up its fees to the nearest cent, or decide to charge for, or not charge for, certain transactions, or assess a specific fee or incorporate the costs into other fee programs). *See, e.g.*, Securities Exchange Act Rel. No. 49928 (June 28, 2004), 69 Fed. Reg. 41060, 41072 (July 7, 2004) (noting that broker-dealers may "over-collect" Section 31-related fees charged to their clients due to rounding practices, and double-counting with regard to certain transactions).

(iii) CAT LLC is Not Required to Facilitate CAT Reporters' Ability to Pass Through Fees to Their Customers

Similar to other regulatory fees, the CAT NMS Plan does not address the manner or extent to which CAT Executing Brokers may seek to pass any CAT fees on to their customers, nor does it impose any obligation on CAT LLC or the Plan Processor to facilitate firms' ability to do so. Accordingly, Historical CAT Assessment 1 does not address the process by which any CAT Reporters may pass through the fee to their customers. Likewise, the CAT billing approach provided by the Plan Processor is designed to address the needs of CAT Reporters with regard to the reconciliation of CAT invoices with the underlying trades provided by CAT LLC with the invoices; they are not designed to address issues related to any pass-through fees. Accordingly, facilitating CAT Reporters' ability to pass through fees to their clients is outside the scope of this fee filing. Nevertheless, as described below, CAT LLC and the Plan Processor have expended significant efforts to provide technical assistance to Industry Members regarding the implementation of Historical CAT Assessment 1, including providing Additional Trade Details that provide significant details about each underlying trade.

(a) Originating Brokers Versus Executing Brokers

In its approval of the CAT Funding Model, the Commission approved charging CAT fees to the CAT Executing Broker, rather than the originating broker. This fee filing must comply with the requirements of the CAT Funding Model, and, therefore, charges the Historical CAT Assessment 1 to CAT Executing Brokers.

Moreover, charging originating brokers would introduce significant complexity to the billing process from the CAT's perspective, and would increase the costs of implementing CAT fees. Charging the CAT Executing Broker is simple and straightforward, and leverages a one-to-one relationship between billable events (trades) and billable parties, similar to other transaction-based fees. In contrast, for a single trade event, there may be many originating brokers, and each trade must be broken down on a pro-rata basis, to account for one or more layers of aggregation, disaggregation, and representation of the underlying orders. While CAT is indeed designed to capture and unwind complex aggregation scenarios, the data and linkages are structured to facilitate regulatory use, and not a billing mechanism that assesses fees on a distinct set of executed trades; it is not simply a matter of using existing CAT linkages. Furthermore, charging originating brokers would implicate issues related to lifecycle linkage rates, and issues related to corrections, cancellations and allocations, while charging CAT Executing Brokers would avoid such issues.

(b) Identification of Order Originator for Underlying Trades

As noted, the CAT NMS Plan does not address the manner or extent to which CAT Executing Brokers may seek to pass any CAT Fees on to their customers, nor does it impose any obligation on CAT LLC or the Plan Processor to facilitate firms' ability to do so. Nevertheless, the Additional Trade Details provided with regard to the underlying trades on CAT invoices may assist with this process. Like with Section 31-related sales value fees, however, it is not always possible to trace every fee on a transaction back to the originating party. Industry Members have faced these issues under Section 31-related

sales values fees for many years.[204] However, with the Additional Trade Details provided under the CAT billing approach, in many cases, CAT Reporters will be able to identify the order originator for the underlying trades provided by CAT with CAT invoices. In some cases, CAT LLC believes that certain issues related to certain types of market activity may implicate CAT Reporters' ability to identify the order originator for a limited set of underlying trades for the CAT invoices. Although CAT LLC does not believe that it is required to address these issues, CAT LLC and FCAT have been carefully researching and analyzing these types of issues as they are identified, and have been working voluntarily to assist CAT Reporters with these issues as necessary and when possible. In addition, CAT LLC intends to continue to provide CAT Reporters with billing guidance through FAQs, CAT Alerts and Helpdesk responses to address outstanding billing questions.

(B) Significant Technical Assistance

CAT LLC has worked with FCAT to provide significant technical assistance to Industry Members to allow the Industry Members to understand how Historical CAT Assessment 1 will be implemented and billed, including webinars, CAT alerts, mock invoices, and responses to questions posed to the FCAT Help Desk.

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204 "FINRA charges a Regulatory Transaction Fee ("RTF") to industry members to reimburse FINRA for the Section 31 fees that FINRA pays to the Commission. FINRA does not currently provide industry members with the data that industry members require for proper reconciliation of RTF fees. This has been a major problem for the industry for many years." Letter from Howard Meyerson, Managing Director, FIF, to Robert Cook, Chief Executive Officer, FINRA at 2 (Dec. 15. 2023) (https://fif.com/index.php/working-groups/category/271-comment-letters?download=2820:fif-letter-to-finra-on-pass-through-of-finra-cat-fees&view=category).

- Technical Specifications and Scenarios. CAT LLC has provided detailed technical documentation for CAT billing, including (1) technical specifications, which describe the CAT Billing Trade Details Files associated with monthly CAT invoices, including detailed information about data elements and file formats as well as access instructions, network and transport options;[205] (2) trade details schemas;[206] and (3) CAT billing scenarios.[207]

- Industry Webinars. CAT LLC has hosted two industry webinars specifically dedicated to CAT billing. The first webinar, hosted on September 28, 2023, discussed the operational implementation of the CAT Reporter billing process.[208] The second webinar, hosted on November 7, 2023, provided (1) a demonstration of the CAT Reporter Portal and how to access CAT billing documents, including CAT invoices; and (2) additional information on underlying trade details in relation to the CAT Reporter billing process and an overview of the CAT Contact Management System.[209] 485 participants and 394 participants attended the two webinars, respectively.

- CAT Alert. CAT LLC has published a detailed CAT Alert that describes how FCAT, as the Plan Processor acting on behalf of CAT LLC, will calculate applicable fees, issue invoices to and collect payment from CAT Executing Brokers.[210]

- Frequently Asked Questions (FAQs). CAT LLC also has continued to engage with the industry on billing issues by making responses to billing FAQs available on the CAT website. The FAQs address a broad range of frequently asked questions, including, for example, which Industry Members will receive invoices, how fees are calculated, when and how fees are required to be paid, how to access invoices, and how to update the billing contact. To date, responses to 27 FAQs

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205 CAT Technical Specifications for Billing Trade Details, Version 1.0 r1 (Dec. 8. 2023) (https://catnmsplan.com/sites/default/files/2023-12/12.07.2023-CAT-Techical-Specifications-for-Billing-Trade-Details-v1.0r1_CLEAN.pdf).

206 Trade Details Schema (https://catnmsplan.com/sites/default/files/2024-02/02.05.24-Billing-Trade-Details-Schema.json).

207 CAT Billing Scenarios, Version 1.0 (Nov. 30, 2023) (https://www.catnmsplan.com/sites/default/files/2024-01/01.12.2024-CAT-Billing-Scenarios-v1.0.pdf).

208 CAT Billing Webinar, Part 1 (Sept. 28, 2023) (https://www.catnmsplan.com/events/part-1-cat-billing-webinar).

209 CAT Billing Webinar, Part 2 (Nov. 7, 2023) (https://www.catnmsplan.com/events/part-2-cat-billing-webinar).

210 *See* CAT Alert 2023-02 (Oct. 12, 2023) (https://www.catnmsplan.com/sites/default/files/2023-10/10.12.23-CAT-Alert-2023-02.pdf).

are available on the CAT website, and CAT LLC will provide additional responses to FAQs as warranted.[211]

- Mock Invoices. To assist Industry Members with compliance with the commencement of Historical CAT Assessment 1, CAT LLC has been making available to CAT Executing Brokers mock invoices for Historical CAT Assessment 1 since December 2023 for billable activity occurring in November 2023. The mock invoices are in the same form as the actual, payable invoices, including both the relevant transaction data and the corresponding fee (as originally contemplated). However, no payments are required in response to such mock invoices; they are to be used solely to assist CAT Executing Brokers with the development of their processes for paying the CAT fees. Such data provides CAT Executing Brokers with a preview of the transaction data used in creating the invoices for Historical CAT Assessment 1 fees, as the data will be the same as data provided in actual invoices. Such data preview is intended to facilitate the payment of Historical CAT Assessment 1. For the November, December, and January billing periods, FCAT has generated trade detail files for 569 distinct firms that are CAT Executing Brokers. As such, CAT Reporters have actively engaged in the billing process via the mock invoices.

- Help Desk Assistance. CAT LLC also provides detailed, individualized assistance to Industry Members regarding CAT fees and the billing process through the FCAT Help Desk.[212] For example, the Help Desk has assisted with 406 cases related to the billing of CAT fees from July 2023 through March 2024.

By providing such detailed and sustained assistance to Industry Members regarding CAT fees and billing, CAT LLC has successfully addressed questions raised by Industry Members regarding the CAT fees and billing processes.

(C) Ample Preparation Time

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211 *See* CAT Billing FAQs, Section V of CAT FAQs (https://www.catnmsplan.com/faq?search_api_fulltext=&field_topics=271&sort_by=field_faq_number).

212 The CAT NMS Plan requires that the Plan Processor "staff a CAT help desk, as described in Appendix D, CAT Help Desk, to provide technical expertise." Section 6.10(c)(vi) of the CAT NMS Plan. *See also* Section 10.3 of Appendix D of the CAT NMS Plan for a description of the Plan requirements for the CAT Help Desk.

CAT LLC has provided Industry Members with ample time to comply with the implementation of Historical CAT Assessment 1. CAT LLC originally proposed issuing the first invoices for Historical CAT Assessment 1 in December 2023 based on transactions in Eligible Securities in November 2023. In consideration of the feedback about the need for additional time to implement the new fee, CAT LLC pushed back this timeline by four months, proposing to issue the first Historical CAT Assessment 1 in April 2024 based on transactions in March 2024.[213] This filing pushes this timeline back even further for implementing Historical CAT Assessment 1, proposing to issue the first invoices for Historical CAT Assessment 1 in November 2024 based on transactions in Eligible Securities in October 2024. Moreover, as discussed above, during these additional months, FCAT has been working closely with Industry Members to provide guidance regarding their mock bills and reconciliation efforts related thereto.

b. Statutory Basis

The Exchange believes the proposed rule change is consistent with the requirements of the Exchange Act. The Exchange believes that the proposed rule change is consistent with Section 6(b)(5) of the Act[214], which requires, among other things, that the Exchange's rules must be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest, and not designed to permit unfair discrimination between customers, issuers, brokers and dealers. The Exchange also believes that the

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213 *See* Exchange Act Release No. 99356 (January 17, 2024), 89 FR 10697 (February 13, 2024) (SR-MEMX-2024-01).

214 15 U.S.C. 78f(b)(6).

proposed rule change is consistent with the provisions of Section 6(b)(4) of the Act,[215] because it provides for the equitable allocation of reasonable dues, fees and other charges among members and issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers. The Exchange further believes that the proposed rule change is consistent with Section 6(b)(8) of the Act[216], which requires that the Exchange's rules not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act. These provisions also require that the Exchange be "so organized and [have] the capacity to be able to carry out the purposes" of the Act and "to comply, and . . . to enforce compliance by its members and persons associated with its members," with the provisions of the Exchange Act.[217] Accordingly, a reasonable reading of the Act indicates that it intended that regulatory funding be sufficient to permit an exchange to fulfill its statutory responsibility under the Act, and contemplated that such funding would be achieved through equitable assessments on the members, issuers, and other users of an exchange's facilities.

The Exchange believes that this proposal is consistent with the Act because it implements provisions of the Plan and is designed to assist the Exchange in meeting regulatory obligations pursuant to the Plan. In approving the Plan, the SEC noted that the Plan "is necessary and appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect

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215 15 U.S.C. 78f(b)(4).

216 15 U.S.C. 78f(b)(8).

217 *See* Section 6(b)(1) of the Exchange Act.

the mechanism of a national market system, or is otherwise in furtherance of the purposes of the Act."[218] To the extent that this proposal implements the Plan and applies specific requirements to Industry Members, the Exchange believes that this proposal furthers the objectives of the Plan, as identified by the SEC, and is therefore consistent with the Act.

The Exchange believes that the proposed fees paid by the CEBBs and CEBSs are reasonable, equitably allocated and not unfairly discriminatory. First, the Historical CAT Assessment 1 fees to be collected are directly associated with the costs of establishing and maintaining the CAT, where such costs include Plan Processor costs and costs related to technology, legal, consulting, insurance, professional and administration, and public relations costs. The Exchange has already incurred such development and implementation costs and the proposed Historical CAT Assessment 1 fees, therefore, would allow the Exchange to collect certain of such costs in a fair and reasonable manner from Industry Members, as contemplated by the CAT NMS Plan.

The proposed Historical CAT Assessment 1 fees would be charged to Industry Members in support of the maintenance of a consolidated audit trail for regulatory purposes. The proposed fees, therefore, are consistent with the Commission's view that regulatory fees be used for regulatory purposes and not to support the Exchange's business operations. The proposed fees would not cover Exchange services unrelated to the CAT. In addition, any surplus would be used as a reserve to offset future fees. Given the direct relationship between CAT fees and CAT costs, the Exchange believes that the proposed fees are reasonable, equitable and not unfairly discriminatory.

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[218] CAT NMS Plan Approval Order at 84697.

As further discussed below, the SEC approved the CAT Funding Model, finding it was reasonable and that it equitably allocates fees among Participants and Industry Members. The Exchange believes that the proposed fees adopted pursuant to the CAT Funding Model approved by the SEC are reasonable, equitably allocated and not unfairly discriminatory.

(1) Implementation of CAT Funding Model in CAT NMS Plan

Section 11.1(b) of the CAT NMS Plan states that "[t]he Participants shall file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves." Per Section 11.1(b) of the CAT NMS Plan, the Exchange has filed this fee filing to implement the Industry Member CAT fees included in the CAT Funding Model. The Exchange believes that this proposal is consistent with the Exchange Act because it is consistent with, and implements, the CAT Funding Model in the CAT NMS Plan, and is designed to assist the Exchange and its Industry Members in meeting regulatory obligations pursuant to the CAT NMS Plan. In approving the CAT NMS Plan, the SEC noted that the Plan "is necessary and appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanism of a national market system, or is otherwise in furtherance of the purposes of the Act."[219] Similarly, in approving the CAT Funding Model, the SEC concluded that the CAT Funding Model met this standard.[220] As this proposal implements the Plan and the CAT Funding Model described therein, and applies specific requirements to Industry Members in compliance with the Plan, the

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219 CAT NMS Plan Approval Order at 84696.

220 CAT Funding Model Approval Order at 62686.

Exchange believes that this proposal furthers the objectives of the Plan, as identified by the SEC, and is therefore consistent with the Exchange Act.

(2) Calculation of Fee Rate for Historical CAT Assessment 1 is Reasonable

The SEC has determined that the CAT Funding Model is reasonable and satisfies the requirements of the Exchange Act. Specifically, the SEC has concluded that the method for determining Historical CAT Assessments as set forth in Section 11.3 of the CAT NMS Plan, including the formula for calculating the Historical Fee Rate, the identification of the parties responsible for payment and the transactions subject to the fee rate for the Historical CAT Assessment, is reasonable and satisfies the Exchange Act.[221] In each respect, as discussed above, Historical CAT Assessment 1 is calculated, and would be applied, in accordance with the requirements applicable to Historical CAT Assessments as set forth in the CAT NMS Plan. Furthermore, as discussed below, the Exchange believes that each of the figures for the variables in the SEC-approved formula for calculating the fee rate for Historical CAT Assessment 1 is reasonable and consistent with the Exchange Act. Calculation of the Historical Fee Rate for Historical CAT Assessment 1 requires the figures for the Historical CAT Costs 1, the executed equivalent share volume for the prior twelve months, the determination of Historical Recovery Period 1, and the projection of the executed equivalent share volume for Historical Recovery Period 1. Each of these variables is reasonable and satisfies the Exchange Act, as discussed throughout this filing.

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221 *Id*. at 62662-63.

(A) Historical CAT Costs 1

The formula for calculating a Historical Fee Rate requires the amount of Historical CAT Costs to be recovered. Specifically, Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan requires a fee filing to provide:

> a brief description of the amount and type of the Historical CAT Costs, including (1) the technology line items of cloud hosting services, operating fees, CAIS operating fees, change request fees, and capitalized developed technology costs, (2) legal, (3) consulting, (4) insurance, (5) professional and administration and (6) public relations costs.

In accordance with this requirement, the Exchange has set forth the amount and type of Historical CAT Costs 1 for each of these categories of costs above.

Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan also requires that the fee filing provide "sufficient detail to demonstrate that the Historical CAT Costs are reasonable and appropriate." As discussed below, the Exchange believes that the amounts set forth in this filing for each of these cost categories is "reasonable and appropriate." Each of the costs included in Historical CAT Costs 1 are reasonable and appropriate because the costs are consistent with standard industry practice, based on the need to comply with the requirements of the CAT NMS Plan, incurred subject to negotiations performed on an arm's length basis, and/or are consistent with the needs of any legal entity, particularly one with no employees.

(i) Technology: Cloud Hosting Services

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover costs related to cloud hosting services as a part of Historical CAT

Assessments.[222] CAT LLC determined that the costs related to cloud hosting services described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. As described above, the cloud hosting services costs reflect, among other things, the breadth of the CAT cloud activities, data volume far in excess of the original volume estimates, the need for specialized cloud services given the volume and unique nature of the CAT, the processing time requirements of the Plan, and regular efforts to seek to minimize costs where permissible under the Plan. CAT LLC determined that use of cloud hosting services is necessary for implementation of the CAT, particularly given the substantial data volumes associated with the CAT, and that the fees for cloud hosting services negotiated by FCAT were reasonable, taking into consideration a variety of factors, including the expected volume of data and the breadth of services provided and market rates for similar services.[223] Indeed, the actual costs of the CAT are far in excess of the original estimated costs of the CAT due to various factors, including the higher volumes and greater complexity of the CAT than anticipated when Rule 613 was originally adopted.

To comply with the requirements of the Plan, the breadth of the cloud activities related to the CAT is substantial. The cloud services not only include the production environment for the CAT, but they also include two industry testing environments, support environments for quality assurance and stress testing and disaster recovery capabilities. Moreover, the cloud storage costs are driven by the requirements of the

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222 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

223 For a discussion of the amount and type of cloud hosting services fees, *see* Sections 3(a)(2)(B)(i)(a), 3(a)(2)(B)(ii)(a), 3(a)(2)(B)(iii)(a) and 3(a)(2)(B)(iv)(A) above.

Plan, which requires the storage of multiple versions of the data, from the original submitted version of the data through various processing steps, to the final version of the data.

Data volume is a significant driver of costs for cloud hosting services. When the Commission adopted the CAT NMS Plan in 2016, it estimated that the CAT would need to receive 58 billion records per day[224] and that annual operating costs for the CAT would range from $36.5 million to $55 million.[225] Through 2021, the actual data volumes have been five times that original estimate. The data volumes for each period are set forth in detail above.[226]

In addition to the effect of the data volume on the cloud hosting costs, the processing timelines set forth in the Plan contribute to the cloud hosting costs. Although CAT LLC has proactively sought to manage cloud hosting costs while complying with the Plan, including through requests to the Commission for exemptive relief and an amendment to the CAT NMS Plan, stringent CAT NMS Plan requirements do not allow for any material flexibility in cloud architecture design choices, processing timelines (*e.g.*, the use of non-peak processing windows), or lower-cost storage tiers. As a result, the required CAT processing timelines contribute to the cloud hosting costs of the CAT.

The costs for cloud hosting services also reflect the need for specialized cloud hosting services given the data volume and unique processing needs of the CAT. The data volume as well as the data processing needs of the CAT necessitate the use of cloud

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224 Appendix D-4 of the CAT NMS Plan at n.262.

225 CAT NMS Plan Approval Order at 84801.

226 *See* Sections 3(a)(2)(B)(i)(a), 3(a)(2)(B)(ii)(a), 3(a)(2)(B)(iii)(a) and 3(a)(2)(B)(iv)(A) above.

hosting services. The equipment, power and services required for an on-premises data model, the alternative to cloud hosting services, would be cost prohibitive. Moreover, as CAT was being developed, there were limited cloud hosting providers that could satisfy all the necessary CAT requirements, including the operational and security criteria. Over time more providers offering cloud hosting services that would satisfy these criteria have entered the market. CAT LLC will continue to evaluate alternative cloud hosting services, recognizing that the time and cost to move to an alternative cloud provider would be substantial.

The reasonableness of the cloud hosting services costs is further supported by key cost discipline mechanisms for the CAT – a cost-based funding structure, cost transparency, cost management efforts (including regular efforts to lower compute and storage costs where permitted by the Plan) and oversight. Together, these mechanisms help ensure the ongoing reasonableness of the CAT's costs and the level of fees assessed to support those costs.[227]

(ii) Technology: Operating Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to operating fees as a part of Historical CAT Assessments.[228] CAT LLC determined that the costs related to operating fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. The operating fees include the negotiated fees paid by CAT LLC to the Plan Processor to operate and

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227 *See* Securities Exchange Act Rel. No. 97151 (Mar. 15, 2023), 88 Fed. Reg. 17086, 17117 (Mar. 21, 2023) (describing key cost discipline mechanisms for the CAT).

228 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

maintain the system for order-related information and to perform business operations related to the system, including compliance, security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management. CAT LLC determined that the selection of FCAT as the Plan Processor was reasonable and appropriate given its expertise with securities regulatory reporting, after a process of considering other potential candidates.[229] CAT LLC also determined that the fixed price contract, negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan and Rule 613, was reasonable and appropriate, taking into consideration a variety of factors, including the breadth of services provided and market rates for similar types of activity.[230] The services performed by FCAT for each period and the costs related to such services are described above.[231]

(iii) Technology: CAIS Operating Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to CAIS operating fees as a part of Historical CAT Assessments.[232] CAT LLC determined that the costs related to CAIS operating fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. The CAIS operating fees include the fees paid to the Plan Processor to operate and maintain CAIS and to perform the business operations related to the system, including compliance,

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229 *See* Section 3(a)(2)(B)(i)(b) above.

230 *See* Sections 3(a)(2)(B)(i)(b), 3(a)(2)(B)(ii)(b), 3(a)(2)(B)(iii)(b) and 3(a)(2)(B)(iv)(b) above.

231 *Id.*

232 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management. CAT LLC determined that the FCAT-negotiated fees for Kingland's CAIS-related services, negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan, taking into consideration a variety of factors, including the services to be provided and market rates for similar types of activity, were reasonable and appropriate.[233] The services performed by Kingland for each period and the costs for each period are described above.[234]

(iv) Technology: Change Request Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to change request fees as a part of Historical CAT Assessments.[235] CAT LLC determined that the costs related to change request fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. It is common practice to utilize a change request process to address evolving needs in technology projects. This is particularly true for a project like CAT that is the first of its kind, both in substance and in scale. The substance and costs of each of the change requests are evaluated by the Operating Committee, and approved in accordance with the requirements for Operating Committee meetings. In each case, CAT LLC determined that the change requests were necessary to implement the CAT. As described

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233 *See* Sections 3(a)(2)(B)(i)(c), 3(a)(2)(B)(ii)(c), 3(a)(2)(B)(iii)(c) and 3(a)(2)(B)(iv)(c) above.

234 *Id*.

235 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

above, the change requests cover various technology changes, including, for example, changes related to CAT reporting, data feeds and exchange functionality. CAT LLC also determined that the costs for each change request were appropriate for the relevant technology change. A description of the change requests for each FAM Period and their total costs are set described above.[236] As noted above, the total costs for change requests through FAM Period 3 represent a small percentage of Historical CAT Costs 1 – that is, 0.25% of Historical CAT Costs 1.

(v) Capitalized Developed Technology Costs

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to capitalized developed technology costs as a part of Historical CAT Assessments.[237] Capitalized developed technology costs include costs related to certain development costs, costs related to certain modifications, upgrades and other changes to the CAT, CAIS implementation fees and license fees. The amount and type of costs for each period are described in more detail above.[238] CAT LLC determined that these costs are reasonable and should be included as a part of Historical CAT Costs 1.

These costs involve the activity of both the Initial Plan Processor and FCAT, as the successor Plan Processor.[239] With regard to the Initial Plan Processor, the Participants utilized an RFP to seek proposals to build and operate the CAT, receiving a number of proposals in response to the RFP. The Participants carefully reviewed and

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236 *See* Sections 3(a)(2)(B)(i)(d), 3(a)(2)(B)(ii)(d), 3(a)(2)(B)(iii)(d) and 3(a)(2)(B)(iv)(d) above.

237 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

238 *See* Sections 3(a)(2)(B)(i)(e), 3(a)(2)(B)(ii)(e), 3(a)(2)(B)(iii)(e) and 3(a)(2)(B)(iv)(e) above.

239 *Id.*

considered each of the proposals, including holding in-person meetings with each of the Bidders. After several rounds of review, the Participants selected the Initial Plan Processor in accordance with the CAT NMS Plan. CAT LLC entered into an agreement with the Initial Plan Processor in which CAT LLC would pay the Initial Plan Processor a negotiated, fixed price fee.[240] In addition, as described above, CAT LLC determined that is was appropriate to enter into an agreement with FCAT as the successor Plan Processor.[241]

(vi) Legal

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to legal fees as a part of Historical CAT Assessments.[242] CAT LLC determined that the legal costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Given the unique nature of the CAT, the number of parties involved with the CAT (including, for example, the SEC, Participants, Industry Members, and vendors) and the many regulatory issues associated with the CAT, the scope of the necessary legal services are substantial. CAT LLC determined that the scope of the legal services is necessary to implement and maintain the CAT and that the legal rates reflect the specialized services necessary for such a project. When hiring each law firm for a CAT project, CAT LLC interviewed multiple firms, and determined to hire each firm based on a variety of factors, including the relevant expertise and fees.

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240 *See* Section 3(a)(2)(B)(i)(e) above.

241 *See* Section 3(a)(2)(B)(i)(b) above.

242 Section 11.3(b)(iii)(B)(II)(B)(2) of the CAT NMS Plan.

In each case, CAT LLC determined that the hourly fee rates were in line with market rates for the specialized legal expertise. In addition, CAT LLC determined that the total costs incurred for each CAT project were appropriate given the breadth of services provided. The services performed by each law firm for each period and the costs related to such services are described above.[243]

(vii) Consulting

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover consulting costs as a part of Historical CAT Assessments.[244] CAT LLC determined that the consulting costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Because there are no CAT employees[245] and because of the significant number of issues associated with the CAT, the consultants provided assistance in the management of various CAT matters and the processes related to such matters.[246] CAT LLC considered a variety of factors in choosing a consulting firm and determined to select Deloitte after an interview process.[247] CAT LLC also determined that the consulting services were provided at reasonable market rates, as the fees were negotiated annually and comparable to the rates charged by other consulting

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243 *See* Sections 3(a)(2)(B)(i)(f), 3(a)(2)(B)(ii)(f), 3(a)(2)(B)(iii)(f) and 3(a)(2)(B)(iv)(f) above.

244 Section 11.3(b)(iii)(B)(II)(B)(3) of the CAT NMS Plan.

245 As stated in the filing of the proposed CAT NMS Plan, "[i]t is the intent of the Participants that the Company have no employees." Securities Exchange Act Rel. No. 77724 (Apr. 27, 2016), 81 Fed. Reg. 30614, 30621 (May 17, 2016).

246 CAT LLC uses certain third parties to perform tasks that may be performed by administrators for other NMS Plans. *See, e.g.*, CTA Plan and CQ Plan.

247 *See* Section 3(a)(2)(B)(i)(g) above.

firms for similar work.[248] Moreover, the total costs for such consulting services were appropriate in light of the breadth of services provided by Deloitte. The services performed by Deloitte and the costs related to such services are described above.[249]

(viii) Insurance

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover insurance costs as a part of Historical CAT Assessments.[250] CAT LLC determined that the insurance costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. CAT LLC determined that it is common practice to have directors' and officers' liability insurance, and errors and omissions liability insurance. CAT LLC further determined that it was important to have cyber security insurance given the nature of the CAT, and such a decision is consistent with the CAT NMS Plan, which states that the cyber incident response plan may include "[i]nsurance against security breaches."[251] In selecting the insurance providers for these policies, CAT LLC engaged in an evaluation of alternative insurers, including a comparison of the pricing offered by the alternative insurers.[252] Based on this analysis, CAT LLC determined that the selected insurance policies provided appropriate coverage at reasonable market rates.[253]

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248 *See* Sections 3(a)(2)(B)(i)(g), 3(a)(2)(B)(ii)(g), 3(a)(2)(B)(iii)(g) and 3(a)(2)(B)(iv)(g) above.

249 *Id*.

250 Section 11.3(b)(iii)(B)(II)(B)(4) of the CAT NMS Plan.

251 Section 4.1.5 of Appendix D of the CAT NMS Plan.

252 *See* Sections 3(a)(2)(B)(i)(h), 3(a)(2)(B)(ii)(h), 3(a)(2)(B)(iii)(h) and 3(a)(2)(B)(iv)(h) above.

253 *Id.*

(ix) Professional and Administration

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover professional and administration costs as a part of Historical CAT Assessments.[254] CAT LLC determined that the professional and administration costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Because there are no CAT employees, all required accounting, financial, tax, cash management and treasury functions for CAT LLC have been outsourced at market rates. In addition, the required annual financial statement audit of CAT LLC is included in professional and administration costs, which costs are also at market rates.

CAT LLC determined to hire a financial advisory firm, Anchin, to assist with financial matters for the CAT. CAT LLC interviewed Anchin as well as other potential financial advisory firms to assist with the CAT project, considering a variety of factors in its analysis, including the firm's relevant expertise and fees.[255] The hourly fee rates for this firm were in line with market rates for the financial advisory services provided.[256] Moreover, the total costs for such financial advisory services was appropriate in light of the breadth of services provided by Anchin. The services performed by Anchin and the costs related to such services are described above.[257]

CAT LLC also determined to engage an independent accounting firm, Grant Thornton, to complete the audit of CAT LLC's financial statements, in accordance with

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254 Section 11.3(b)(iii)(B)(II)(B)(5) of the CAT NMS Plan.

255 *See* Section 3(a)(2)(B)(i)(i) above.

256 *See* Sections 3(a)(2)(B)(i)(i), 3(a)(2)(B)(ii)(i), 3(a)(2)(B)(iii)(i) and 3(a)(2)(B)(iv)(i) above.

257 *Id*.

the requirements of the CAT NMS Plan. CAT LLC interviewed this firm as well as another potential accounting firm to audit CAT LLC's financial statements, considering a variety of factors in its analysis, including the relevant expertise and fees of each of the firms. CAT LLC determined that Grant Thornton was well-qualified for the role given the balanace of these considerations.[258] Grant Thornton's fixed fee rate compensation arrangement was reasonable and appropriate, and in line with the market rates charged for these types of accounting services.[259] Moreover, the total costs for such financial advisory services was appropriate in light of the breadth of services provided by Grant Thornton. The services performed by Grant Thornton and the costs related to such services are described above.[260]

The professional and administrative costs also include costs related to the receipt of certain market data from Exegy. After performing an analysis of the available market data vendors to confirm that the data provided met the SIP Data requirements of the CAT NMS Plan and comparing the costs of the vendors providing the required SIP Data, CAT LLC determined to purchase market data from Exegy. Exegy provided the data elements required by the CAT NMS Plan, and the fees were reasonable and in line with market rates for the market data received.[261]

The professional and administrative costs also include costs related to a third party security assessment of the CAT performed by RSM. The assessment was designed

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258 *See* Section 3(a)(2)(B)(i)(i) above.

259 *See* Sections 3(a)(2)(B)(i)(i), 3(a)(2)(B)(ii)(i), 3(a)(2)(B)(iii)(i) and 3(a)(2)(B)(iv)(i) above.

260 *Id*.

261 *See* Section 3(a)(2)(B)(i)(i) above.

to verify and validate the effective design, implementation and operation of the controls specified by NIST Special Publication 800-53, Revision 4 and related standards and guidelines. Such a security assessment is in line with industry practice and important given the data included in the CAT. CAT LLC determined to engage RSM to perform the security assessment, after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fees were reasonable and in line with market rates for such an assessment.[262]

(x) Public Relations Costs

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover public relations costs as a part of Historical CAT Assessments.[263] CAT LLC determined that the public relations costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. CAT LLC determined that the types of public relations services utilized were beneficial to the CAT and market participants more generally. Public relations services were important for various reasons, including monitoring comments made by market participants about CAT and understanding issues related to the CAT discussed on the public record.[264] By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT issues to the benefit of all market participants.[265] Moreover, CAT LLC determined that

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262 *Id.*

263 Section 11.3(b)(iii)(B)(II)(B)(6) of the CAT NMS Plan.

264 *See* Section 3(a)(2)(B)(i)(j) above.

265 *See* Sections 3(a)(2)(B)(i)(j), 3(a)(2)(B)(ii)(j), 3(a)(2)(B)(iii)(j) and 3(a)(2)(B)(iv)(j) above.

the rates charged for such services were in line with market rates.[266] As noted above, the total public relations costs through FAM Period 3 represent a small percentage of Historical CAT Costs 1 – that is, 0.1% of Historical CAT Costs 1.

(B) Total Executed Equivalent Share Volume for the Prior 12 Months

The total executed equivalent share volume of transactions in Eligible Securities for the 12-month period from June 2023 through May 2024 was 3,980,753,840,905.21 executed equivalent shares. CAT LLC determined the total executed equivalent share volume for the prior twelve months by counting executed equivalent shares in the same manner as it will count executed equivalent shares for CAT billing purposes.

(C) Historical Recovery Period 1

CAT LLC has determined to establish a Historical Recovery Period of 24 months for Historical CAT Assessment 1 and that such length is reasonable. CAT LLC determined that the length of Historical Recovery Period 1 appropriately weighs the need for a reasonable Historical Fee Rate 1 that spreads the Historical CAT Costs over an appropriate amount of time and the need to repay the loans notes to the Participants in a timely fashion. CAT LLC determined that 24 months for Historical Recovery Period 1 would establish a fee rate that is lower than other transaction-based fees, including fees assessed pursuant to Section 31.[267] In addition, in establishing a Historical Recovery Period of 24 months, CAT LLC recognized that the total costs for Historical CAT

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266 *Id.*

267 As the SEC noted in the CAT Funding Model Approval Order, recent Section 31 fees ranged from $0.00009 per share to $0.0004 per share. CAT Funding Model Approval Order at 62682.

Assessment 1 was less than the total costs for 2022 and 2023, and therefore it would be appropriate to recover those costs in two years.

(D) Projected Executed Equivalent Share Volume for Historical Recovery Period 1

CAT LLC has determined to calculate the projected total executed equivalent share volume for the 24 months of Historical Recovery Period 1 by doubling the executed equivalent share volume for the prior 12 months. CAT LLC determined that such an approach was reasonable as the CAT's annual executed equivalent share volume has remained relatively constant in recent years. For example, the executed equivalent share volume for 2021 was 3,963,697,612,395, the executed equivalent share volume for 2022 was 4,039,821,841,560.31, and the executed equivalent share volume for 2023 was 3,868,940,345,680.6. Accordingly, the projected total executed equivalent share volume for Historical Recovery Period 1 is projected to be 7,961,507,681,810.42 executed equivalent shares.[268]

(E) Actual Fee Rate for Historical CAT Assessment 1

(i) Decimal Places

As noted in the Plan amendment for the CAT Funding Model, as a practical matter, the fee filing for a Historical CAT Assessment would provide the exact fee per executed equivalent share to be paid for each Historical CAT Assessment, by multiplying the Historical Fee Rate by one-third and describing the relevant number of decimal places

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[268] This projection was calculated by multiplying 3,980,753,840,905.21 executed equivalent shares by two.

for the fee rate.[269] Accordingly, proposed paragraph (a)(1)(B) of the fee schedule would set forth a fee rate of $0.000013 per executed equivalent share. This fee rate is calculated by multiplying Historical Fee Rate 1 by one-third, and rounding the result to 6 decimal places. CAT LLC determined that the use of six decimal places is reasonable as it balances the accuracy of the calculation with the potential systems and other impracticalities of using additional decimal places in the calculation.

(ii) Reasonable Fee Level

The Exchange believes that imposing Historical CAT Assessment 1 with a fee rate of $0.000013 per executed equivalent share is reasonable because it provides for a revenue stream for the Company that is aligned with Historical CAT Costs 1 and such costs would be spread out over an appropriate recovery period, as discussed above. Moreover, the Exchange believes that the level of the fee rate is reasonable, as it is comparable to other transaction-based fees. Indeed, Historical CAT Assessment 1 is significantly lower than fees assessed pursuant to Section 31 (*e.g.*, $0.0009 per share to 0.0004 per share),[270] and, as a result, the magnitude of Historical CAT Assessment 1 is small, and therefore will mitigate any potential adverse economic effects or inefficiencies.[271] Furthermore, the reasonable fee rate for Historical CAT Assessment 1 further supports CAT LLC's decision to seek to recover all Historical CAT Costs prior to 2022, rather than establishing separate Historical CAT Assessments for pre-FAM, FAM 1, FAM 2 and FAM 3 costs.

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269 CAT Funding Model Approval Order at 62658, n.658.

270 CAT Funding Model Approval Order at 62663, 62682.

271 *Id*.

(3) Historical CAT Assessment 1 Provides for an Equitable Allocation of Fees

Historical CAT Assessment 1 provides for an equitable allocation of fees, as it equitably allocates CAT costs between and among the Participants and Industry Members. The SEC approved the CAT Funding Model, finding that each aspect of the CAT Funding Model satisfied the requirements of the Exchange Act, including the formula for calculating Historical CAT Assessments as well as the Industry Members to be charged the Historical CAT Assessments.[272] In approving the CAT Funding Model, the SEC stated that "[t]he Participants have sufficiently demonstrated that the proposed allocation of fees is reasonable."[273] Accordingly, the CAT Funding Model sets forth the requirements for allocating fees related to Historical CAT Costs among Participants and Industry Members, and the fee filings for Historical CAT Assessments must comply with those requirements.

Historical CAT Assessment 1 provides for an equitable allocation of fees as it complies with the requirements regarding the calculation of Historical CAT Assessments as set forth in the CAT NMS Plan. For example, as described above, the calculation of Historical CAT Assessment 1 complies with the formula set forth in Section 11.3(b) of the CAT NMS Plan. In addition, Historical CAT Assessment 1 would be charged to CEBBs and CEBSs in accordance with Section 11.3(b) of the CAT NMS Plan. Furthermore, the Participants would continue to remain responsible for their designated

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272 *See* Section 11.3(b) of the CAT NMS Plan.

273 CAT Funding Model Approval Order at 62629.

share of Past CAT Costs through the cancellation of loans made by the Participants to CAT LLC.

In addition, as discussed above, each of the inputs into the calculation of Historical CAT Assessment 1 – Historical CAT Costs 1 (including Excluded Costs), the count for the executed equivalent share volume for the prior 12 months, the length of the Historical Recovery Period, and the projected executed equivalent share volume for the Historical Recovery Period – are reasonable. Moreover, these inputs lead to a reasonable fee rate for Historical CAT Assessment 1 that is lower than other fee rates for transaction-based fees. A reasonable fee rate allocated in accordance with the requirements of the CAT Funding Model provides for an equitable allocation of fees.

(4) Historical CAT Assessment 1 is Not Unfairly Discriminatory

Historical CAT Assessment 1 is not an unfairly discriminatory fee. The SEC approved the CAT Funding Model, finding that each aspect of the CAT Funding Model satisfied the requirements of the Exchange Act. In reaching this conclusion, the SEC analyzed the potential effect of Historical CAT Assessments calculated pursuant to the CAT Funding Model on affected categories of market participants, including Participants (including exchanges and FINRA), Industry Members (including subcategories of Industry Members, such as alternative trading systems, CAT Executing Brokers and market makers), and investors generally, and considered market effects related to equities and options, among other things. Historical CAT Assessment 1 complies with the requirements regarding the calculation of Historical CAT Assessments as set forth in the CAT NMS Plan. In addition, as discussed above, each of the inputs into the calculation

of Historical CAT Assessment 1 and the resulting fee rate for Historical CAT Assessment 1 is reasonable. Therefore, Historical CAT Assessment 1 does not impose an unfairly discriminatory fee on Industry Members.

Finally, the Exchange believes the proposed fees established pursuant to the CAT Funding Model promote just and equitable principles of trade, and, in general, protect investors and the public interest, and are provided in a transparent manner and specificity in the fee schedule. The Exchange also believes that the proposed fees are reasonable because they would provide ease of calculation, ease of billing and other administrative functions, and predictability of a fee based on fixed rate per executed equivalent share. Such factors are crucial to estimating a reliable revenue stream for CAT LLC and for permitting Exchange members to reasonably predict their payment obligations for budgeting purposes.

4. Self-Regulatory Organization's Statement on Burden on Competition

Section 6(b)(8) of the Act[274] requires that the Exchange's rules not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act. The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange notes that Historical CAT Assessment 1 implements provisions of the CAT NMS Plan that were approved by the Commission and is designed to assist the Exchange in meeting its regulatory obligations pursuant to the Plan.

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274 15 U.S.C. 78f(b)(8).

In addition, all Participants (including exchanges and FINRA) are proposing to introduce Historical CAT Assessment 1 on behalf of CAT LLC to implement the requirements of the CAT NMS Plan. Therefore, this is not a competitive fee filing, and, therefore, it does not raise competition issues between and among the Participants.

Furthermore, in approving the CAT Funding Model, the SEC analyzed the potential competitive impact of the CAT Funding Model, including competitive issues related to market services, trading services and regulatory services, efficiency concerns, and capital formation.[275] The SEC also analyzed the potential effect of CAT fees calculated pursuant to the CAT Funding Model on affected categories of market participants, including Participants (including exchanges and FINRA), Industry Members (including subcategories of Industry Members, such as alternative trading systems, CAT Executing Brokers and market makers), and investors generally, and considered market effects related to equities and options, among other things. Based on this analysis, the SEC approved the CAT Funding Model as compliant with the Exchange Act. Historical CAT Assessment 1 is calculated and implemented in accordance with the CAT Funding Model as approved by the SEC.

As discussed above, each of the inputs into the calculation of Historical CAT Assessment 1 is reasonable and the resulting fee rate for Historical CAT Assessment 1 calculated in accordance with the CAT Funding Model is reasonable. Therefore, Historical CAT Assessment 1 would not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act.

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[275] CAT Funding Model Approval Order at 62676-86.

5. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

Not applicable.

6. Extension of Time Period for Commission Action

Not applicable.

7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)

(a) This proposed rule change is filed pursuant to paragraph (A) of Section 19(b)(3) of the Exchange Act.

(b) This proposed rule change establishes dues, fees or other charges among its members and, as such, may take effect upon filing with the Commission pursuant to Section 19(b)(3)(A)(ii) of the Act[276] and paragraph (f)(2) of Rule 19b-4 thereunder.[277] Accordingly, the proposed rule change would take effect upon filing with the Commission.

(c) Not applicable.

(d) Not applicable.

8. Proposed Rule Change Based on Rules of Another Self-Regulatory Organization or of the Commission

As discussed in detail above, the proposed rule change is consistent with, and would implement the CAT fee requirements applicable to Industry Members in accordance with, the CAT NMS Plan. As such, each Participant in the CAT NMS Plan is proposing the same fee requirements.

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276 15 U.S.C. 78s(b)(3)(A)(ii).

277 17 CFR 240.19b-4(f)(2).

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11. Exhibits

Exhibit 1. Form of Notice of the Proposed Rule Change for Publication in the Federal Register.

Exhibit 5. Text of the Proposed Rule Change

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34- ; File No. SR-MEMX-2024-34]
[Insert date]

Self-Regulatory Organizations; MEMX LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Establish Fees for Industry Members related to Certain Historical Costs of the CAT NMS Plan

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] notice is hereby given that on [insert date], MEMX LLC ("MEMX" or the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange is filing with the Commission a proposed rule change to establish fees for Industry Members[2] related to certain historical costs of the National Market System Plan Governing the Consolidated Audit Trail (the "CAT NMS Plan" or "Plan") incurred prior to January 1, 2022. These fees would be payable to Consolidated Audit Trail, LLC ("CAT LLC" or "the Company")[3] and referred to as Historical CAT Assessment 1, and would be described in a section of the Exchange's fee schedule

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1 15 U.S.C. 78s(b)(1).

2 An "Industry Member" is defined as "a member of a national securities exchange or a member of a national securities association." *See* Rule 4.5(u). *See also* Section 1.1 of the CAT NMS Plan. Unless otherwise specified, capitalized terms used in this rule filing are defined as set forth in the CAT NMS Plan and/or the CAT Compliance Rule. *See* Rule 4.5.

3 The term "CAT LLC" may be used to refer to Consolidated Audit Trail, LLC or CAT NMS, LLC, depending on the context.

entitled "Consolidated Audit Trail Funding Fees." The fee rate for Historical CAT Assessment 1 will be $0.000013 per executed equivalent share. CAT Executing Brokers will receive their first monthly invoice for Historical CAT Assessment 1 in November 2024 calculated based on their transactions as CAT Executing Brokers for the Buyer ("CEBB") and/or CAT Executing Brokers for the Seller ("CEBS") in October 2024. A notice of the proposed rule change for publication in the Federal Register is attached hereto as Exhibit 1, and the text of the proposed rule change is attached as Exhibit 5.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

On July 11, 2012, the Commission adopted Rule 613 of Regulation NMS, which required the self-regulatory organizations ("SROs") to submit a national market system ("NMS") plan to create, implement and maintain a consolidated audit trail that would capture customer and order event information for orders in NMS securities across all markets, from the time of order inception through routing, cancellation, modification or

execution.[4] On November 15, 2016, the Commission approved the CAT NMS Plan.[5] Under the CAT NMS Plan, the Operating Committee has the discretion to establish funding for CAT LLC to operate the CAT, including establishing fees for Industry Members to be assessed by CAT LLC that would be implemented on behalf of CAT LLC by the Participants.[6] The Operating Committee adopted a revised funding model to fund the CAT ("CAT Funding Model"). On September 6, 2023, the Commission approved the CAT Funding Model, after concluding that the model was reasonable and that it satisfied the requirements of Section 11A of the Exchange Act and Rule 608 thereunder.[7]

The CAT Funding Model provides a framework for the recovery of the costs to create, develop and maintain the CAT, including providing a method for allocating costs to fund the CAT among Participants and Industry Members. The CAT Funding Model establishes two categories of fees: (1) CAT fees assessed by CAT LLC and payable by certain Industry Members to recover a portion of historical CAT costs previously paid by the Participants ("Historical CAT Assessment" fees); and (2) CAT fees assessed by CAT LLC and payable by Participants and Industry Members to fund prospective CAT costs ("Prospective CAT Costs" fees).[8]

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4 Securities Exchange Act Rel. No. 67457 (July 18, 2012), 77 Fed. Reg. 45721 (Aug. 1, 2012) ("Rule 613 Adopting Release").

5 Securities Exchange Act Rel. No. 79318 (Nov. 15, 2016), 81 Fed. Reg. 84696 (Nov. 23, 2016) ("CAT NMS Plan Approval Order").

6 Section 11.1(b) of the CAT NMS Plan.

7 Securities Exchange Act Rel. No. 98290 (Sept. 6, 2023), 88 Fed. Reg. 62628 (Sept. 12, 2023) ("CAT Funding Model Approval Order").

8 Under the CAT Funding Model, the Operating Committee may establish one or more Historical CAT Assessments. Section 11.3(b) of the CAT NMS Plan. This filing only establishes Historical CAT Assessment 1 related to certain Historical CAT Costs as described herein; it does not address any other potential Historical CAT Assessment related to other Historical CAT Costs. In addition, under the CAT Funding Model, the Operating Committee also may establish CAT Fees related to CAT costs going forward. Section 11.3(a) of the CAT NMS Plan. This filing does not address

Under the CAT Funding Model, "[t]he Operating Committee will establish one or more fees (each a 'Historical CAT Assessment') to be payable by Industry Members with regard to CAT costs previously paid by the Participants ('Past CAT Costs')."[9] In establishing a Historical CAT Assessment, the Operating Committee will determine a "Historical Recovery Period" and calculate a "Historical Fee Rate" for that Historical Recovery Period. Then, for each month in which a Historical CAT Assessment is in effect, each CEBB and CEBS would be required to pay the fee – the Historical CAT Assessment – for each transaction in Eligible Securities executed by the CEBB or CEBS from the prior month as set forth in CAT Data, where the Historical CAT Assessment for each transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by one-third and by the Historical Fee Rate.[10]

Each Historical CAT Assessment to be paid by CEBBs and CEBSs is designed to contribute toward the recovery of two-thirds of the Historical CAT Costs. Because the Participants previously have paid Past CAT Costs via loans to the Company, the Participants would not be required to pay any Historical CAT Assessment. In lieu of a Historical CAT Assessment, the Participants' one-third share of Historical CAT Costs will be paid by the cancellation of loans made by the Participants to the Company on a pro rata basis based on the outstanding loan amounts due under the loans, instead of

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any potential CAT Fees related to CAT costs going forward. Any such other fee for any other Historical CAT Assessment or CAT Fee for Prospective CAT Costs will be subject to a separate fee filing.

9 Section 11.3(b) of the CAT NMS Plan.

10 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, the proposed recovery of the Past CAT Costs via the Historical CAT Assessment is reasonable." CAT Funding Model Approval Order at 62662.

through the payment of a CAT fee.[11] In addition, the Participants also will be 100% responsible for certain Excluded Costs (as discussed below).

CAT LLC proposes to charge CEBBs and CEBSs (as described in more detail below) Historical CAT Assessment 1 to recover certain historical CAT costs incurred prior to January 1, 2022, in accordance with the CAT Funding Model. To implement this fee on behalf of CAT LLC, the CAT NMS Plan requires the Participants to "file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves, and such fees shall be labeled as 'Consolidated Audit Trail Funding Fees.'"[12] The Plan further states that "Participants will be required to file with the SEC pursuant to Section 19(b) of the Exchange Act a filing for each Historical CAT Assessment."[13] Accordingly, the purpose of this filing is to implement a Historical CAT Assessment on behalf of CAT LLC for Industry Members, referred to as Historical CAT Assessment 1, in accordance with the CAT NMS Plan.[14]

The Exchange previously filed a fee filing to implement Historical CAT Assessment 1. On February 13, 2024, the SEC published this prior filing for Historical CAT Assessment 1, temporarily suspended the fee filing, and instituted proceedings to determine whether to approve or disapprove the fee filing.[15] The Exchange is withdrawing its original fee filing for Historical CAT Assessment 1. This Historical

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11 Section 11.3(b)(ii) of the CAT NMS Plan.

12 Section 11.1(b) of the CAT NMS Plan.

13 Section 11.3(b)(iii)(B)(I) of the CAT NMS Plan.

14 Note that there may be one or more Historical CAT Assessments depending on the timing of the completion of the Financial Accountability Milestones, among other things. Section 11.3(b) of the CAT NMS Plan.

15 *See* Exchange Act Release No. 99356 (January 17, 2024), 89 FR 10697 (February 13, 2024) (SR-MEMX-2024-01).

CAT Assessment 1 replaces the prior Historical CAT Assessment 1 that was previously filed with the Commission.

(1) CAT Executing Brokers

Historical CAT Assessment 1 will be charged to each CEBB and CEBS for each applicable transaction in Eligible Securities.[16] The CAT NMS Plan defines a "CAT Executing Broker" to mean:

> (a) with respect to a transaction in an Eligible Security that is executed on an exchange, the Industry Member identified as the Industry Member responsible for the order on the buy-side of the transaction and the Industry Member responsible for the sell-side of the transaction in the equity order trade event and option trade event in the CAT Data submitted to the CAT by the relevant exchange pursuant to the Participant Technical Specifications; and (b) with respect to a transaction in an Eligible Security that is executed otherwise than on an exchange and required to be reported to an equity trade reporting facility of a registered national securities association, the Industry Member identified as the executing broker and the Industry Member identified as the contra-side executing broker in the TRF/ORF/ADF transaction data event in the CAT Data submitted to the CAT by FINRA pursuant to the Participant Technical Specifications; provided, however, in those circumstances where there is a non-Industry Member identified as the contra-side executing broker in the TRF/ORF/ADF transaction data event or no contra-side executing broker is identified in the TRF/ORF/ADF transaction data event, then the Industry Member identified as the executing broker in the TRF/ORF/ADF transaction data event would be treated as CAT Executing Broker for the Buyer and for the Seller.[17]

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16 In its approval of the CAT Funding Model, the Commission determined that charging CAT fees to CAT Executing Brokers was reasonable. In reaching this conclusion the Commission noted that the use of CAT Executing Brokers is appropriate because the CAT Funding Model is based upon the calculation of *executed* equivalent shares, and, therefore, charging CAT Executing Brokers would reflect their executing role in each transaction. Furthermore, the Commission noted that, because CAT Executing Brokers are already identified in transaction reports from the exchanges and FINRA's equity trade reporting facilities recorded in CAT Data, charging CAT Executing Brokers could streamline the billing process. CAT Funding Model Approval Order at 62629.

17 Section 1.1 of the CAT NMS Plan. Note that CEBBs and CEBSs may, but are not required to, pass-through their CAT fees to their clients, who may, in turn, pass their fees to their clients until

The following fields of the Participant Technical Specifications indicate the CAT Executing Brokers for the transactions executed on an exchange.

Equity Order Trade (EOT)[18]

#	Field Name	Data Type	Description	Include Key
12.*n*.8/ 13.*n*.8	member	Member Alias	The identifier for the member firm that is responsible for the order on this side of the trade. Not required if there is no order for the side as indicated by the NOBUYID/NOSELLID instruction. This must be provided if orderID is provided.	C

Option Trade (OT)[19]

#	Field Name	Data Type	Description	Include Key
16.*n*.13 / 17.*n*.13	member	Member Alias	The identifier for the member firm that is responsible for the order	R

In addition, the following fields of the Participant Technical Specifications would indicate the CAT Executing Brokers for the transactions executed otherwise than on an exchange.

TRF/ORF/ADF Transaction Data Event (TRF)[20]

#	Field Name	Data Type	Description	Include

they are imposed ultimately on the account that executed the transaction. *See* CAT Funding Model Approval Order at 62649.

18 *See* Table 23, Section 4.7 (Order Trade Event) of the CAT Reporting Technical Specifications for Plan Participants, Version 4.1.0-r21 (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 ("CAT Reporting Technical Specifications for Plan Participants").

19 *See* Table 51, Section 5.2.5.1 (Simple Option Trade Event) of the CAT Reporting Technical Specifications for Plan Participants.

20 *See* Table 61, Section 6.1 (TRF/ORF/ADF Transaction Data Event) of the CAT Reporting Technical Specifications for Plan Participants.

				Key
26	reportingExecutingMpid	Member Alias	MPID of the executing party	R
28	contraExecutingMpid	Member Alias	MPID of the contra-side executing party.	C

(2) Calculation of Historical Fee Rate 1

The Operating Committee determined the Historical Fee Rate to be used in calculating Historical CAT Assessment 1 ("Historical Fee Rate 1") by dividing the Historical CAT Costs for Historical CAT Assessment 1 ("Historical CAT Costs 1") by the projected total executed share volume of all transactions in Eligible Securities for the Historical Recovery Period for Historical CAT Assessment 1 ("Historical Recovery Period 1"), as discussed in detail below. Based on this calculation, the Operating Committee has determined that Historical Fee Rate 1 would be $0.00003994969693072937 per executed equivalent share. This rate is then divided by three and rounded to determine the fee rate of $0.000013 per executed equivalent share that will be assessed to CEBBs and CEBSs, as also discussed in detail below.

(A) Executed Equivalent Shares for Transactions in Eligible Securities

Under the CAT NMS Plan, for purposes of calculating each Historical CAT Assessment, executed equivalent shares in a transaction in Eligible Securities will be reasonably counted as follows: (1) each executed share for a transaction in NMS Stocks will be counted as one executed equivalent share; (2) each executed contract for a transaction in Listed Options will be counted based on the multiplier applicable to the specific Listed Options (*i.e.*, 100 executed equivalent shares or such other applicable multiplier); and (3) each executed share for a transaction in OTC Equity Securities shall

be counted as 0.01 executed equivalent share.[21]

(B) Historical CAT Costs 1

The CAT NMS Plan states that "[t]he Operating Committee will reasonably determine the Historical CAT Costs sought to be recovered by each Historical CAT Assessment, where the Historical CAT Costs will be Past CAT Costs minus Past CAT Costs reasonably excluded from Historical CAT Costs by the Operating Committee. Each Historical CAT Assessment will seek to recover from CAT Executing Brokers two-thirds of Historical CAT Costs incurred during the period covered by the Historical CAT Assessment."[22] As described in detail below, Historical CAT Costs 1 would be $318,059,819. This figure includes Past CAT Costs of $401,312,909 minus certain Excluded Costs of $83,253,090. Participants collectively will remain responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67), plus the Excluded Costs of $83,253,090. CEBBs collectively will be responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67), and CEBSs collectively will be responsible for one-third of Historical CAT Costs 1 (which is $106,019,939.67).

The following describes in detail Historical CAT Costs 1 with regard to four separate historical time periods as well as Past CAT Costs excluded from Historical CAT Costs 1 ("Excluded Costs"). The following cost details are provided in accordance with the requirement in the CAT NMS Plan to provide in the fee filing "a brief description of the amount and type of Historical CAT Costs, including (1) the technology line items of

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21 Section 11.3(a)(i)(B) and 11.3(b)(i)(B) of the CAT NMS Plan. In approving the CAT Funding Model, the Commission concluded that "the use of executed equivalent share volume as the basis of the proposed cost allocation methodology is reasonable and consistent with the approach taken by the funding principles of the CAT NMS Plan." CAT Funding Model Approval Order at 62640.

22 Section 11.3(b)(i)(C) of the CAT NMS Plan.

cloud hosting services, operating fees, CAIS operating fees, change request fees, and capitalized developed technology costs, (2) legal, (3) consulting, (4) insurance, (5) professional and administration and (6) public relations costs."[23] Each of the costs described below are reasonable, appropriate and necessary for the creation, implementation and maintenance of CAT.

(i) Historical CAT Costs Incurred Prior to June 22, 2020 (Pre-FAM Costs)

Historical CAT Costs 1 would include costs incurred by CAT prior to June 22, 2020 ("Pre-FAM Period") and already funded by the Participants, excluding Excluded Costs (described further below). Historical CAT Costs 1 would include costs for the Pre-FAM Period of $124,290,730. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($41,430,243.33), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($41,430,243.33) and CEBSs paying one-third ($41,430,243.33). These costs do not include Excluded Costs, as discussed further below. The following table breaks down Historical CAT Costs 1 for the Pre-FAM Period into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	Historical CAT Costs 1 for Pre-FAM Period (Prior to June 22, 2020)[24]

[23] Section 11.3(b)(iii)(B)(II)(B) of the CAT NMS Plan.

[24] The costs described in this table of costs for the Pre-FAM Period were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website. In addition, in accordance with Section 6.6(a)(i) of the CAT NMS Plan, in 2018 CAT LLC provided the SEC with "an independent audit of fees, costs, and expenses incurred by the Participants on behalf of the Company prior to the Effective Date of the Plan that will be publicly available." The audit is available on the CAT website.

Capitalized Developed Technology Costs*	$51,847,150
Technology Costs:	$33,568,579
Cloud Hosting Services	$10,268,840
Operating Fees	$21,085,485
CAIS Operating Fees	$2,072,908
Change Request Fees	$141,346
Legal	$19,674,463
Consulting	$17,013,414
Insurance	$880,419
Professional and administration	$1,082,036
Public relations	$224,669
Total Operating Expenses	**$124,290,730**

* The non-cash amortization of these capitalized developed technology costs of $2,115,545 incurred during the period prior to June 22, 2020 have been appropriately excluded from the above table.[25]

The Pre-FAM Period includes a broad range of CAT-related activity from 2012 through June 22, 2020, including the evaluation of the requirements of SEC Rule 613, the development of the CAT NMS Plan, the evaluation and selection of the initial and successor Plan Processors, the commencement of the creation and implementation of the CAT to comply with Rule 613 and the CAT NMS Plan, including technical specifications for transaction reporting and regulatory access, and related technology and the commencement of reporting to the CAT. The following describes the costs for each of the categories for the Pre-FAM Period.

(a) Technology Costs – Cloud Hosting Services.

The $10,268,840 in technology costs for cloud hosting services represent costs

[25] With respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

incurred for services provided by the cloud services provider for the CAT, Amazon Web Services, Inc. ("AWS"), during the Pre-FAM Period.

As part of its proposal for acting as the successor Plan Processor for the CAT, FCAT selected AWS as a subcontractor to provide cloud hosting services. In 2019, after reviewing the capabilities of other cloud services providers, FCAT determined that AWS was the only cloud services provider at that time sufficiently mature and capable of providing the full suite of necessary cloud services for the CAT, including, for example, the security, resiliency and complexity necessary for the CAT computing requirements. The use of cloud hosting services is standard for this type of high-volume data activity and reasonable and necessary for implementation of the CAT, particularly given the substantial data volumes associated with the CAT.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay FCAT the fees incurred by the Plan Processor for cloud hosting services provided by AWS as FCAT's subcontrator on a monthly basis for the cloud hosting services, and FCAT, in turn, pays such fees to AWS. The fees for cloud hosting services were negotiated by FCAT on an arm's length basis with the goals of managing cost and receiving services required to comply with the CAT NMS Plan and Rule 613, taking into consideration a variety of factors, including the expected volume of data, the breadth of services provided and market rates for similar services. The fees for cloud hosting services during the Pre-FAM Period were paid to FCAT by CAT NMS, LLC[26] and subsequently Consolidated Audit Trail, LLC (as previously noted, both entities are

[26] CAT NMS, LLC was formed by FINRA and the U.S. national securities exchanges to implement the requirements of SEC Rule 613 under the Exchange Act. SEC Rule 613 required the SROs to jointly submit to the SEC the CAT NMS Plan to create, implement and maintain the CAT. The SEC approved the CAT NMS Plan on November 15, 2016. CAT NMS Plan Approval Order.

referred to generally as "CAT LLC"),[27] and FCAT, in turn, paid AWS. CAT LLC was funded via loan contributions by the Participants.[28]

AWS was engaged by FCAT to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. Services provided by AWS include storage services, databases, compute services and other services (such as networking, management tools and DevOps tools). AWS also was engaged to provide various environments for CAT, such as development, performance testing, test and production environments.

The cost for AWS services for the CAT is a function of the volume of CAT Data. The greater the amount of CAT Data, the greater the cost of AWS services to the CAT. During the Pre-FAM Period from the engagement of AWS in February 2019 through June 2020, AWS provided cloud hosting services for volumes of CAT Data far in excess of the volume predictions set forth in the CAT NMS Plan. The CAT NMS Plan states, when all CAT Reporters are submitting their data to the CAT, it "must be sized to receive[,] process and load more than 58 billion records per day,"[29] and that "[i]t is expected that the Central Repository will grow to more than 29 petabytes of raw, uncompressed data."[30] However, the volume of CAT Data for the Pre-FAM Period was

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27 On August 29, 2019, the Participants formed a new Delaware limited liability company named Consolidated Audit Trail, LLC for the purpose of conducting activities related to the CAT from and after the effectiveness of the proposed amendment of the CAT NMS Plan to replace CAT NMS, LLC. *See* Securities Exchange Act Rel. No. 87149 (Sept. 27, 2019), 84 Fed. Reg. 52905 (Oct. 3, 2019).

28 For each of the costs paid by CAT NMS, LLC and Consolidated Audit Trail, LLC as discussed throughout this filing, CAT NMS, LLC and Consolidated Audit Trail, LLC paid these costs via loan contributions by the Participants to CAT NMS, LLC and Consolidated Audit Trail, LLC, respectively.

29 Appendix D-4 of the CAT NMS Plan at n.262.

30 Appendix D-5 of the CAT NMS Plan.

far in excess of these predicted levels. By the end of this period, data submitted to the CAT included options and equities Participant Data,[31] Phase 2a and Phase 2b Industry Member Data[32] (including certain linkages), as well as SIP Data,[33] reference data and other types of Other Data.[34] The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during the Pre-FAM Period.[35]

	Date Range: 3/29/19 to 4/12/20*	Date Range: 4/13/20 to 6/21/20**
Average Daily Volume in Billions		
Participant - Equities	5	5
Participant - Options	80	981
Industry Member - Equities	-	3
Industry Member - Options	-	0.04
SIP – Options & Equities	64	70
Average Total Daily Volume	149	166
Cumulative Total Events for the Period	3,890	4,990
Total Compute Hours for the Period	N/A[36]	5,663,247
Storage Footprint at End of	30.57	47.96

31 *See* Section 6.3(d) of the CAT NMS Plan.

32 *See* Securities Exchange Rel. No. 88702 (Apr. 20, 2020), 85 Fed. Reg. 23075 (Apr. 24, 2020) ("Phased Reporting Exemptive Relief Order") for a description of Phase 2a and Phase 2b Industry Member Data.

33 *See* Section 6.5(a)(ii) of the CAT NMS Plan.

34 *See* Appendix C-108 of the CAT NMS Plan.

35 Note that the volume data described in this table does not include CAIS data.

36 Note that, although there were compute hours during this period, data related to such compute hours are no longer available in current data.

Period (Petabytes)		

* The Participant Equities in RSA format.
** Start of Industry Member reporting on 4/13/2020

(b) Technology Costs – Operating Fees

The $21,085,485 in technology costs related to operating fees represent costs incurred with regard to activities of FCAT as the Plan Processor. Operating fees are those fees paid by CAT LLC to FCAT as the Plan Processor to operate and maintain the CAT and to perform business operations related to the system, including compliance, security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management as required by the CAT NMS Plan.

FCAT was selected to assume the role of the successor Plan Processor. Prior to this selection, the Participants engaged in discussions with two prior Bidders[37] for the successor Plan Processor role. The Operating Committee formed a Selection Subcommittee in accordance with Section 4.12 of the CAT NMS Plan to evaluate and review Bids and to make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor. In an April 9, 2019 letter to the Commission, the Participants described the reasons for its selection of the successor Plan Processor:

> The Selection Subcommittee considered factors including, but not limited to, the following, in recommending FINRA to the Operating Committee as the successor Plan Processor:
>
> > a. FINRA's specialized technical expertise and capabilities in the area of broker-dealer technology;

[37] The term "Bidder" is defined in Section 1.1 of the CAT NMS Plan.

> b. The need to appoint a successor Plan Processor with specialized expertise to develop, implement, and maintain the CAT System in accordance with the CAT NMS Plan and SEC Rule 613;
> c. FINRA's detailed proposal in response to CATLLC's recent inquiries; and
> d. FINRA's data query and analytics systems demonstration to the Participants.
>
> Based on these and other factors, the Selection Subcommittee determined that FINRA was the most appropriate Bidder to become the successor Plan Processor.[38]

On February 26, 2019, the Operating Committee (with FINRA recusing itself) voted to select FINRA as the successor Plan Processor pursuant to Section 6.1(t) of the CAT NMS Plan.[39] On March 29, 2019, CAT LLC and FCAT (a wholly owned subsidiary of FINRA) entered into a Plan Processor Agreement pursuant to which FCAT would perform the functions and duties of the Plan Processor contemplated by the CAT NMS Plan, including the management and operation of the CAT.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay FCAT a negotiated monthly fixed price for the operation of the CAT. This fixed price contract was negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan and Rule 613, taking into consideration a variety of factors, including the breadth of services provided and market rates for similar types of activity. The operating fees during the Pre-FAM Period were paid to FCAT by CAT LLC.

From March 29, 2019 (the commencement of the Plan Processor Agreement with

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38 Letter from Michael J. Simon, Chair, CAT NMS, LLC Operating Committee, to Brent J. Fields, Secretary, SEC (Apr. 9, 2019), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection-040919.pdf.

39 *Id.*

FCAT) through June 22, 2020 (the end of the Pre-FAM Period), the Plan Processor's activities with respect to the CAT included the following:

- Commenced user acceptance testing with market data provided by Exegy Incorporated ("Exegy"), a market data provider;[40]
- Published Technical Specifications and related reporting scenarios documents for Phase 2a, 2b and 2c reporting for Industry Members, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Facilitated testing for Phase 2a and 2b reporting for Industry Members;
- Began developing Technical Specifications and related reporting scenarios documents for Phase 2d reporting for Industry Members, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Published Central Repository Access Technical Specifications, and provided regulator access to test data from Industry Members;
- Facilitated Participant exchanges that support options market makers sending Quote Sent Time to the CAT;
- Facilitated the introduction of OPRA and Options NBBO Other Data to CAT;
- Addressed compliance items, including drafting CAT policies and procedures, and addressing requirements under Regulation SCI;
- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;

[40] The use of Exegy to provide market data, including the costs and market data provided, is discussed below in Section 3(a)(2)(B)(i)(i).

- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with Participants, the SEC and its staff;
- Operated the FINRA CAT Helpdesk, which is the primary source for answers to questions about CAT, including questions regarding: clock synchronization, firm reporting responsibilities, interpretive questions, technical specifications for reporting to CAT and more;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content;[41] and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

The $2,072,908 in technology costs related to CAIS operating fees represent the fees paid for FCAT's subcontractor charged with the development and operation of CAT's Customer and Account Information System ("CAIS"). The CAT is required under the CAT NMS Plan to capture and store Customer Identifying Information and Customer Account Information in a database separate from the transactional database and to create a CAT-Customer-ID for each Customer.

During the Pre-FAM Period, the CAIS-related services were provided by the Plan Processor through the Plan Processor's subcontractor, Kingland Systems Incorporation ("Kingland"). Kingland had experience operating in the securities regulatory technology space, and as a part of its proposal for acting as the Plan Processor for the CAT, FCAT selected Kingland as a subcontractor to provide certain CAIS-related services.

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41 The CAT website is https://www.catnmsplan.com.

Under the Plan Processor Agreement with FCAT, CAT LLC is required to pay to the Plan Processor the fees incurred by FCAT for CAIS-related services provided by FCAT through Kingland on a monthly basis. FCAT negotiated the fees for Kingland's CAIS-related services on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan, taking into consideration a variety of factors, including the services to be provided and market rates for similar types of activity. The fees for CAIS-related services during the Pre-FAM Period were paid by CAT LLC to FCAT. FCAT, in turn, paid Kingland.

During the Pre-FAM Period, Kingland began development of the CAIS Technical Specifications and the building of CAIS. In addition, Kingland also worked on the build related to the CCID Alternative, an alternative approach to customer information that was not included in the CAT NMS Plan as originally adopted.[42] Furthermore, Kingland also worked on the acceleration of the reporting of large trader identifiers ("LTID") earlier than originally contemplated during this period, in accordance with exemptive relief granted by the SEC.[43]

(d) Technology Costs – Change Request Fees

The technology costs related to change request fees include costs related to certain modifications, upgrades or other changes to the CAT. Change requests are standard practice and necessary to reflect operational changes, including changes related to new market developments, such as new market participants. In general, if CAT LLC determines that a modification, upgrade or other change to the functionality or service is

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42 For a discussion of the CCID Alternative, *see* Securities Exchange Act Rel. No. 88393 (Mar. 17, 2020), 85 Fed. Reg. 16152 (Mar. 20, 2020).

43 Phased Reporting Exemptive Relief Order at 23079-80.

necessary and appropriate, CAT LLC will submit a request for such a change to the Plan Processor. The Plan Processor will then respond to the request with a proposal for implementing the change, including the cost (if any) of such a change. CAT LLC then determines whether to approve the proposed change. The change request costs were paid by CAT LLC to FCAT. During the Pre-FAM Period, CAT LLC incurred costs of $141,346 related to change requests implemented by FCAT. Such change requests related to a development fee regarding the OPRA and SIP data feeds, and the reprocessing of certain exchange data.[44]

(e) Technology Costs – Capitalized Developed Technology Costs

This category of costs includes capitalizable application development costs incurred in the development of the CAT. The capitalized developed technology costs for the Pre-FAM Period of $51,847,150 relate to technology provided by the Initial Plan Processor and the successor Plan Processor.

Initial Plan Processor: Thesys CAT, LLC. The capitalized developed technology costs related to the Initial Plan Processor include costs incurred with regard to testing for Participant reporting, Participant reporting to the CAT, a security assessment of the CAT, and the development of the billing function for the CAT.

On January 17, 2017, the Selection Committee of the CAT NMS Plan selected the Initial Plan Processor, Thesys Technologies, LLC, for the CAT NMS Plan pursuant to

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[44] Note that CAT LLC also has incurred costs related to specific Industry Members (*e.g.*, reprocessing costs related to Industry Member reporting errors).

Article V of the CAT NMS Plan.[45] The Participants utilized a request for proposal ("RFP") to seek proposals to build and operate the CAT, receiving a number of proposals in response to the RFP. The Participants carefully reviewed and considered each of the proposals, including holding in-person meetings with each of the Bidders. After several rounds of review, the Participants selected the Initial Plan Processor in accordance with the CAT NMS Plan, taking into consideration that the Initial Plan Processor had experience operating in the securities regulatory technology space, among other considerations. On April 6, 2017, CAT LLC entered into an agreement with Thesys CAT LLC ("Thesys CAT"), a Thesys affiliate, to perform the functions and duties of the Plan Processor contemplated by the CAT NMS Plan, including the management and operation of the CAT. Under the agreement, CAT LLC would pay Thesys CAT a negotiated, fixed price fee for its role as the Initial Plan Processor. Effective January 30, 2019, the Plan Processor Agreement with Thesys CAT was terminated, and FCAT was subsequently selected as the successor Plan Processor.

From January 17, 2017 through January 30, 2019, the time in which the Thesys CAT was engaged for the CAT, but excluding the period from November 15, 2017 through January 30, 2019, the Initial Plan Processor engaged in various activities with respect to the CAT, including preparing iterative drafts of Participant Technical Specifications, Industry Member Technical Specifications and the Central Repository Access Technical Specifications. In addition, Thesys CAT also developed CAT technology, addressed compliance items, including drafting CAT policies and procedures, addressing Regulation SCI requirements, establishing a CAT Compliance

[45] Letter from the Participants to Brent J. Fields, Secretary, SEC (Jan. 18, 2017), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf.

Officer and a Chief Information Security Officer, addressed security-related matters for the CAT, and worked towards the initiation of Participant reporting per the Participant Technical Specifications.

Successor Plan Processor: FCAT. The capitalized developed technology costs related to FCAT include: (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, including the completion of go-live functionality related to options ingestion and validation, equities regulatory services agreement query tool updates and unlinked options data query, options linkages release, Industry Member Phase 2a file submission and data integrity (including error corrections), and Industry Member testing, including reporting relationships, ATS order type management, basic reporting statistics, SFTP data integrity feedback and error correction; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including a one-time development fee for a secure analytics workspace, a one-time development fee of an Industry Member connectivity solution, and a one-time development fee for the acceleration of multi-factor authentication; (3) CAIS implementation fees; and (4) license fees.

(f) Legal Costs

The legal costs of $19,674,463 represent the fees paid for legal services provided by two law firms, Wilmer Cutler Pickering Hale and Dorr LLP ("WilmerHale") and Pillsbury Winthrop Shaw Pittman LLP ("Pillsbury"), during the Pre-FAM Period. The legal costs exclude those costs incurred from November 15, 2017 through November 15, 2018.

Law Firm: WilmerHale. Following the adoption of Rule 613, the Participants determined it was necessary to engage external legal counsel to advise the Participants with respect to corporate and regulatory legal matters related to the CAT, including drafting and developing the CAT NMS Plan. The Participants considered a variety of factors in their analysis of prospective law firms, including (1) the firm's qualifications, resources and expertise; (2) the firm's relevant experience and understanding of the regulatory matters raised by the CAT and in advising on matters of similar scope; (3) the composition of the legal team; and (4) professional fees. Following a series of interviews, the Participants acting as a consortium determined that WilmerHale was well qualified given the balance of these considerations and engaged WilmerHale in February 2013.

WilmerHale's billing rates are negotiated on an annual basis and are determined with reference to the rates charged by other leading law firms for similar work. The Participants assess WilmerHale's performance and review prospective budgets and staffing plans submitted by WilmerHale on an annual basis. WilmerHale's compensation arrangements are reasonable and appropriate, and in line with the rates charged by other leading law firms for similar work.

The legal costs for WilmerHale during the Pre-FAM Period included costs incurred from 2013 until June 22, 2020 to address corporate and regulatory legal matters related to the CAT. The legal fees for this law firm during the period from February 2013 until the formation of the CAT NMS, LLC on November 15, 2016 were paid directly by the exchanges and FINRA to WilmerHale. After the formation of CAT NMS LLC, the legal fees were paid by CAT LLC to WilmerHale.

After WilmerHale was engaged in 2013 through the end of the Pre-FAM Period on June 22, 2020 (excluding the legal costs from November 15, 2017 through November 15, 2018), WilmerHale provided legal assistance to the CAT on a variety of matters, including with regard to the following:

- Analyzed various legal matters associated with the Selection Plan, and drafted an amendment to the Selection Plan;
- Assisted with the RFP and bidding process for the CAT Plan Processor;
- Analyzed legal matters related to the Development Advisory Group ("DAG");
- Drafted the CAT NMS Plan, analyzed various items related to the CAT NMS Plan, and responded to comment letters on CAT NMS Plan;
- Provided legal support for the formation of the legal entity, the governance of the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding and Other Products) and the DAG, governance support during the transition to the new governance structure under the CAT NMS Plan, and governance support after the adoption of the CAT NMS Plan, which involved support for the Operating Committee, Advisory Committee, Compliance Subcommittee and CAT working groups;
- Assisted with the development of the CAT funding model and drafted related amendments of the CAT NMS Plan and related filings;
- Negotiated and drafted the plan processor agreements with the Initial Plan Processor and the successor Plan Processor;
- Provided assistance with compliance with Regulation SCI;
- Assisted with clock synchronization study;
- Provided assistance with respect to the establishment of CAT security;
- Drafted exemptive requests from CAT NMS Plan requirements, including with regard to options market maker quotes, Customer IDs, CAT Reporter IDs, linking allocations to executions, CAT reporting timeline, FDIDs, customer and account information, timestamp granularity, small industry members, data facility reporting and linkage, allocation reports, SRO-assigned market participant

identifiers and cancelled trade indicators, thereby seeking to implement changes that would be cost effective and benefit Industry Members and Participants;

- Assisted with the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;
- Provided advice regarding CAT policies and procedures;
- Analyzed the SEC's amendment of the CAT NMS Plan regarding financial accountability;
- Provided interpretations of and related to the CAT NMS Plan;
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues; and
- Assisted with third-party vendor agreements.

Law Firm: Pillsbury. The legal costs for CAT during the Pre-FAM Period include costs related to the legal services performed by Pillsbury. The Participants interviewed this law firm as well as other potential law firms to provide legal assistance regarding certain liability matters. After considering a variety of factors in its analysis, including the relevant expertise and fees of the firm, CAT LLC determined to hire Pillsbury in April 2019. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees were paid by CAT LLC to Pillsbury. The legal costs for Pillsbury during the Pre-FAM Period included costs incurred from April 2019 until June 22, 2020 to address legal matters regarding the agreements between CAT Reporters and CAT LLC concerning certain terms associated with CAT Reporting (the "Reporter Agreement"). During that period, Pillsbury advised CAT LLC regarding applicable legal matters, participated in negotiations between the Participants and Industry Members, participated in meetings with senior SEC staff, the Chairman, and Commissioners, represented CAT LLC and the Participants in an SEC administrative

proceeding, and drafted a proposed amendment to the CAT NMS Plan regarding liability matters. Liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants. Moreover, litigation involving CAT LLC is an expense of operating the CAT, and, therefore, is appropriately an obligation of both Participants and Industry Members under the CAT Funding Model.

(g) Consulting Costs

The consulting costs of $17,013,414 represent the fees paid to the consulting firm Deloitte & Touche LLP ("Deloitte") as project manager during the Pre-FAM Period, from October 2012 until June 22, 2020. These consulting costs include costs for advisory services related to the operation of the CAT, and meeting facilitation and communications coordination, vendor support and financial analyses.

To help facilitate project management given the unprecedented complexity and scope of the CAT project, the Participants determined it was necessary to engage a consulting firm to assist with the CAT project in 2012, following the adoption of Rule 613. A variety of factors were considered in the analysis of prospective consulting firms, including (1) the firm's qualifications, resources, and expertise; (2) the firm's relevant experience and understanding of the regulatory issues raised by the CAT and in coordinating matters of similar scope; (3) the composition of the consulting team; and (4) professional fees. Following a series of interviews, the exchanges and FINRA as a consortium determined that Deloitte was well qualified given the balance of these considerations and engaged Deloitte on October 1, 2012.

Deloitte's fee rates are negotiated on an annual basis and are in line with market rates for this type of specialized consulting work. CAT LLC assesses Deloitte's performance and reviews prospective budgets and staffing plans submitted by Deloitte on an annual basis. Deloitte's compensation arrangements are reasonable and appropriate, and in line with the rates charged by other leading consulting firms for similar work.

The consulting costs for CAT during the period from 2012 until the formation of the CAT NMS, LLC were paid directly by the Participants to Deloitte. After the formation of CAT NMS, LLC, the consulting fees were paid by CAT LLC to Deloitte. CAT LLC reviewed the consulting fees each month and approved the invoices.

After Deloitte was hired in 2012 through the end of the Pre-FAM Period on June 22, 2020 (excluding the consulting costs from November 15, 2017 through November 15, 2018), Deloitte provided a variety of consulting services, including the following:

- Established and implemented program operations for the CAT project, including the program managment office and workstream design;
- Assisted with the Plan Processor selection process, including but not limited to, the development of the RFP and the bidder evaluation process, and facilitation and consolidation of the Participant's independent reviews;
- Assisted with the development and drafting of the CAT NMS Plan, including conducting cost-benefit studies, analyzing OATS and CAT requirements, and drafting appendices to the Plan;
- Assisted with cost and funding-related activities for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided governance support to the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding and Other Products) and the DAG, governance support during the transition to the new governance structure under the CAT NMS Plan and governance support after

the adoption of the CAT NMS Plan, which involved support for the Operating Committee, Advisory Committee, Compliance Subcommittee and CAT working groups;

- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;

- Assisted with industry outreach and communications regarding the CAT, including assistance with industry outreach events, the development of the CAT website, frequently asked questions, and coordinating with the CAT LLC's public relations firm;

- Provided support for updating the SEC on the progress of the development of the CAT;

- Provided active planning and coordination with and support for the Initial Plan Processor with regard to the development of the CAT, and reported to the Participants on the progress;

- Coordinated efforts regarding the selection of the successor Plan Processor;

- Assisted with the transition from the Initial Plan Processor to the successor Plan Processor, including support for the Operating Committee and successor Plan Processor for the new role; and

- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $880,419 represent the cost incurred for insurance for CAT during the Pre-FAM Period. Commencing in 2020, CAT LLC performed an evaluation of various potential alternatives for CAT insurance policies, which included engaging in discussions with different insurance companies and conducting cost comparisons of various alternative approaches to insurance. Based on an analysis of a variety of factors, including coverage and premiums, CAT LLC determined to purchase cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions

liability insurance from USI Insurance Services LLC ("USI"). Such policies are standard for corporate entities, and cyber security liability insurance is important for the CAT System. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

In adopting the CAT NMS Plan, the Commission amended the Plan to add a requirement that CAT LLC's financial statements be prepared in compliance with GAAP, audited by an independent public accounting firm, and made publicly available.[46] The professional and administration costs include costs related to accounting and accounting advisory services to support the operating and financial functions of CAT, financial statement audit services by an independent accounting firm, preparation of tax returns, and various cash management and treasury functions. In addition, professional and administration costs for the Pre-FAM Period include costs related to the receipt of market data and a security assessment. The costs for these professional and administration services were $1,082,036 for the Pre-FAM Period.

Financial Advisory Firm: Anchin Accountants & Advisors ("Anchin"). CAT LLC determined to hire a financial advisory firm, Anchin, to assist with financial matters for the CAT in April 2018. CAT LLC interviewed Anchin as well as other potential financial advisory firms to assist with the CAT project, considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The hourly fee rates for this firm were in line with market rates for these financial advisory services. The fees for

46 Section 9.2 of the CAT NMS Plan.

these services were paid by CAT LLC to Anchin.

After Anchin was hired in April 2018 through the end of the Pre-FAM Period on June 22, 2020 (excluding the period from April 2018 through November 15, 2018), Anchin provided a variety of services, including the following:

- Developed, updated and maintained internal controls;
- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Addressed accounting and financial reporting matters relating to the transition from CAT NMS, LLC to Consolidated Audit Trail, LLC, including supporting the dissolution of CAT NMS, LLC;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;
- Reviewed historical costs from inception; and

- Provided accounting and financial information in support of SEC filings.

Accounting Firm: Grant Thornton LLP ("Grant Thornton"). In February 2020, CAT LLC determined to engage an independent accounting firm, Grant Thornton, to complete the audit of CAT LLC's financial statements, in accordance with the requirements of the CAT NMS Plan. CAT LLC interviewed this firm as well as another potential accounting firm to audit CAT LLC's financial statements, considering a variety of factors in its analysis, including the relevant expertise and fees of each of the firms. CAT LLC determined that Grant Thornton was well-qualified for the proposed role given the balance of these considerations. Grant Thornton's fixed fee rate compensation arrangement was reasonable and appropriate, and in line with the market rates charged for these types of accounting services. The fees for these services were paid by CAT LLC to Grant Thornton.

Market Data Provider: Exegy. The professional and administrative costs for the Pre-FAM Period included costs related to the receipt of certain market data for the CAT pursuant to an agreement with the CAT LLC, and then with FCAT. Exegy provided SIP Data required by the CAT NMS Plan.

After performing an analysis of the available market data vendors to confirm that the data provided met the SIP Data requirements of the CAT NMS Plan and comparing the costs of the vendors providing the required SIP Data, CAT LLC determined to purchase market data from Exegy from July 2018 through March 2019. CAT LLC determined that, unlike certain other vendors, Exegy provided market data that included all data elements required by the CAT NMS Plan.[47] In addition, the fees were reasonable

[47] *See* Section 6.5(a)(ii) of the CAT NMS Plan.

and in line with market rates for the market data received. Accordingly, the professional and administrative costs for the Pre-FAM Period include the Exegy costs from November 2018 through March 2019. The cost of the market data was reasonable for the market data received. The fees for the market data were paid directly by CAT LLC to Exegy.

Upon the termination of the contract between CAT LLC and Exegy, FCAT entered into a contract with Exegy to purchase the required market data from Exegy in July 2019. All costs under the contract were treated as a direct pass through cost to CAT LLC. Therefore, the fees for the market data were paid by CAT LLC to FCAT, who, in turn, paid Exegy for the market data.

Security Assessment: RSM US LLP ("RSM"). The operating costs for the Pre-FAM Period include costs related to a third party security assessment of the CAT performed by RSM. The assessment was designed to verify and validate the effective design, implementation, and operation of the controls specified by NIST Special Publication 800-53, Revision 4 and related standards and guidelines. Such a security assessment is in line with industry practice and important given the data included in the CAT. CAT LLC determined to engage RSM to perform the security assessment, after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fees were reasonable and in line with market rates for such an assessment. RSM performed the assessment from October 2018 through December 2018. Accordingly, the costs for the Pre-FAM Period include the costs incurred in November and December 2018. The cost for the security assessment were paid directly to RSM by CAT LLC.

(j) Public Relations Costs

The public relations costs of $224,669 represent the fees paid to public relations firms during the Pre-FAM Period for professional communications services to CAT, including media relations consulting, strategy and execution. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants. Specifically, the public relations firms provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). Public relations services were important for various reasons, including monitoring comments made by market participants about CAT and understanding issues related to the CAT discussed on the public record.

The services performed by each of the public relations firms were comparable. The fees for such services were reasonable and in line with market rates. Only one public relations firm was engaged at a time; the three firms were engaged sequentially as the primary public relations contact moved among the three firms during this time period.

Public Relations Firm: Peppercomm, Inc. ("Peppercomm"). The national securities exchanges and FINRA, acting as a consortium, determined to hire the public relations firm Peppercomm in October 2014 and continued to engage this firm through September 2017. The exchanges and FINRA made this engagement decision after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fee rates for this public relations firm were negotiated on an arm's length

basis and were in line with market rates for these types of services. The public relations costs during the period from October 2014 until the formation of the CAT NMS, LLC were paid directly by the exchanges and FINRA to the public relations firm. After the formation of CAT NMS, LLC, the consulting fees were paid by CAT LLC.

Public Relations Firm: Sloane & Company ("Sloane"). CAT LLC determined to hire a new public relations firm, Sloane, in March 2018, based on, among other things, their expertise and the primary contact's history with the project. The fee rates for this public relations firm were in line with market rates for these types of services. The fees during the Pre-FAM Period were paid by CAT LLC to Sloane. CAT LLC continued the engagement with Sloane until February 2020.

Public Relations Firm: Peak Strategies. CAT LLC determined to hire a new public relations firm, Peak Strategies, in March 2020, based on, among other things, their expertise and the primary contact's history with the project. The fee rates for this public relations firm were in line with market rates for these types of services. The fees during the Pre-FAM Period were paid by CAT LLC to Peak Strategies.

(ii) Historical CAT Costs Incurred in Financial Accountability Milestone Period 1

Historical CAT Costs 1 would include costs incurred by CAT and already funded by the Participants during Period 1 of the Financial Accountability Milestones ("FAM Period 1"),[48] which covers the period from June 22, 2020 – July 31, 2020. Historical CAT Costs 1 would include costs for FAM Period 1 of $6,377,343. The Participants would remain responsible for one-third of this cost (which they have previously paid)

[48] Section 11.6(a)(i)(A) of the CAT NMS Plan.

($2,125,781), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($2,125,781) and CEBSs paying one-third ($2,125,781). The following table breaks down Historical CAT Costs 1 for FAM Period 1 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Historical CAT Costs for FAM Period 1**[49]
Capitalized Developed Technology Costs*	$1,684,870
Technology Costs:	$3,996,800
Cloud Hosting Services	$2,642,122
Operating Fees	$1,099,680
CAIS Operating Fees	$254,998
Change Request Fees	-
Legal	$481,687
Consulting	$137,209
Insurance	-
Professional and administration	$69,077
Public relations	$7,700
Total Operating Expenses	**$6,377,343**

* The non-cash amortization of these capitalized developed technology costs of $362,121 incurred during FAM Period 1 have been appropriately excluded from the above table.[50]

By the completion of FAM Period 1, CAT LLC was required to implement the reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of equities transaction data and options transaction data, excluding Customer

49 The costs described in this table of costs for FAM Period 1 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

50 As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

Account Information, Customer-ID and Customer Identifying Information.[51] CAT LLC completed the requirements of FAM Period 1 by July 31, 2020. The following describes the costs for each of the categories for FAM Period 1.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 1 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 1 Period. Accordingly, the $2,642,122 in technology costs for cloud hosting services represent costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 1. The fee arrangement for AWS described above with regard to the Pre-FAM Period continued in place during FAM Period 1 pursuant to the Plan Processor Agreement. Moreover, CAT LLC continued to believe that AWS's maturity in the cloud services space as well as the significant cost and time necessary to move the CAT to a different cloud services provider supported the continued engagement of AWS.

The cost for AWS cloud services for the CAT continued to be a function of the volume of CAT Data. During the FAM 1 Period, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant

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[51] *See* definition of "Initial Industry Member Core Equity and Options Reporting" in Section 1.1 of the CAT NMS Plan.

Data, Phase 2a and Phase 2b Industry Member Data (including certain linkages) as well as SIP Data, reference data and other types of Other Data. The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 1.[52]

	Date Range: 6/22/20-7/31/20
Average Daily Volume in Billions	
Participant - Equities	6
Participant - Options	103
Industry Member - Equities	7
Industry Member - Options	0.31
SIP – Options & Equities	74
Average Total Daily Volume	185
Cumulative Total Events for the Period	5,190
Total Compute Hours for the Period	2,612,082
Storage Footprint at End of Period (Petabytes)	57.47

(b) Technology Costs – Operating Fees

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in its role as the Plan Processor for the CAT during FAM Period 1. Accordingly, the $1,099,680 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 1. The fee arrangement for FCAT described above with regard to the Pre-FAM Period continued in

[52] Note that the volume data described in this table does not include CAIS data.

place during FAM Period 1 pursuant to the Plan Processor Agreement. During FAM Period 1, FCAT's activities with respect to the CAT included the following:

- Published iterative drafts of draft Technical Specifications for Phase 2d, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Published iterative drafts of CAIS Technical Specifications, after substantial engagement with SEC staff, Industry Members and Participants on the Technical Specifications;
- Facilitated Industry Member reporting of Quote Sent Time on Options Market Maker quotes;
- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with Participants and the SEC and its staff;
- Operated the FINRA CAT Helpdesk;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 1. Accordingly, the $254,998 in technology costs for CAIS operating fees represent costs incurred for services provided by Kingland during FAM Period 1. The fee arrangement for Kingland described above with regard to the Pre-FAM Period continued in place during FAM Period 1 pursuant to the Plan Processor Agreement. During FAM Period 1, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to CCID Alternative, as well as the acceleration of the reporting of LTIDs.

(d) Technology Costs – Change Request Fees

CAT LLC did not incur costs related to change requests during FAM Period 1.

(e) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for FAM Period 1 of $1,684,870 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include: (1) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including separate production and industry test entitlements, and reprocessing of exchange event timestamps; (2) implementation fees; and (3) license fees.

(f) Legal Costs

The legal costs of $481,687 represent the fees paid for legal services provided by two law firms, WilmerHale and Pillsbury during FAM Period 1.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 1 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 1 were paid by CAT LLC to WilmerHale. During FAM Period 1, WilmerHale provided legal assistance to the CAT including with regard to the following:

- Assisted with the development of the CAT funding model and drafted related amendments and fee filings;
- Drafted exemptive requests from CAT NMS Plan requirements regarding, for example, verbal activity, options market maker quote sent time, TRF linkages, and allocations;
- Provided interpretations related to CAT NMS Plan requirements, including the Financial Accountability Milestone amendment;
- Assisted with compliance with Regulation SCI;
- Provided support for the Operating Committee, Compliance Subcommittee, working groups and Leadership Team, including with regard to meetings with the SEC staff;
- Assisted with the drafting of the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;
- Assisted with communications and presentations for the industry regarding CAIS;
- Drafted SRO rule filings related to the CAT Compliance Rule;
- Provided support for Compliance Subcommittee, including with regard to response to OCIE examinations and the annual assessment;
- Provided guidance regarding CAT technical specifications;

- Assisted with third-party vendor agreements; and
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 1 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 1 were paid by CAT LLC to Pillsbury. During FAM Period 1, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During that period, Pillsbury advised CAT LLC regarding applicable legal matters and drafted a proposed amendment to the CAT NMS Plan regarding liability matters. Liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants.

(g) Consulting Costs

The consulting costs of $137,209 represent the fees paid to Deloitte as project manager during FAM Period 1. CAT LLC continued to employ Deloitte during FAM Period 1 based on, among other things, their expertise and cumulative experience with the CAT. The fee rates for Deloitte during FAM Period 1 were negotiated and in line with market rates for this type of specialized consulting work. The consulting fees during FAM Period 1 were paid by CAT LLC to the consulting firm. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 1, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;
- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT;
- Assisted with the transition from the Initial Plan Processor to the successor Plan Processor; and
- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

Although insurance was in effect during FAM Period 1, CAT LLC did not incur costs related to insurance during FAM Period 1.

(i) Professional and Administration Costs

Financial Advisory Firm: Anchin. The professional and administration costs of $69,077 represent the fees paid to Anchin during FAM Period 1. CAT LLC continued to employ Anchin during FAM Period 1 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these type of financial advisory services. The fees for these services during FAM Period 1 were paid by CAT LLC to Anchin. During FAM Period 1, Anchin provided a variety of services, including the following:

- Maintained internal controls;

- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups; and
- Prepared monthly and quarterly financial statements.

(j) Public Relations Costs

The public relations costs of $7,700 represent the fees paid to Peak Strategies during FAM Period 1. CAT LLC continued to employ Peak Strategies during FAM Period 1 based on, among other things, their expertise and history with the project. The fee rates for this firm were reasonable and in line with market rates for these types of services. The fees for these services during FAM Period 1 were paid by CAT LLC to Peak Strategies. During FAM Period 1, Peak Strategies continued to provide professional communications services to CAT LLC, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to

proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(iii) Historical CAT Costs Incurred in Financial Accountability Milestone Period 2

Historical CAT Costs 1 would include costs incurred by CAT LLC and already funded by Participants during Period 2 of the Financial Accountability Milestones ("FAM Period 2"),[53] which covers the period from August 1, 2020 – December 31, 2020. Historical CAT Costs 1 would include costs for FAM Period 2 of $42,976,478. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($14,325,493), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($14,325,493) and CEBSs paying one-third ($14,325,493). The following table breaks down Historical CAT Costs 1 for FAM Period 2 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

[53] Section 11.6(a)(i)(B) of the CAT NMS Plan.

Operating Expense	Historical CAT Costs for FAM Period 2[54]
Capitalized Developed Technology Costs*	$6,761,094
Technology Costs:	$31,460,033
Cloud Hosting Services	$20,709,212
Operating Fees	$9,108,700
CAIS Operating Fees	$1,590,298
Change Request Fees	$51,823
Legal	$2,766,644
Consulting	$532,146
Insurance	$976,098
Professional and administration	$438,523
Public relations	$41,940
Total Operating Expenses	**$42,976,478**

* The non-cash amortization of these capitalized developed technology costs of $1,892,505 incurred during FAM Period 2 have been appropriately excluded from the above table.[55]

By the completion of FAM Period 2, CAT LLC was required to implement the following with regard to the CAT:

> (a) Industry Member reporting (excluding reporting by Small Industry Members that are not OATS reporters) for equities transactions, excluding Customer Account Information, CustomerID, 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

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54 The costs described in this table of costs for FAM Period 2 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

55 As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

> incorporates the Industry Member equities transaction data described in condition (a) and is available to the Participants and to the Commission.[56]

CAT LLC completed the requirements of FAM Period 2 by December 31, 2020. The following describes the costs for each of the categories for FAM Period 2.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 2 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 2 Period. Accordingly, the $20,709,212 in technology costs for cloud hosting services represent costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 2. The fee arrangement for AWS described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement.

The cost for AWS cloud services for the CAT continued to be a function of the volume of CAT Data. During the FAM 2 Period, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant Data, Phase 2a and Phase 2b Industry Member Data (including certain linkages) as well as SIP Data, and Other Data, including reference data. In addition, Industry Members began reporting LTID account information. The following chart provides data regarding

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[56] *See* definition of "Full Implementation of Core Equity Reporting Requirements" in Section 1.1 of the CAT NMS Plan.

the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 2.[57]

	Date Range: 8/1/20 – 12/31/20
Average Daily Volume in Billions	
Participant - Equities	6
Participant - Options	116
Industry Member - Equities	11
Industry Member - Options	0.98
SIP – Options & Equities	80
Average Total Daily Volume	282
Cumulative Total Events for the Period	2,170
Total Compute Hours for the Period	15,660,392
Storage Footprint at End of Period (Petabytes)	114.59

(b) Technology Costs – Operating Fees

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in its role as the Plan Processor for the CAT during FAM Period 2. Accordingly, the $9,108,700 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 2. The fee arrangement for FCAT described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement. During FAM Period 2, FCAT's activities with respect to the CAT included

[57] Note that the volume data described in this table does not include CAIS data.

publishing the Technical Specifications for Phase 2d and overseeing the reporting of firm to firm and intrafirm linkages by Industry Members. In addition, FCAT also continued to engage in the following activities during FAM Period 2:

- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the development and implementation of the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with the Participants and the SEC and its staff;
- Operated the FINRA CAT Helpdesk;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 2. Accordingly, the $1,590,298 in technology costs for CAIS operating fees represent costs incurred for services provided by Kingland during FAM Period 2. The

fee arrangement for Kingland described above with regard to the Pre-FAM Period and FAM Period 1 continued in place during FAM Period 2 pursuant to the Plan Processor Agreement. During FAM Period 2, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to the CCID Alternative, as well as the acceleration of the reporting of LTIDs.

(d) Technology Costs – Change Request Fees

During FAM Period 2, CAT LLC engaged FCAT to pursue certain change requests in accordance with the Plan Processor Agreement. The change request costs were paid by CAT LLC to FCAT. Specifically, during FAM Period 2, CAT incurred costs of $51,823 related to a change request regarding the addition of functionality for exchange Participants to report rejected messages to the CAT.

(e) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for FAM Period 2 of $6,761,094 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as defined in the agreement between CAT LLC and the Plan Processor; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including costs related to separate production and industry test entitlements, market maker reference data, and back-processing of exchange exception logic; (3) implementation fees; and (4) license

fees.

(f) Legal Costs

The legal costs of $2,766,644 represent the fees paid for legal services provided by two law firms, WilmerHale and Pillsbury during FAM Period 2.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 2 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 2 were paid by CAT LLC to WilmerHale. During FAM Period 2, the legal assistance provided by WilmerHale included providing legal advice regarding the following:

- Assisted with the development of the CAT funding model and drafting related amendments and rule filings;
- Drafted exemptive requests from CAT NMS Plan requirements regarding, for example, allocations, exchange activity, OTQT, initial data validation, error corrections and recordkeeping;
- Provided interpretations related to CAT NMS Plan requirements, including with regard to the Financial Accountability Milestone amendment, FAQs and technical specifications;
- Provided support for the Operating Committee, Compliance Subcommittees, working groups and Leadership Team, including with regard to meetings with the SEC staff;
- Assisted with the Implementation Plan and Quarterly Progress Reports required pursuant to Section 6.6 of the CAT NMS Plan;
- Drafted SRO rule filings related to the CAT Compliance Rule;
- Provided support for the Compliance Subcommittee, including with regard to responses to OCIE examinations and the annual assessment;
- Provided guidance regarding the SEC's proposed security amendments to the CAT NMS Plan;

- Provided guidance regarding SRO rule filings for the retirement of systems;
- Provided legal support for Operating Committee meetings, including drafting resolutions and other materials and voting advice;
- Assisted with third-party vendor agreements (*e.g.*, with regard to Anchin, Grant Thornton and insurance policies);
- Assisted with change requests; and
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 2 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 2 were paid by CAT LLC to Pillsbury. During FAM Period 2, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During that period, Pillsbury advised CAT LLC regarding applicable legal matters and drafted and filed a proposed amendment to the CAT NMS Plan regarding liability matters. As discussed above, liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants.

(g) Consulting Costs

The consulting costs of $532,146 represent the fees paid to Deloitte as project manager during FAM Period 2. CAT LLC continued to employ Deloitte during FAM Period 2 based on, among other things, their expertise and long history with the project.

The fee rates for Deloitte during FAM Period 2 were negotiated and in line with market rates for this type of specialized consulting work. The consulting fees during FAM Period 2 were paid to Deloitte by CAT LLC. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 2, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;
- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT; and
- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $976,098 represent the fees paid for insurance during FAM Period 2. CAT LLC continued to maintain cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions liability insurance offered by USI. After engaging in a process for renewing the coverage, CAT LLC determined to purchase these insurance policies from USI. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

The professional and administration costs of $438,523 represent the fees paid to Anchin and Grant Thornton for financial services provided during FAM Period 2.

Financial Advisory Firm: Anchin. CAT LLC continued to engage Anchin during FAM Period 2 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these types of financial advisory services. The fees for these services during FAM Period 2 were paid by CAT LLC to Anchin. During FAM Period 2, Anchin provided a variety of services, including the following:

- Updated and maintained internal controls;
- Provided cash management and treasury functions;
- Faciliated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from the Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;

- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audit by an independent auditor; and
- Reviewed historical costs from inception.

Accounting Firm: Grant Thornton. CAT LLC continued to employ the accounting firm Grant Thornton during FAM Period 2 based on, among other things, its expertise and cumulative knowledge of CAT LLC. CAT LLC continued to believe that Grant Thornton was well qualified for its role and its fee rates were in line with with market rates for these accounting services. The fees for these services during FAM Period 2 were paid by CAT LLC to Grant Thornton. During FAM Period 2, Grant Thornton performed a financial statement audit for CAT LLC as an independent accounting firm.

(j) Public Relations Costs

The public relations costs of $41,940 represent the fees paid to Peak Strategies during FAM Period 2. CAT LLC continued to employ Peak Strategies during FAM Period 2 based on, among other things, their expertise and history with the project. The fee rates for this firm were in line with market rates for these types of services. The fees for these services during FAM Period 2 were paid by CAT LLC to Peak Strategies. During FAM Period 2, Peak Strategies continued to provide professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to

proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(iv) Historical CAT Costs Incurred in Financial Accountability Milestone Period 3

Historical CAT Costs 1 would include costs incurred by CAT and already funded by the Participants during Period 3 of the Financial Accountability Milestones ("FAM Period 3"),[58] which covers the period from January 1, 2021 – December 31, 2021. Historical CAT Costs 1 would include costs for FAM Period 3 of $144,415,268. The Participants would remain responsible for one-third of this cost (which they have previously paid) ($48,138,423), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($48,138,423) and CEBSs paying one-third ($48,138,423). The following table breaks down Historical CAT Costs 1 for FAM Period 3 into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

58 Section 11.6(a)(i)(C) of the CAT NMS Plan.

Operating Expense	Historical CAT Costs for FAM Period 3[59]
Capitalized Developed Technology Costs*	$10,763,372
Technology Costs:	$123,639,402
Cloud Hosting Services	$94,574,759
Operating Fees	$23,106,091
CAIS Operating Fees	$5,562,383
Change Request Fees	$396,169
Legal	$6,333,248
Consulting	$1,408,209
Insurance	$1,582,714
Professional and administration	$595,923
Public relations	$92,400
Total Operating Expenses	**$144,415,268**

* The non-cash amortization of these capitalized developed technology costs of $5,108,044 incurred during FAM Period 3 have been appropriately excluded from the above table.[60]

By the completion of FAM Period 3, CAT LLC was required to implement the following requirements with regard the CAT:

> (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

[59] The costs described in this table of costs for FAM Period 3 were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

[60] As discussed above, with respect to certain costs that were "appropriately excluded," such excluded costs relate to the amortization of capitalized technology costs, which are amortized over the life of the Plan Processor Agreement. As such costs have already been otherwise reflected in the filing, their inclusion would double count the capitalized technology costs. In addition, amortization is a non-cash expense.

> order cancellation, is developed, tested, and implemented at a 5% Error Rate or less; (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; (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.[61]

CAT LLC completed the requirements of FAM Period 3 by December 31, 2021. The following describes the costs for each of the categories for FAM Period 3.

(a) Technology Costs – Cloud Hosting Services

CAT LLC continued to utilize AWS in FAM Period 3 to provide a broad array of cloud hosting services for the CAT, including data ingestion, data management, and analytic tools. AWS continued to provide storage services, databases, compute services and other services (such as networking, management tools and DevOps tools), as well as various environments for CAT, such as development, performance testing, test, and production environments, during the FAM 3 Period. Accordingly, the $94,574,759 in technology costs for cloud hosting services represents costs incurred for services provided by AWS, as the cloud services provider, during FAM Period 3. The fee arrangement for AWS described above for the earlier periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement.

The cost for AWS cloud services for the CAT continued to be a function of the

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[61] *See* definition of "Full Availability and Regulatory Utilization of Transactional Database Functionality" in Section 1.1 of the CAT NMS Plan.

volume of CAT Data. During FAM Period 3, the volume of CAT Data continued to far exceed the original predictions for the CAT as set forth in the CAT NMS Plan. During this period, data submitted to the CAT included options and equities Participant Data, Phase 2a, Phase 2b, Phase 2c and Phase 2d Industry Member Data (including certain linkages), SIP Data, Other Data, including reference data, and LTID account information. The following chart provides data regarding the average daily volume, cumulative total events, total compute hours and storage footprint of the CAT during FAM Period 3.[62]

	Date Range: 1/1/21 to 4/25/21	Date Range: 4/26/21/ to 12/31/21*
Average Daily Volume in Billions		
Participant - Equities	9	9
Participant - Options	135	136
Industry Member - Equities	20	19
Industry Member - Options	2	2
SIP – Options & Equities	129	137
Average Total Daily Volume	297	304
Cumulative Total Events for the Period	7,480	5,310
Total Compute Hours for the Period	15,860,304	33,487,318
Storage Footprint at End of Period (Petabytes)	180.22	284.62

* Start of Participant Equities in CAT format and SIP Equities on 4/26/21

(b) Technology Costs – Operating Fees

Pursuant to the Plan Processor Agreement discussed above, FCAT continued in

[62] Note that the volume data described in this table does not include CAIS data.

its role as the Plan Processor for the CAT during FAM Period 3. Accordingly, the $23,106,091 in technology costs for operating fees represent costs incurred for the services provided by FCAT under the Plan Processor Agreement during FAM Period 3. The fee arrangement for FCAT described above with regard to the prior Periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement. During FAM Period 3, FCAT's activities with respect to the CAT included the following:

- Facilitated Phase 2c and Phase 2d testing for Industry Members;
- Oversaw creation of linkages of the lifecycle of order events based on the received data through Phase 2d;
- Addressed compliance items, including drafting CAT policies and procedures, and addressing Regulation SCI requirements;
- Provided support to the Operating Committee, the Compliance Subcommittee and CAT working groups;
- Assisted with interpretive efforts and exemptive requests regarding the CAT NMS Plan;
- Oversaw the security of the CAT;
- Monitored the operation of the CAT, including with regard to Participant and Industry Member reporting;
- Provided support to subcontractors under the Plan Processor Agreement;
- Provided support in discussions with the Participants and the SEC and its staff;
- Operated the FINRA CAT Helpdesk;
- Facilitated communications with the industry, including via FAQs, CAT Alerts, meetings, presentations and webinars;
- Administered the CAT website and all of its content; and
- Provided technical support and assistance with connectivity, data access, and user support, including the use of CAT Data and query tools, for Participants and the SEC staff.

(c) Technology Costs – CAIS Operating Fees

Pursuant to the Plan Processor Agreement with FCAT discussed above, Kingland continued in its role as a subcontractor for the development and implementation of CAIS during FAM Period 3. Accordingly, the $5,562,383 in technology costs for CAIS operating fees represents costs incurred for services provided by Kingland during FAM Period 3. The fee arrangement for Kingland described above with regard to the prior Periods continued in place during FAM Period 3 pursuant to the Plan Processor Agreement. During FAM Period 3, Kingland continued the development of the CAIS Technical Specifications and building of CAIS. In addition, Kingland continued to work on the CAIS Technical Specifications and build related to the CCID Alternative, as well as the acceleration of the reporting of LTIDs. The full CAIS Technical Specifications were published during FAM Period 3.

(d) Technology Costs – Change Request Fees

During FAM Period 3, CAT LLC engaged FCAT to pursue certain change requests in accordance with the Plan Processor Agreement. The change request costs were paid by CAT LLC to FCAT. Specifically, during FAM Period 3, CAT incurred costs of $396,169 related to change requests, including the following: (1) the addition of functionality for exchange Participants to report rejected messages to the CAT; (2) the migration of MIRS query engine to AWS to reduce operational costs and increase resiliency; and (3) updating the Participant Technical Specifications to allow for two-sided Participant option quote reporting.

(e) Technology Costs – Capitalized

Developed Technology Costs

Capitalized developed technology costs for FAM Period 3 of $10,763,372 include capitalizable application development costs incurred in the development of the CAT by FCAT. Such costs include (1) development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as defined in the agreement between CAT LLC and the Plan Processor, including the transition from equity data received by FINRA pursuant to various regulatory services agreements between FINRA and Participant exchanges to the equity CAT Data, and the completion of the Industry Member Phase 2d options manual and complex orders go-live requirements; (2) costs related to certain modifications, upgrades, or other changes to the CAT that were not contemplated by the agreement between CAT LLC and the Plan Processor, including costs related to off-exchange volume concentration, Participant 24-hour trading and an external metastore; (3) implementation fees; and (4) license fees.

(f) Legal Costs

The legal costs of $6,333,248 represent the fees paid for legal services provided by three law firms, WilmerHale, Pillsbury and Covington & Burling LLP ("Covington") during FAM Period 3.

Law Firm: WilmerHale. CAT LLC continued to employ WilmerHale during FAM Period 3 based on, among other things, their expertise and long history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 3 were paid by CAT LLC to WilmerHale. During FAM Period 3, the legal assistance provided by WilmerHale included providing legal advice regarding the following:

- Assisted with the development of the CAT funding model and drafting related amendments and rule filings;

- Drafted exemptive requests from CAT NMS Plan requirements, including, for example, verbal activity regarding Phase 2c cutover, error reports, error corrections, Phase 2d Reporting, unique Order-ID on internal route events, reporting addresses, recordkeeping, and unique CCID for foreign customers;

- Provided interpretations related to CAT NMS Plan requirements, including with regard to the Financial Accountability Milestone amendment, FAQs, CAIS requirements, ADF, and technical specifications;

- Provided support for the Operating Committee, Compliance Subcommittee, working groups and Leadership Team, including with regard to meetings with the SEC staff;

- Assisted with the Implementation Plan and Quarterly Progress Reports required pursuant to Section 6.6(c) of the CAT NMS Plan;

- Drafted SRO rule filings related to the CAT Compliance Rule;

- Provided support for Compliance Subcommittee, including with regard to responses to OCIE examinations and the annual assessment;

- Provided guidance regarding the SEC's proposed security amendments to the CAT NMS Plan;

- Provided guidance regarding SRO rule filings for the retirement of systems;

- Provided legal support for Operating Committee meetings, including drafting resolutions and other materials and voting advice;

- Provided assistance with change requests;

- Provided guidance and regulatory support for litigation regarding the response to the SEC's exemptive orders;

- Assisted with communications with the industry, includng CAT Alerts and presentations;

- Provided guidance regarding the confidentiality of CAT Data, including third-party information requests;

- Assisted with cost management analysis and proposals; and

- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretive and implementation issues.

Law Firm: Pillsbury. CAT LLC continued to employ Pillsbury during FAM Period 3 based on, among other things, their expertise and history with the project. The hourly fee rates for this law firm were in line with market rates for specialized legal expertise. The legal fees during FAM Period 3 were paid by CAT LLC to Pillsbury. During FAM Period 3, Pillsbury provided legal assistance to the CAT regarding the CAT Reporter Agreement. During this period, Pillsbury advised CAT LLC regarding applicable legal matters, reviewed and responded to comment letters regarding the proposed Plan amendment, participated in meetings with senior SEC staff, responded to comments submitted following the SEC's April 6, 2021 order instituting proceedings,[63] and assessed legal matters regarding the SEC's October 29, 2021 order denying the proposed Plan amendment.[64]

Law Firm: Covington. CAT LLC hired Covington for litigation with the SEC regarding certain exemptive orders related to the CAT, including orders issued in December 2020.[65] CAT LLC interviewed this law firm as well as other potential law firms, considering a variety of factors in its analysis for choosing legal assistance, including the relevant expertise and fees of the potential lawyers. CAT LLC approved the engagement of Covington in January 2021. The fee rates for this law firm, which were calculated based on hourly rates, were in line with market rates for specialized

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63 Securities Exchange Act Rel. No. 91487 (Apr. 6, 2021), 86 Fed. Reg. 19054 (Apr. 12, 2021).

64 Securities Exchange Act Rel. No. 93484 (Oct. 29, 2021), 86 Fed. Reg. 60933 (Nov. 4, 2021).

65 *See* Securities Exchange Act Rel. No. 90688 (Dec. 16, 2020), 85 Fed. Reg. 83634 (Dec. 22, 2020); and Securities Exchange Act Rel. No. 90689 (Dec. 16, 2020), 85 Fed. Reg. 83667 (Dec. 22, 2020) (collectively, the "2020 Orders").

services. The legal fees for FAM Period 3 for this firm were paid by CAT LLC to Covington.

After Covington was hired in 2021 through the end of 2021, the firm provided legal assistance regarding the litigation with the SEC regarding the 2020 Orders. These services included researching, drafting, and filing motions to stay the 2020 orders and related materials in proceedings before the SEC, as well as researching, drafting, and filing petitions for judicial review of the 2020 Orders in proceedings before the U.S. Court of Appeals for the D.C. Circuit. Covington oversaw ongoing litigation proceedings on these matters, and also supported WilmerHale with respect to settlement negotiations with the SEC staff regarding the 2020 Orders.

In addition to these services, CAT LLC engaged Covington in November 2021 to provide assistance with respect to the SEC's disapproval of CAT NMS Plan amendments concerning a proposed limitation on liability in the event of a data breach or similar event. Covington provided advice concerning CAT's response to the SEC's disapproval order. This work accounted for a minority of Covington's fees in 2021.[66]

(g) Consulting Costs

The consulting costs of $1,408,209 represent the fees paid to Deloitte as project manager during FAM Period 3. CAT LLC continued to employ Deloitte during FAM Period 3 based on, among other things, their expertise and long history with the project. The fee rates for Deloitte during FAM Period 3 were negotiated and in line with market

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[66] As discussed above with regard to Pillsbury's work on liability matters, liability issues related to the CAT are important matters that needed to be resolved and clarified. CAT LLC's efforts to seek such resolution and clarity work to the benefit of Participants, Industry Members and other market participants. Moreover, such activity is a necessary part of the operation of the CAT.

rates for this type of specialized consulting work. The consulting fees during FAM Period 3 were paid to Deloitte by CAT LLC. CAT LLC reviewed the consulting fees each month and approved the invoices. During FAM Period 3, Deloitte's CAT-related activities included the following:

- Implemented program operations for the CAT project;
- Provided support to the Operating Committee, the Chair of the Operating Committee and the Leadership Team, including project management support, coordination and planning for meetings and communications, and interfacing with law firms and the SEC;
- Assisted with cost and funding matters for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT; and
- Provided support for third-party vendors for the CAT, including FCAT, Anchin and the law firms engaged by CAT LLC.

(h) Insurance

The insurance costs of $1,582,714 represent the fees paid for insurance during FAM Period 3. CAT LLC continued to maintain cyber security liability insurance, directors' and officers' liability insurance, and errors and omissions liability insurance offered by USI. After engaging in a process for renewing the coverage, CAT LLC determined to purchase these insurance policies from USI. The annual premiums for these policies were competitive for the coverage provided. The annual premiums were paid by CAT LLC to USI.

(i) Professional and Administration Costs

The professional and administration costs of $595,923 represent the fees paid to

Anchin and Grant Thornton for financial services during FAM Period 3.

Financial Advisory Firm: Anchin. CAT LLC continued to employ Anchin during FAM Period 3 based on, among other things, their expertise and history with the project. The hourly fee rates for this firm were in line with market rates for these financial advisory services. The fees for these services during FAM Period 3 were paid by CAT LLC to Anchin. During FAM Period 3, Anchin provided a variety of services, including the following:

- Updated and maintained internal controls;
- Provided cash management and treasury functions;
- Faciliated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;

- Reviewed historical costs from inception; and
- Provided accounting and financial information in support of SEC filings.

Accounting Firm: Grant Thornton. CAT LLC continued to employ the accounting firm Grant Thornton during FAM Period 3 based on, among other things, their expertise and cumulative knowledge of CAT LLC. CAT LLC determined that Grant Thornton was well qualified for its role and that its fixed fee rates were in line with market rates for these accountant services. The fees for these services during FAM Period 3 were paid by CAT LLC to Grant Thornton. During FAM Period 3, Grant Thornton provided audited financial statements for CAT LLC.

(j) Public Relations Costs

The public relations costs of $92,400 represent the fees paid to Peak Strategies during FAM Period 3. CAT LLC continued to employ Peak Strategies during FAM Period 3 based on, among other things, their expertise and history with the project. The fee rates for this firm were in line with market rates for these types of services. The fees for these services during FAM Period 3 were paid by CAT LLC to Peak Strategies. During FAM Period 3, Peak Strategies continued to provide professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, the public relations firm provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as

well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan). As discussed above, such public relations services were important for various reasons, including monitoring comments made by market participants about the CAT and understanding issues related to the CAT discussed on the public record. By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT matters to the benefit of all market participants.

(v) Excluded Costs

Historical CAT Costs 1 would not include three categories of CAT costs ("Excluded Costs"): (1) $14,749,362 of costs related to the termination of the relationship with the Initial Plan Processor; (2) $48,874,937, which are all CAT costs incurred from November 15, 2017 through November 15, 2018; and (3) $19,628,791, which are costs paid to the the Initial Plan Processor from November 16, 2018 through February 2019 when the relationship with the Initial Plan Processor was concluded. The Participants would remain responsible for 100% of these costs, which total $83,253,090. CAT LLC determined to exclude these Excluded Costs from Historical CAT Costs 1 because these costs relate to the delay in the start of reporting to the CAT and the conclusion of the relationship with the Initial Plan Processor.[67]

(a) Costs related to Conclusion of Relationship with Initial Plan Processor

[67] In approving the CAT Funding Model, the Commission states that the proposed exclusion of the first two categories of Excluded Costs "is reasonable in the Commission's view because it would not require all costs incurred by the Participants to be recovered from Industry Members through the Historical CAT Assessment, specifically excluding those costs related to the delay in the start of reporting to the CAT and costs related to the conclusion of the relationship with the Initial Plan Processor." CAT Funding Model Approval Order at 62663. In addition to the first two categories of Excluded Costs, CAT LLC is now proposing a third category of Excluded Costs that would exclude all costs paid to the Initial Plan Processor after November 15, 2018.

First, Historical CAT Costs 1 would not include $14,749,362 of costs related to the conclusion of the relationship with the Initial Plan Processor. Such costs include costs related to the American Arbitration Association, the legal assistance of Pillsbury with regard to the arbitration with the Initial Plan Processor, and the settlement costs related to the arbitration with the Initial Plan Processor. The Participants would remain responsible for 100% of these $14,749,362 in costs.

(b) Costs Incurred from November 15, 2017 through November 15, 2018

Second, Historical CAT Costs 1 would not include all CAT costs incurred from November 15, 2017 through November 15, 2018. CAT LLC determined to exclude all costs during this one-year period of $48,874,937 from fees charged to Industry Members due to the delay in the start of reporting to the CAT. The Participants would remain responsible for 100% of these $48,874,937 in costs. The following table breaks down these costs into the categories set forth in Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Operating Expense	**Excluded Costs for November 15, 2017 – November 15, 2018**[68]
Capitalized Developed Technology Costs	$37,852,083
Technology Costs:	-
Cloud Hosting Services	-
Operating Fees	-

[68] The costs described in this table of Excluded Costs were calculated based upon CAT LLC's review of applicable bills and invoices and related financial statements. CAT LLC financial statements are available on the CAT website.

CAIS Operating Fees	-
Change Request Fees	-
Legal	$6,143,278
Consulting	$4,452,106
Insurance	-
Professional and administration	$340,145
Public relations	$87,325
Total Operating Expenses	**$48,874,937**

The following provides additional detail regarding the Excluded Costs.

(I) Technology Costs – Cloud Hosting Services, Operating Fees, CAIS Operating Fees and Change Request Fees

CAT LLC did not incur technology costs related to the categories of cloud hosting services, operating fees, CAIS operating fees or change requests during the period from November 15, 2017 through November 15, 2018.

(II) Technology Costs – Capitalized Developed Technology Costs

Capitalized developed technology costs for the period from November 15, 2017 through November 15, 2018 include capitalizable application development costs of $37,852,083 incurred in the development of the CAT by the Initial Plan Processor. Such costs include development costs incurred during the application development stage to meet various agreed-upon milestones regarding the CAT, as defined in the agreement between CAT LLC and the Initial Plan Processor. Such costs include costs related to Industry Member technical specifications for orders and transactions, the system security plan, testing and production for Participant CAT reporting, third-party security assessment and response, query portal, onboarding of the Chief Information Security

Officer, and ingestion of FINRA TRF data and FINRA data related to halts and corporate actions.

(III) Legal Costs

The legal costs of $6,143,278 represent the fees paid to WilmerHale for legal services from November 15, 2017 through November 15, 2018. During this period, WilmerHale provided legal assistance to the CAT including with regard to the following:

- Provided legal support for the governance of the CAT, including governance support for the Operating Committee, Advisory Committee, Compliance Subcommittee, and CAT working groups;
- Assisted with the development of the CAT funding model and drafted related amendments of the CAT NMS Plan;
- Provided assistance related to CAT security;
- Drafted exemptive requests, including requests related to PII;
- Assisted with the Implementation Plan required pursuant to Section 6.6(c)(i) of the CAT NMS Plan;
- Provided interpretations of and related to the CAT NMS Plan;
- Provided advice with regard to regulator access to the CAT;
- Assisted with the Plan Processor transition;
- Provided assistance regarding communications with the industry regarding the CAT;
- Provided advice regarding Customer Account Information and PII;
- Provided support for litigation related to SEC exemptive orders; and
- Provided support with regard to discussions with the SEC and its staff, including with respect to addressing interpretative and implementation issues.

(IV) Consulting Costs

The consulting costs of $4,452,106 represent the fees paid to Deloitte for their role as project manager for the CAT from November 15, 2017 through November 15, 2018. During this period, Deloitte engaged in the following activities with respect to the CAT:

- Implemented program operations for the CAT project;
- Provided governance support to the Operating Committee, including support for Subcommittees and working groups of the Operating Committee (*e.g.*, Compliance Subcommittee, Cost and Funding Working Group, Technical Working Group, Industry Outreach Working Group, Security Working Group and Steering Committee);
- Assisted with cost and funding issues for the CAT, including the development of the CAT funding model and assistance with loans and the CAT bank account for CAT funding;
- Provided support for updating the SEC on the progress of the development of the CAT; and
- Provided active planning and coordination with and support for the Initial Plan Processor with regard to the development of the CAT, and reported to the Participants on the progress.

(V) Insurance

CAT LLC did not incur costs related to insurance during the period from November 15, 2017 through November 15, 2018.

(VI) Professional and Administration Costs

The professional and administration costs of $340,145 represent the fees paid to Anchin, Exegy and RSM from November 15, 2017 through November 15, 2018.

Financial Advisory Firm: Anchin. From the commencement of its engagment in April 2018 through November 15, 2018, Anchin engaged in the following activities with respect to the CAT:

- Developed, updated and maintained internal controls;
- Provided cash management and treasury functions;
- Facilitated bill payments;
- Provided monthly bookkeeping;
- Reviewed vendor invoices and documentation in support of cash disbursements;
- Provided accounting research and consultations on various accounting, financial reporting and tax matters;
- Addressed not-for-profit tax and accounting considerations;
- Prepared tax returns;
- Addressed various accounting, financial reporting and operating inquiries from Participants;
- Developed and maintained quarterly and annual operating and financial budgets, including budget to actual fluctuation analyses;
- Addressed accounting and financial matters relating to the transition from CAT NMS, LLC to Consolidated Audit Trail, LLC, including supporting the dissolution of CAT NMS, LLC;
- Supported compliance with the CAT NMS Plan;
- Worked with and provided support to the Operating Committee and various CAT working groups;
- Prepared monthly, quarterly and annual financial statements;
- Supported the annual financial statement audits by an independent auditor;
- Reviewed historical costs from inception; and
- Provided accounting and financial information in support of SEC filings.

Market Data Provider: Exegy. From July 2018 through November 15, 2018, CAT LLC purchased market data from Exegy (as described in more detail above).

Security Assessment: RSM. From October 2018 through November 15, 2018, CAT LLC incurred costs for RSM's performance of a security assessment (as described in more detail above).

(VII) Public Relations Costs

The public relations costs of $87,325 represent the fees paid to Sloane from November 15, 2017 through November 15, 2018. From the commencement of its engagment in March 2018 through November 15, 2018, Sloane provided professional communications services to CAT, including media relations consulting, strategy and execution. Specifically, Sloane provided services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT (*e.g.*, amendments to the CAT NMS Plan).

(c) Costs Paid to Initial Plan Processor from November 16, 2018 through February 2019

Third, Historical CAT Costs 1 would not include the $19,628,791 in costs paid to the Initial Plan Processor from November 16, 2018 through February 2019 when CAT LLC's relationship with the Initial Plan Processor concluded. CAT LLC determined that Historical CAT Costs 1 would not include any fees paid to the Initial Plan Processor after

November 15, 2017,[69] which was the date by which Participants were required to begin reporting to the CAT.[70] As discussed above, the Participants determined that Historical CAT Costs 1 would not include all CAT costs incurred from November 15, 2017 through November 15, 2018, which includes $37,852,083 in Initial Plan Processor costs incurred from November 15, 2017 through November 15, 2018 (as well as other CAT costs during this period). The remaining Initial Plan Processor costs incurred after November 15, 2018 are the $19,628,791 in costs for the period from November 16, 2018 through February 2019 incurred in the development of the CAT by the Initial Plan Processor, as well as a transition fee for the transition from the Initial Plan Processor to the successor Plan Processor. The Participants would remain responsible for 100% of these $19,628,791 in costs.

(C) Historical Recovery Period 1

Under the CAT NMS Plan, the Operating Committee is required to reasonably establish the length of the Historical Recovery Period used in calculating each Historical Fee Rate based upon the amount of the Historical CAT Costs to be recovered by the Historical CAT Assessment, and to describe the reasons for its length.[71] The Historical Recovery Period used in calculating the Historical Fee Rate may not be less than 24

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69 As discussed below, CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017. *See* Section 3(a)(10)(E) below.

70 The SEC approved the CAT NMS Plan on November 15, 2016, and Participant reporting was required to begin on the first anniversary of this date, November 15, 2017. *See* Section 6.3 of the CAT NMS Plan and CAT NMS Plan Approval Order.

71 Section 11.3(b)(i)(D)(I) and Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

months or more than five years.[72] The Operating Committee has determined to establish a Historical Recovery Period 1 of 24 months for Historical CAT Assessment 1.

The Operating Committee determined that the length of Historical Recovery Period 1 appropriately weighs the need for a reasonable Historical Fee Rate 1 that spreads the Historical CAT Costs over an appropriate amount of time and the need to repay the loans to the Participants in a timely fashion. The Operating Committee determined that 24 months for Historical Recovery Period 1 would establish a fee rate that is lower than other transaction-based fees, including fees assessed pursuant to Section 31.[73] In addition, in establishing a Historical Recovery Period of 24 months, the Operating Committee recognized that the total costs for Historical CAT Assessment 1 were less than the total costs for 2022 and 2023,[74] and therefore it would be reasonable and appropriate to recover costs subject to this filing over an approximate two-year period.

The length of the Historical Recovery Period 1 and the reasons for its length are provided in this filing in accordance with the requirement in the CAT NMS Plan to provide such information in a fee filing for a Historical CAT Assessment.[75]

(D) Projected Total Executed Equivalent Share Volume

The calculation of Historical Fee Rate 1 also requires the determination of the projected total executed equivalent share volume of transactions in Eligible Securities for

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72 Section 11.3(b)(i)(D)(I) of the CAT NMS Plan. In the CAT Funding Model Approval Order, the SEC stated that "[i]n the Commission's view, it is reasonable for the Operating Committee to establish the length of the Historical Recovery Period to be no less than 24 months and no more than five years." CAT Funding Model Approval Order at 62664.

73 As the SEC noted in the CAT Funding Model Approval Order, recent Section 31 fees ranged from $0.00009 per share to $0.0004 per share. CAT Funding Model at 62682.

74 The total CAT costs for 2022 were approximately $186 million and the total CAT costs for 2023 were approximately $233 million.

75 Section 11.3(b)(iii)(B)(II)(C) of the CAT NMS Plan.

Historical Recovery Period 1. Under the CAT NMS Plan, the Operating Committee is required to "reasonably determine the projected total executed equivalent share volume of all transactions in Eligible Securities for each Historical Recovery Period based on the executed equivalent share volume of all transactions in Eligible Securities for the prior twelve months."[76] The Operating Committee is required to base its projection on the prior twelve months, but it may use its discretion to analyze the likely volume for the upcoming year. Such discretion would allow the Operating Committee to use its judgment when estimating projected total executed equivalent share volume if the volume over the prior twelve months was unusual or otherwise unfit to serve as the basis of a future volume estimate.[77]

The total executed equivalent share volume of transactions in Eligible Securities for the 12-month period from June 2023 through May 2024 was 3,980,753,840,905.21 executed equivalent shares. The Operating Committee has determined to calculate the projected total executed equivalent share volume for the 24 months of Historical Recovery Period 1 by doubling the executed equivalent share volume for the prior 12 months. The Operating Committee determined that such an approach was reasonable as the CAT's annual executed equivalent share volume has remained relatively constant. For example, the executed equivalent share volume for 2021 was 3,963,697,612,395, the executed equivalent share volume for 2022 was 4,039,821,841,560.31, and the executed equivalent share volume for 2023 was 3,868,940,345,680.6. Accordingly, the projected total executed equivalent share volume for Historical Recovery Period 1 is projected to

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[76] Section 11.3(b)(i)(E) of the CAT NMS Plan.

[77] CAT Funding Model Approval Order at 62664.

be 7,961,507,681,810.42 executed equivalent shares.[78]

The projected total executed equivalent share volume of all transactions in Eligible Securities for Historical Recovery Period 1 and a description of the calculation of the projection is provided in this filing in accordance with the requirement in the CAT NMS Plan to provide such information in a fee filing for a Historical CAT Assessment.[79]

(E) Historical Fee Rate 1

Historical Fee Rate 1 would be calculated by dividing Historical CAT Costs 1 by the reasonably projected total executed equivalent share volume of all transactions in Eligible Securities for Historical Recovery Period 1, as described in detail above.[80] Specifically, Historical Fee Rate 1 would be calculated by dividing $318,059,819 by 7,961,507,681,810.42. As a result, the Historical Fee Rate 1 would be $0.00003994969693072937 per executed equivalent share. Historical Fee Rate 1 is provided in this filing in accordance with the requirement in the CAT NMS Plan to provide the Historical Fee Rate in a fee filing for a Historical CAT Assessment.[81]

(3) Past CAT Costs and Participants

Participants would not be required to pay any fees associated with Historical CAT Assessment 1 as the Participants previously have paid all Past CAT Costs. The CAT NMS Plan explains that:

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78 This projection was calculated by multiplying 3,980,753,840,905.21 executed equivalent shares by two.

79 Section 11.3(b)(iii)(B)(II)(D) of the CAT NMS Plan.

80 In approving the CAT Funding Model, the Commission stated that "[t]he calculation of the Historical Fee Rate by dividing the Historical CAT Costs by the projected total executed equivalent share volume of all transactions in Eligible Securities for the Historical Recovery Period is reasonable." CAT Funding Model Approval Order at 62664.

81 Section 11.3(b)(iii)(B)(II)(A) of the CAT NMS Plan.

> Because Participants previously have paid Past CAT Costs via loans to the Company, Participants would not be required to pay any Historical CAT Assessment. In lieu of a Historical CAT Assessment, the Participants' one-third share of Historical CAT Costs and such other additional Past CAT Costs as reasonably determined by the Operating Committee will be paid by the cancellation of loans made to the Company on a pro rata basis based on the outstanding loan amounts due under the loans.[82]

The CAT NMS Plan further states that "Historical CAT Assessments are designed to recover two-thirds of the Historical CAT Costs."[83]

(4) Monthly Fees

CEBBs and CEBSs would be required to pay fees for Historical CAT Assessment 1 on a monthly basis for the period in which Historical CAT Assessment 1 is in effect.[84] A CEBB or CEBS's fee for each month would be calculated based on the transactions in Eligible Securities executed by the CEBB or CEBS from the prior month.[85] Proposed paragraph (a)(1)(A) of the fee schedule would state that each CAT Executing Broker would receive its first invoice in November 2024, and "would receive an invoice each month thereafter in which Historical CAT Assessment 1 is in effect." Proposed paragraph (a)(1)(B) of the fee schedule would state that "Consolidated Audited Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis." In addition, proposed paragraph (b)(1) of the fee schedule states that each CEBB and CEBS is required to pay its CAT fees "each month."

(5) Actual Recovery Period for Historical CAT Assessment 1

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82 Section 11.3(b)(ii) of the CAT NMS Plan.

83 *Id*. In approving the CAT Funding Model, the Commission stated that "[t]he proposed allocation of the Historical CAT Assessment solely to CEBSs and CEBBs, and ultimately Industry Members, is reasonable. The Historical CAT Assessment will still be divided into thirds," as the Participants' one-third share of Historical CAT Costs will be paid by the cancellation of loans made to the Company. CAT Funding Model Approval Order at 62666.

84 *See* Section 11.3(b)(iii)(A) of the CAT NMS Plan.

85 *See* proposed paragraph (a)(1)(B) of the fee schedule.

The CAT NMS Plan states that, "[n]otwithstanding the length of the Historical Recovery Period used in calculating the Historical Fee Rate, each Historical CAT Assessment calculated using the Historical Fee Rate will remain in effect until all Historical CAT Costs for the Historical CAT Assessment are collected."[86] Accordingly, Historical CAT Assessment 1 will remain in effect until all Historical CAT Costs 1 have been collected. The actual recovery period for Historical CAT Assessment 1 may be shorter or longer than Historical Recovery Period 1 depending on the actual executed equivalent share volumes during the time that Historical CAT Assessment 1 is in effect.[87]

(6) Consolidated Audit Trail Funding Fees

To implement Historical CAT Assessment 1, a new section would be added to the Exchange's fee schedule for "Consolidated Audit Trail Funding Fees", and it would include the proposed paragraphs described below.

(A) Fee Schedule for Historical CAT Assessment 1

The CAT NMS Plan states that:

> Each month in which a Historical CAT Assessment is in effect, each CEBB and each CEBS shall pay a fee for each transaction in Eligible Securities executed by the CEBB or CEBS from the prior month as set forth in CAT Data, where the Historical CAT Assessment for each transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by one-third and by the Historical Fee Rate reasonably determined pursuant to paragraph (b)(i) of this Section 11.3.[88]

Accordingly, based on the factors discussed above, the Exchange proposes to add

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86 Section 11.3(b)(i)(D)(II) of the CAT NMS Plan.

87 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, it is reasonable for Industry Members to be charged a Historical CAT Assessment until all Historical CAT Costs for the Historical CAT Assessment are collected." CAT Funding Model Approval Order at 62665.

88 Section 11.3(b)(iii)(A) of the CAT NMS Plan.

paragraph (a)(1) to the Consolidated Audit Trail Funding Fees section of its fee schedule. Proposed paragraph (a)(1) would state the following:

> (A) Each CAT Executing Broker shall receive its first invoice for Historical CAT Assessment 1 in November 2024, which shall set forth the Historical CAT Assessment 1 fees calculated based on transactions in October 2024, and shall receive an invoice for Historical CAT Assessment 1 for each month thereafter in which Historical CAT Assessment 1 is in effect.
>
> (B) Consolidated Audit Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis. Each month, such invoices shall set forth a fee for each transaction in Eligible Securities executed by the CAT Executing Broker in its capacity as a CAT Executing Broker for the Buyer ("CEBB") and/or the CAT Executing Broker for the Seller ("CEBS") (as applicable) from the prior month as set forth in CAT Data. The fee for each such transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by the fee rate of $0.000013 per executed equivalent share.
>
> (C) Historical CAT Assessment 1 will remain in effect until $212,039,879.34 (two-thirds of Historical CAT Costs 1) are collected from CAT Executing Brokers collectively, which is estimated to be approximately two years, but could be for a longer or shorter period of time. Consolidated Audit Trail, LLC will provide notice when Historical CAT Assessment 1 will no longer be in effect.
>
> (D) Each CAT Executing Broker shall be required to pay each invoice for Historical CAT Assessment 1 in accordance with paragraph (b).

As noted in the Plan amendment for the CAT Funding Model, "as a practical matter, the fee filing for a Historical CAT Assessment would provide the exact fee per executed equivalent share to be paid for each Historical CAT Assessment, by multiplying the Historical Fee Rate by one-third and describing the relevant number of decimal places for the fee rate.[89] Accordingly, proposed paragraph (a)(1)(B) of the fee schedule would

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[89] CAT Funding Model Approval Order at 62658, n.658.

set forth a fee rate of $0.000013 per executed equivalent share. This fee rate is calculated by multiplying Historical Fee Rate 1 of $0.00003994969693072937 by one-third, and rounding the result to 6 decimal places.[90] The Operating Committee determined to use six decimal places to balance the accuracy of the calculation with the potential systems and other impracticalities of using additional decimal places in the calculation.

The proposed language in paragraph (a)(1)(A) of the fee schedule would describe when CAT Executing Brokers would receive their first monthly invoice for Historical CAT Assessment 1. Specifically, CAT Executing Brokers would receive their first monthly invoice for Historical CAT Assessment 1 in November 2024 and the fees set forth in that invoice would be calculated based on transactions executed in the prior month, that is, transactions executed in October 2024. The payment for the first invoice would be required within 30 days after the receipt of the first invoice (unless a longer period is indicated), as described in paragraph (b)(2) of the fee schedule.

Proposed paragraph (a)(1)(A) of the fee schedule also would describe the monthly cadence of the invoices for Historical CAT Assessment 1. Specifically, after the first invoices are provided to CAT Executing Brokers in November 2024, invoices will be sent to CAT Executing Brokers each month thereafter while Historical CAT Assessment 1 is in effect.

Proposed paragraph (a)(1)(B) of the fee schedule would describe the invoices for Historical CAT Assessment 1. Proposed paragraph (a)(1)(B) of the fee schedule would state that "Consolidated Audit Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis." Proposed paragraph

[90] Dividing $0.00003994969693072937 by three equals $0.00001331656564357646. Rounding $0.00001331656564357646 to six decimal places equals $0.000013.

(a)(1)(B) of the fee schedule also would describe the fees to be set forth in the invoices for Historical CAT Assessment 1. Specifically, it would state that "[e]ach month, such invoices shall set forth a fee for each transaction in Eligible Securities executed by the CAT Executing Broker in its capacity as a CAT Executing Broker for the Buyer ("CEBB") and/or the CAT Executing Broker for the Seller ("CEBS") (as applicable) from the prior month as set forth in CAT Data. The fee for each such transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by the fee rate of $0.000013 per executed equivalent share."

Furthermore, proposed paragraph (a)(1)(C) of the fee schedule would describe how long Historical CAT Assessment 1 would remain in effect. It would state that "Historical CAT Assessment 1 will remain in effect until $212,039,879.34 (two-thirds of Historical CAT Costs 1) are collected from CAT Executing Brokers collectively, which is estimated to be approximately two years, but could be for a longer or shorter period of time." This proposed paragraph would further state that "Consolidated Audit Trail, LLC will provide notice when Historical CAT Assessment 1 will no longer be in effect."

Historical CAT Assessment 1 will be assessed for all transactions executed in each month through the end of the month in which two-thirds of Historical CAT Costs 1 are assessed, and then CAT LLC will provide notice that Historical CAT Assessment 1 is no longer in effect. Since Historical CAT Assessment 1 is a monthly fee based on transaction volume from the prior month, Historical CAT Assessment 1 may collect more than two-thirds of Historical CAT Costs 1. To the extent that occurs, any excess money collected during the final month in which Historical CAT Assessment 1 is in effect will be used to offset future fees and/or to fund the reserve for the CAT.

Finally, proposed paragraph (a)(1)(D) of the fee schedule sets forth the requirement for the CAT Executing Brokers to pay the invoices for Historical CAT Assessment 1. It would state that "[e]ach CAT Executing Broker shall be required to pay each invoice for Historical CAT Assessment 1 in accordance with paragraph (b)."

(B) Manner of Payment

Paragraph (b)(1) to the "Consolidated Audit Trail Funding Fees" section of its fee schedule describes the manner of payment of Industry Member CAT fees. Paragraph (b)(1) states that "[e]ach CAT Executing Broker shall pay its CAT fees as required pursuant to paragraph (a) each month to the Consolidated Audit Trail, LLC in the manner prescribed by the Consolidated Audit Trail, LLC." The CAT NMS Plan requires the Operating Committee to establish a system for the collection of CAT fees.[91] The Plan Processor has established a billing system for CAT fees.[92] Therefore, the Exchange proposes to require CAT Executing Brokers to pay Historical CAT Assessment 1 in accordance with such system.

(C) Failure to Pay CAT Fees

The CAT NMS Plan further states that:

> Participants shall require each Industry Member to pay all applicable fees authorized under this Article XI within thirty (30) days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If an Industry Member fails to pay any such fee when due (as determined in accordance with the preceding sentence), such Industry Member shall pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal

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91 Section 11.4 of the CAT NMS Plan.

92 The billing process and system are described in CAT Alert 2023-02 as well as the CAT FAQs related to the billing of CAT fees, the Industry Member CAT Reporter Portal User Guide, the FCAT Industry Member Onboarding Guide, the FCAT Connectivity Supplement for Industry Members and the CAT Billing Webinars (dated Sept. 28, 2023, and Nov. 7, 2023), each available on the CAT website.

> to the lesser of: (a) the Prime Rate plus 300 basis points; or (b) the maximum rate permitted by applicable law.[93]

Accordingly, the Exchange previously has added this requirement to the Exchange's fee schedule. Specifically, paragraph (b)(2) of the fee schedule states:

> Each CAT Executing Broker shall pay the CAT fees required pursuant to paragraph (a) within thirty days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If a CAT Executing Broker fails to pay any such CAT fee when due, such CAT Executing Broker shall pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal to the lesser of (i) the Prime Rate plus 300 basis points, or (ii) the maximum rate permitted by applicable law.

The requirements of paragraph (b)(2) would apply to Historical CAT Assessment 1.

(7) Historical CAT Assessment Details

The CAT NMS Plan states that:

> Details regarding the calculation of a CAT Executing Broker's Historical CAT Assessment will be provided upon request to such CAT Executing Broker. At a minimum, such details would include each CAT Executing Broker's executed equivalent share volume and corresponding fee by (1) Listed Options, NMS Stocks and OTC Equity Securities, (2) by transactions executed on each exchange and transactions executed otherwise than on an exchange, and (3) by buy-side transactions and sell-side transactions.[94]

Such information would provide CEBBs and CEBSs with the ability to understand the details regarding the calculation of their Historical CAT Assessment.[95] CAT LLC will

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93 Section 11.4 of the CAT NMS Plan.

94 Section 11.3(a)(iv)(A) of the CAT NMS Plan.

95 In approving the CAT Funding Model, the Commission stated that, "[i]n the Commission's view, providing CAT Execut[ing] Brokers information regarding the calculation of their CAT Fees will aid in transparency and permit CAT Execut[ing] Brokers to confirm the accuracy of their invoices for CAT Fees." CAT Funding Model Approval Order at 62667.

provide CAT Executing Brokers with these details regarding the calculation of their Historical CAT Assessments on their monthly invoice for the Historical CAT Assessment.

In addition, CAT LLC will make certain aggregate statistics regarding Historical CAT Assessments publicly available. Specifically, the CAT NMS Plan states that, "[f]or each Historical CAT Assessment, at a minimum, CAT LLC will make publicly available the aggregate executed equivalent share volume and corresponding aggregate fee by (1) Listed Options, NMS Stocks and OTC Equity Securities, (2) by transactions executed on each exchange and transactions executed otherwise on an exchange, and (3) by buy-side transactions and sell-side transactions."[96] Such aggregate statistics will be available on the CAT website.

Furthermore, CAT LLC will make publicly available on the CAT website the total amount invoiced each month that Historical CAT Assessment 1 is in effect as well as the total amount invoiced for Historical CAT Assessment 1 for all months since its commencement. CAT LLC also will make publicly available on the CAT website the total costs to be collected from Industry Members for Historical CAT Assessment 1. By reviewing statistics regarding how much has been invoiced and how much remains to be invoiced for Historical CAT Assessment 1, Industry Members would have sufficient information to reasonably track how much longer Historical CAT Assessment 1 is likely to be in place.

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[96] Section 11.3(a)(iv)(B) of the CAT NMS Plan. In approving the CAT Funding Model, the Commission stated that "[t]he publication of the aggregate executed equivalent share volume and aggregate fee is appropriate because it would allow Participants and CAT Executing Brokers a high-level validation of executed volume and fees." CAT Funding Model Approval Order at 62667.

(8) Implementation Assistance

To assist Industry Members with compliance with the commencement of Historical CAT Assessment 1, CAT LLC has been making available to CAT Executing Brokers mock invoices prior to the commencement of Historical CAT Assessment 1. Specifically, CAT Executing Brokers have received mock invoices based on transaction data each month since November 2023. The mock invoices are in the same form as the actual, payable invoices, including both the relevant transaction data and the corresponding fee. However, no payments have been required in response to such mock invoices; they have been used solely to assist CAT Executing Brokers with the development of their processes for paying the CAT fees. Such data has provided CAT Executing Brokers with a preview of the transaction data used in creating the invoices for Historical CAT Assessment 1 fees, as the data will be the same as data provided in actual invoices. Such data preview is intended to facilitate the payment of Historical CAT Assessment 1.

(9) Financial Accountability Milestones

The CAT NMS Plan states that "[n]o Participant will make a filing with the SEC pursuant to Section 19(b) of the Exchange Act regarding any Historical CAT Assessment until any applicable Financial Accountability Milestone described in Section 11.6 has been satisfied."[97] The CAT NMS Plan further states that "in all filings submitted by the Participants to the Commission under Section 19(b) of the Exchange Act, to establish or implement Post-Amendment Industry Member Fees pursuant to this Article, … the Participants shall clearly indicate whether such fees are related to Post-Amendment

[97] Section 11.3(b)(iii)(B)(III) of the CAT NMS Plan.

Expenses incurred during Period 1, Period 2, Period 3, or Period 4."[98] As discussed in detail below, all applicable Financial Accountability Milestones for Historical CAT Assessment 1 – that is, Period 1, Period 2 and Period 3 of the Financial Accountability Milestones – have been satisfied. Furthermore, as discussed below, this filing clearly indicates that Historical CAT Assessment 1 relates to Post-Amendment Expenses incurred during Periods 1, 2 and 3 of the Financial Accountability Milestones.

(A) Period 1 of the Financial Accountability Milestones

In accordance with Section 11.6(b) of the CAT NMS Plan, Historical CAT Assessment 1 seeks to recover costs that are related to "all fees, costs, and expenses (including legal and consulting fees, costs, and expenses) incurred by or for the Company in connection with the development, implementation and operation of the CAT from the effective date of [Section 11.6 of the CAT NMS Plan] until such time as Full Implementation of CAT NMS Plan Requirements has been achieved"[99] ("Post-Amendment Expenses") incurred during FAM Period 1. FAM Period 1 began on June 22, 2020, the effective date of Section 11.6 of the CAT NMS Plan, and concluded on July 31, 2020, the date of Initial Industry Member Core Equity and Options Reporting. Section 1.1 of the CAT NMS Plan defines "Initial Industry Member Core Equity and Options Reporting" 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

98 Section 11.6(b) of the CAT NMS Plan.

99 Section 11.6 of the CAT NMS Plan.

Customer Account Information, Customer-ID and Customer Identifying Information.

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports.[100] As indicated by the Participants' Quarterly Progress Report for the third quarter of 2020,[101] Initial Industry Member Core Equity and Option Reporting was completed on schedule on July 22, 2020, which is prior to the July 31, 2020 deadline.

Under the FAM Period 1 requirement of Initial Industry Member Core Equity and Options Reporting, Industry Members – excluding Small Industry Members that are not OATS reporters – were required to report two categories of data to the CAT: equites transaction data and options transaction data (both excluding Customer Account Information, Customer-ID, and Customer Identifying Information) by July 31, 2020. Pursuant to exemptive relief provided by the Commission, the Commission authorized the Participants' Compliance Rules to allow core equity reporting for Industry Members (Phase 2a) to begin on June 22, 2020 and core options reporting for Industry Members (Phase 2b) to begin on July 20, 2020.[102]

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100 The Quarterly Progress Reports are available at https://www.catnmsplan.com/implementation-plan.

101 *See* Q3 2020 Quarterly Progress Report (Oct. 30, 2020) and Updated Q3 2020 Quarterly Progress Report (Jan. 29, 2021).

102 *See* Phased Reporting Exemptive Relief Order. Under the CAT NMS Plan as adopted, the Participants were required, through their Compliance Rules, to require their Large Industry Members to commence reporting Industry Member Data to the Central Repository by November 15, 2018, and to require their Small Industry Members to commence reporting Industry Member Data to the Central Repository by November 15, 2019. Sections 6.7(a)(v) and (vi) of the CAT NMS Plan. The SEC granted exemptive relief from these provisions of the CAT NMS Plan to allow for the phased implementation of Industry Member reporting via five phases addressing the reporting requirements for Phase 2a Industry Member Data, Phase 2b Industry Member Data, Phase 2c Industry Member Data, Phase 2d Industry Member Data and Phase 2e Industry Member Data.

In adopting the FAMs, the Commission stated that the equities transaction reporting required for FAM Period 1 "is consistent with the functionality that the Participants describe on the CAT NMS Plan website as 'Production Go-Live for Equities 2a file submission and data integrity validations.'"[103] The Phase 2a Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order, and includes the following data related to Eligible Securities that are equities:

- All events and scenarios covered by OATS, which includes information related to the receipt or origination of orders, order transmittal, and order modifications, cancellations and executions;

- Reportable Events for: (1) proprietary orders, including market maker orders, for Eligible Securities that are equities; (2) electronic quotes in listed equity Eligible Securities (*i.e.*, NMS stocks) sent to a national securities exchange or FINRA's Alternative Display Facility ("ADF"); (3) electronic quotes in unlisted Eligible Securities (*i.e.*, OTC Equity Securities) received by an Industry Member operating an interdealer quotation system ("IDQS"); and (4) electronic quotes in unlisted Eligible Securities sent to an IDQS or other quotation system not operated by a Participant or Industry Member;

- Firm Designated IDs ("FDIDs"), which Industry Members must report to the CAT as required by Sections 6.3(d)(i)(A) and 6.4(d)(ii)(C) of the CAT NMS Plan;

- Industry Members would be required to report all street side representative orders, including both agency and proprietary orders and mark such orders as representative orders, except in certain limited exceptions as described in the Industry Member Technical Specifications;

- The link between the street side representative order and the order being represented when: (1) the representative order was originated specifically to represent a single order received either from a customer or another broker-dealer; and (2) there is (a) an existing direct electronic link in the Industry Member's system between the order being represented and the representative order and (b) any resulting executions are immediately and automatically applied to the represented order in the Industry Member's system;

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[103] Securities Exchange Act Rel. No. 88890 (May 15, 2020), 85 Fed. Reg. 31322, 31330 n.97 (May 22, 2020) ("FAM Adopting Release").

- Manual and Electronic Capture Time for Manual Order Events;
- Special handling instructions for the original receipt or origination of an order during Phase 2a; and
- When routing an order, whether the order was routed as an intermarket sweep order ("ISO").

In Phase 2a, Industry Members were not required to report modifications of a previously routed order in certain limited instances, nor were they required to report a cancellation of an order received from a Customer after the order has been executed.[104]

The Quarterly Progress Report for the third quarter of 2020 states that "Interim Step: Production Go-Live for Equities 2a file submission and data integrity validation (Large Industry Members and Small OATS Reporters)" was completed on June 22, 2020. Accordingly, the FAM Period 1 requirement of reporting by Industry Members (excluding Small Industry Members that are not OATS reporters) of "equities transaction data, excluding Customer Account Information, Customer-ID, and Customer Identifying Information" was completed on June 22, 2020.

In adopting the FAMs, the Commission stated that the options transaction reporting required for FAM Period 1 is "consistent with the functionality that the Participants describe on the CAT NMS Plan website as 'Production Go-Live for Options 2b file submission and data integrity validations.'"[105] The Phase 2b Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order, and includes the Industry Member Data related to Eligible Securities that are options and related to simple electronic option orders, excluding electronic paired option orders. A

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104 Phased Reporting Exemptive Relief Order at 23076-78.

105 FAM Adopting Release at 31330, n.98.

simple electronic option order is an order to buy or sell a single option that is not related to or dependent on any other transaction for pricing and timing of execution that is either received or routed electronically by an Industry Member. Electronic receipt of an order is defined as the initial receipt of an order by an Industry Member in electronic form in standard format directly into an order handling or execution system. Electronic routing of an order is the routing of an order via electronic medium in standard format from one Industry Member's order handling or execution system to an exchange or another Industry Member. An electronic paired option order is an electronic option order that contains both the buy and sell side that is routed to another Industry Member or exchange for crossing and/or price improvement as a single transaction on an exchange. Responses to auctions of simple orders and paired simple orders would be reportable in Phase 2b. Furthermore, combined orders in options would be treated in Phase 2b in the same way as equity representative orders are treated in Phase 2a. A combined order would mean, as permitted by SRO rules, a single, simple order in Listed Options created by combining individual, simple orders in Listed Options from a customer with the same exchange origin code before routing to an exchange. During Phase 2b, the single combined order sent to an exchange must be reported and marked as a combined order, but the linkage to the underlying orders is not required to be reported until Phase 2d.[106]

The Quarterly Progress Report for the third quarter of 2020 states that "Interim Step: Production Go-Live for Options 2b file submission and data integrity validations" was completed on July 20, 2020. Accordingly, the FAM Period 1 requirement of reporting by Industry Members (excluding Small Industry Members that are not OATS

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[106] Phased Reporting Exemptive Relief Order at 23078.

reporters) of "options transaction data, excluding Customer Account Information, Customer-ID and Customer Identifying Information" was completed on July 20, 2020.

As discussed above, the Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from June 22, 2020 through July 31, 2020. The total costs for this period, as discussed above, are $6,377,343. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be responsible for the remaining two-thirds, with CEBBs paying one-third ($2,125,781) and CEBSs paying one-third ($2,125,781).

(B) Period 2 of the Financial Accountability Milestones

Historical CAT Assessment 1 seeks to recover costs that are related to Post-Amendment Expenses incurred during FAM Period 2. FAM Period 2 began on August 1, 2020, and concluded on December 31, 2020, the date of the Full Implementation of Core Equity Reporting. Section 1.1 of the CAT NMS Plan defines "Full Implementation of Core Equity Reporting" 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 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.

> This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports. As indicated by the Participants' Quarterly Progress Report for the fourth quarter of 2020,[107] Full Implementation of Core Equity Reporting was completed on schedule by December 31, 2020.

Specifically, the Full Implementation of Core Equity Reporting requires the satisfaction of two prongs. The first prong requires Participants to have fully implemented the first phase of equities transaction reporting for Industry Members (excluding Small Industry Members that are not OATS reporters) at an Error Rate of less than 5%. In addition, equities transaction data produced by the CAT at this stage must also be sufficiently interlinked so as to permit full analysis of an order's lifecycle across the national market, excluding full linkage of representative orders. As CAT LLC reported on its Quarterly Progress Reports, Phase 2a was fully implemented as of October 26, 2020, including intra-firm, inter-firm, national securities exchange, and trade reporting facilities linkages.[108] In addition to the reporting of Phase 2a Industry Member Data as described above with regard to FAM Period 1, the following linkage data was added to the CAT as described in the Quarterly Progress Reports for the third and fourth quarter of 2020:

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107 Q4 2020 Quarterly Progress Report (Jan. 29, 2021).

108 For a description of the requirements of Phases 2a, *see* Phased Reporting Exemptive Relief Order.

- "Production Go-Live for Equities 2a Intrafirm Linkage validations" was completed on 7/27/2020;[109]

- "Production Go-Live for Firm to Firm Linkage validations for Equities 2a (Large Industry Members and Small OATS Reporters)" was completed on October 26, 2020; and

- "Production Go-Live for Equities 2a Exchange and TRF Linkage validations (Large Industry Members and Small OATS Reporters)" was completed on October 26, 2020.

Furthermore, as CAT LLC reported on its Quarterly Progress Report for the fourth quarter of 2020, the average overall error rate for Phase 2a Industry Member Data was less than 5% as of December 31, 2020. The average overall error rate was calculated by dividing the compliance errors by processed records.

The second prong of this FAM requires that the equities transaction data collected by the CAT at this stage be made available to regulators through two basic query tools required by the CAT NMS Plan – a targeted query tool that will enable regulators to retrieve data via an online query screen with a variety of predefined selection criteria, and a user-defined direct query tool that will provide regulators with the ability to query data using all available attributes and data sources.[110] As CAT LLC reported on its Quarterly Progress Reports, the query tool functionality incorporating the data from Phase 2a was available to the Participants and the Commission as of December 31, 2020.[111]

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109 Q3 2020 Quarterly Progress Report (Oct. 20, 2021).

110 Section 6.10(c)(i)(A) of the CAT NMS Plan requires the Plan Processor to "provide Participants and the SEC with access to all CAT Data stored in the Central Repository" via an "online targeted query tool." Appendix D,

Sections 8.1.1-8.1.3 of the CAT NMS Plan describes the required functionality associated with this regulatory tool. Appendix D, Section 8.2.1 describes the required functionality associated with a user-defined direct query tool that will "deliver large sets of data that can then be used in internal surveillance or market analysis applications."

111 *See* Q3 2020 Quarterly Progress Report (Oct. 30, 2020); Updated Q3 2020 Quarterly Progress Report (Jan. 29, 2021); and Q4 2020 Quarterly Progress Report (Jan. 29, 2021).

The Commission has determined that the Participants have sufficiently complied with the conditions set forth in the 2020 Orders and with the technical requirements for Quarterly Progress Reports set forth in Section 6.6(c) of the CAT NMS Plan for purposes of determining compliance with this FAM.[112]

As discussed above, Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from August 1, 2020 through December 31, 2020. The total costs for this period, as discussed above, are $42,976,478. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be responsible for the remain two-thirds, with CEBBs paying one-third ($14,325,492.70) and CEBSs paying one-third ($14,325,492.70).

(C) Period 3 of the Financial Accountability Milestones

Historical CAT Assessment 1 seeks to recover costs that are related to Post-Amendment Expenses incurred during FAM Period 3. FAM Period 3 began on January 1, 2021, and concluded on December 31, 2021, the date of the Full Availability and Regulatory Utilization of Transactional Database Functionality. Section 1.1 of the CAT NMS Plan defines "Full Availability and Regulatory Utilization of Transactional Database Functionality" as:

> the point at which: (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

[112] Securities Exchange Act Rel. No. 98848 (Nov. 2, 2023), 88 Fed. Reg. 77128, 77129 n.13 (Nov. 8, 2023) ("Settlement Exemptive Order").

> 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 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. This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

Under Section 1.1 of the CAT NMS Plan, this Financial Accountability Milestone is considered complete as of the date identified in the Participants' Quarterly Progress Reports. As indicated by the Participants' Quarterly Progress Report for the fourth quarter of 2021,[113] Full Availability and Regulatory Utilization of Transactional Database Functionality was completed on schedule by December 31, 2021.

Specifically, the "Full Availability and Regulatory Utilization of Transactional Database Functionality" requires the satisfaction of five prongs. The first prong requires that reporting to the Order Audit Trail System ("OATS") is no longer required for new orders. As CAT LLC reported on its Quarterly Progress Report for the fourth quarter of

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113 Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

2021,[114] FINRA retired OATS effective September 1, 2021.[115] Accordingly, after the retirement of OATS, reporting to OATS was no longer required.

In addition to Phase 2a and Phase 2b Industry Member Data, the second and third prongs of "Full Availability and Regulatory Utilization of Transactional Database Functionality" require Industry Member reporting of Phase 2c Industry Member Data and Phase 2d Industry Member Data. The Phase 2c Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order. That Order states that "Phase 2c Industry Member Data" is Industry Member Data related to Eligible Securities that are equities other than Phase 2a Industry Member Data, Phase 2d Industry Member Data, or Phase 2e Industry Member Data. Specifically, the Phase 2c Industry Member Data includes Industry Member Data that is related to Eligible Securities that are equities and that is related to: (1) Allocation Reports as required to be recorded and reported to the Central Repository pursuant to Section 6.4(d)(ii)(A)(1) of the CAT NMS Plan; (2) quotes in unlisted Eligible Securities sent to an IDQS operated by a CAT Reporter (reportable by the Industry Member sending the quotes) (except for quotes reportable in Phase 2d, as discussed below); (3) electronic quotes in listed equity Eligible Securities (*i.e.*, NMS stocks) that are not sent to a national securities exchange or FINRA's Alternative Display Facility; (4) reporting changes to client instructions regarding modifications to algorithms; (5) marking as a representative order any order originated to work a customer order in price guarantee scenarios, such as a guaranteed VWAP; (6) flagging rejected external routes to indicate a route was not accepted by the receiving

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114 *Id.*

115 Securities Exchange Act Rel. No. 92239 (June 23, 2021), 86 Fed. Reg. 34293 (June 29, 2021).

destination; (7) linkage of duplicate electronic messages related to a Manual Order Event between the electronic event and the original manual route; (8) special handling instructions on order route reports (other than the ISO, which is required to be reported in Phase 2a); (9) quote identifier on trade events; (10) reporting of LTIDs (if applicable) for accounts with Reportable Events that are reportable to CAT as of and including Phase 2c; (11) reporting of date account opened or Account Effective Date (as applicable) for accounts and reporting of a flag indicating the Firm Designated ID type as account or relationship; (12) order effective time for orders that are received by an Industry Member and do not become effective until a later time; (13) the modification or cancellation of an internal route of an order; and (14) linkages to the customer orders(s) being represented for representative order scenarios, including agency average price trades, net trades, aggregated orders, and disconnected Order Management System ("OMS") – Execution Management System ("EMS") scenarios, as required in the Industry Member Technical Specifications.[116]

Phase 2c Industry Member Data also includes electronic quotes that are provided by or received in a CAT Reporter's order/quote handling or execution systems in Eligible Securities that are equities and are provided by an Industry Member to other market participants off a national securities exchange under the following conditions: (1) an equity bid or offer is displayed publicly or has been communicated (a) for listed securities to the ADF operated by FINRA; or (b) for unlisted equity securities to an "interdealer quotation system," as defined in FINRA Rule 6420(c); or (2) an equity bid or offer which is accessible electronically by customers or other market participants and is immediately

116 Phase Reporting Exemptive Relief Order at 23078-79.

actionable for execution or routing; *i.e.*, no further manual or electronic action is required by the responder providing the quote in order to execute or cause a trade to be executed). With respect to OTC Equity Securities, OTC Equity Securities quotes sent by an Industry Member to an IDQS operated by an Industry Member CAT Reporter (other than such an IDQS that does not match and execute orders) are reportable by the Industry Member sending them in Phase 2c. Accordingly, any response to a request for quote or other form of solicitation response provided in a standard electronic format (*e.g.*, FIX) that meets this quote definition (*i.e.*, an equity bid or offer which is accessible electronically by customers or other market participants and is immediately actionable for execution or routing) would be reportable in Phase 2c.[117]

The Phase 2d Industry Member Data is described in detail in the SEC's Phased Reporting Exemptive Relief Order. "Phase 2d Industry Member Data" is Industry Member Data that is related to Eligible Securities that are options other than Phase 2b Industry Member Data, Industry Member Data that is related to Eligible Securities that are equities other than Phase 2a Industry Member Data or Phase 2c Industry Member Data, and Industry Member Data other than Phase 2e Industry Member Data. Phase 2d Industry Member Data includes with respect to the Eligible Securities that are options: (1) simple manual orders; (2) electronic and manual paired orders; (3) all complex orders with linkages to all CAT-reportable legs; (4) LTIDs (if applicable) for accounts with Reportable Events for Phase 2d; (5) date account opened or Account Effective Date (as applicable) for accounts with an LTID and flag indicating the Firm Designated ID type as account or relationship for such accounts; (6) Allocation Reports as required to be

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117 *Id*. at 23079.

recorded and reported to the Central Repository pursuant to Section 6.4(d)(ii)(A)(1) of the CAT NMS Plan; (7) the modification or cancellation of an internal route of an order; and (8) linkage between a combined order and the original customer orders. Phase 2d Industry Member Data also would include electronic quotes that are provided by or received in a CAT Reporter's order/quote handling or execution systems in Eligible Securities that are options and are provided by an Industry Member to other market participants off a national securities exchange under the following conditions: a listed option bid or offer which is accessible electronically by customers or other market participants and is immediately actionable (*i.e.*, no further action is required by the responder providing the quote in order to execute or cause a trade to be executed). Accordingly, any response to a request for quote or other form of solicitation response provided in standard electronic format (*e.g.*, FIX) that meets this definition is reportable in Phase 2d for options.[118]

Phase 2d Industry Member Data also includes with respect to Eligible Securities that are options or equities (1) receipt time of cancellation and modification instructions through Order Cancel Request and Order Modification Request events; (2) modifications of previously routed orders in certain instances; and (3) OTC Equity Securities quotes sent by an Industry Member to an IDQS operated by an Industry Member CAT Reporter that does not match and execute orders. In addition, subject to any exemptive or other relief, Phase 2d Industry Member Data will include verbal or manual quotes on an exchange floor or in the over-the-counter market, where verbal quotes and manual quotes are defined as bids or offers in Eligible Securities provided verbally or that are provided

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118 *Id.*

or received other than via a CAT Reporter's order handling and execution system (*e.g.*, quotations provided via email or instant messaging).[119]

The Quarterly Progress Report for the fourth quarter of 2021 states that "Phase 2a was fully implemented as of October 26, 2020;" "Phase 2b was fully implemented as of January 4, 2021;" "Phase 2c was implemented as of April 26, 2021;" and "Phase 2d was fully implemented as of December 13, 2021."[120] The Quarterly Progress Reports for 2021 provide additional detail regarding the implementation of these steps including the following:

- "Production Go-Live for Equities 2c reporting requirements (Large Industry Members)" was completed on April 26, 2021;
- "LTID Account Information Reporting Go-Live for Phases 2a, 2b and 2c (Large Industry Members)" was completed on April 26, 2021;
- "FCAT Plan Processor creates linkages of the lifecycle of order events based on the received data through Phase 2d Production Go-Live for Options 2d reporting requirements (Large Industry Members)" was completed on December 13, 2021;
- "Production Go-Live for Options 2d reporting requirements (Large Industry Members)" was completed on December 13, 2021;
- "Production Go-Live for Options 2b reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;
- "Production Go-Live for Equities 2c reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;
- "Production Go-Live for Options 2d reporting requirements (Small OATS Reporters and Small Non-OATS Reporters)" was completed on December 13, 2021;

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119 *Id*. at 23079-80.

120 *See* Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

- "LTID Account Information Reporting Go-Live for Phases 2d (Large Industry Members)" was completed on December 13, 2021; and
- "LTID Account Information Reporting Go-Live for Phases 2a, 2b, 2c and 2d (Small Industry Members)" was completed on December 13, 2021.[121]

The third prong of "Full Availability and Regulatory Utilization of Transactional Database Functionality" also imposes an Error Rate requirement of 5% or less. The Quarterly Progress Report for the fourth quarter of 2021 states the average overall error rate was less than 5% as of December 31, 2021. The average overall error rate was calculated by dividing the compliance errors by processed records.

The fourth prong of "Full Availability and Regulatory Utilization of Transactional Database Functionality" requires that the data collected by the CAT at this stage be made available to regulators through an online targeted query tool and a user-defined direct query tool. As CAT LLC reported on its Quarterly Progress Report for the fourth quarter of 2021, the query tool functionality incorporating the data from Phases 2a, 2b, 2c and 2d was available to the Participants and to the Commission as of December 31, 2021.[122]

The fifth prong requires the requirements of Section 6.10(a) of the CAT NMS Plan to have been met. Section 6.10(a) of the CAT NMS Plan requires the Participants to use the tools described in Appendix D to "develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the Central Repository." The Exchange implemented a surveillance system, or enhanced existing surveillance systems,

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121 *See* Q2 2021 Quarterly Progress Report (July 27, 2021); and Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

122 *See* Q4 2021 Quarterly Progress Report (Jan. 17, 2022)

reasonably designed to make use of the consolidated information contained in the Central Repository as of December 31, 2021 in accordance with Section 6.10(a) of the CAT NMS Plan.[123]

The Commission has determined that the Participants have sufficiently complied with the conditions set forth in the 2020 Orders and with the technical requirements for Quarterly Progress Reports set forth in Section 6.6(c) of the CAT NMS Plan for purposes of determining compliance with this FAM.[124]

As discussed above, Historical CAT Costs 1 to be recovered via Historical CAT Assessment 1 would include fees, costs and expenses incurred by or for the Company in connection with the development, implementation and operation of the CAT during the period from January 1, 2021 through December 31, 2021. The total costs for this period, as discussed above, are $144,415,268. Participants would remain responsible for one-third of this cost (which they have previously paid), and Industry Members would be responsible for the remain two-thirds, with CEBBs paying one-third ($48,138,422.70) and CEBSs paying one-third ($48,138,422.70).

(D) Additional Considerations related to the Financial Accountability Milestones

As discussed above, CAT LLC has satisfied the Financial Accountability Milestones ("FAMs") for Periods 1 through 3.[125] As discussed below, none of the

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123 *See* Q1 2021 Quarterly Progress Report (Apr. 30, 2021); Q2 2021 Quarterly Progress Report (July 27, 2021); Q3 2021 Quarterly Progress Report (Nov. 1, 2021); Q4 2021 Quarterly Progress Report (Jan. 17, 2022).

124 Settlement Exemptive Order at 77129 n.13.

125 In May 2020, the Commission adopted amendments to the CAT NMS Plan that establish four Financial Accountability Milestones and set target deadlines by which these milestones must be achieved. These amendments also reduce the amount of any fees, costs, and expenses that may be

circumstances related to NIA Electronic RFQ Responses, the 2023 Verbal Quotes Exemption, the November 2023 Order, or Executing Broker reporting, affect the conclusion that the FAMs for Periods 1 through 3 were satisfied in a timely fashion.

(i) NIA Electronic RFQ Responses

CAT LLC does not believe that the exemptive relief relating to the reporting of electronic responses for quotes ("RFQs") that are not immediately actionable ("NIA Electronic RFQ Responses") affect the conclusion that FAMs 1 through 3 have been satisfied. The only reason CAT LLC pursued this relief is because certain Industry Members introduced concerns that NIA Electronic RFQ Responses could be considered "orders" reportable pursuant to Rule 613(j)(8) and some Industry Members were not prepared to report such orders to CAT. Thus, the relief was requested on behalf of Industry Members. CAT LLC itself has not taken any position on whether NIA Electronic RFQ Responses are "orders," as the definition of "order" is an SEC rule and the trading processes for NIA Electronic RFQ Responses are the Industry Members', not those of the Participants or CAT LLC. Accordingly, CAT LLC stated in its letter that "Industry Members must determine whether trading interest falls within the definition of an 'order' for CAT purposes. To the extent an NIA Electronic RFQ Response is not considered an 'order" as defined in Rule 613(j)(8) and the CAT NMS Plan, it would not be reportable to CAT."[126]

Only "orders" as defined in SEC Rule 613(j)(8) are reportable to CAT. There is

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recovered from Industry Members if the Participants fail to meet the target deadlines. FAM Adopting Release.

126 *See* Letter from Brandon Becker, Chair, CAT NMS Plan Operating Committee to Vanessa Countryman, Secretary, Commission (Feb. 13, 2024) at 2.

no agreement across the industry or among regulators as to whether NIA Electronic RFQ Responses are "orders" reportable to CAT. Certain Industry Members have raised the question as to whether NIA Electronic RFQ Responses are orders, but others have argued that they are not orders under Rule 613(j)(8).[127] Indeed, members of the Advisory Committee, which CAT LLC relies upon for guidance with regard to Industry Member issues, have not had a definitive view on whether NIA Electronic RFQ Responses are orders. As Rule 613(j)(8) is an SEC rule, CAT LLC believes that only the SEC can provide a definitive determination as to if, and under what circumstances, an NIA Electronic RFQ Response is considered an "order" reportable to CAT. The issue has persisted for some time. As a result, CAT LLC filed an exemptive request regarding NIA Electronic RFQ Responses for clarity on the interpretive issue. As recently as April 2024, Industry Members have re-raised this issue stating that the SEC agrees that it must provide additional guidance on this interpretive issue to resolve the CAT reporting issue for NIA Electronic RFQ Responses:

> As further discussed in the prior FIF letters, even if the Commission had the legal authority to require the reporting of NIA RFQ responses to CAT without an amendment to Rule 613, the Commission has not provided guidance to industry members as to the conditions under which NIA RFQ responses would be reportable to CAT. In subsequent discussions with industry members, Commission representatives have agreed that, prior to NIA RFQ responses being reportable to CAT, it would be necessary for the Commission to provide further guidance to

127 *See, e.g.*, Letter from Howard Meyerson, Managing Director, FIF, to Sai Rao, Counsel for Trading and Markets, Office of the Chair (Apr. 25, 2024).

industry members as to the conditions under which NIA RFQ responses would be reportable to CAT.[128]

On May 20, 2024, the Commission granted CAT LLC's request for exemptive relief from certain CAT reporting requirements pertaining to NIA Electronic RFQ Responses to the extent such responses are considered "orders" reportable pursuant to Rule 613(j)(8).[129] The Commission, however, did not provide additional guidance regarding the conditions under which NIA Electronic RFQ Responses would be reportable to CAT. The Commission stated in its exemptive order that "[t]o the extent that the Participants are availing themselves of exemptive relief from a CAT NMS Plan requirement, such requirement shall not be included in the requirements for the Financial Accountability Milestones, provided that any conditions of the exemption are satisfied."[130]

When the Commission proposed the FAMs, the Participants expressed concern that, "by conditioning the ability of CAT LLC and the Participants to collect Post-Amendment Industry Member Fees on factors dependent on the efforts of Industry Members, the Commission's proposals inadvertently establish a perverse incentive for Industry Members to devote less than maximum efforts to comply with their obligations related to the CAT as they will pay less fees in such instances."[131] The Participants further warned that "Industry Members may request or require unanticipated reporting delays to address Industry Member implementation issues or concerns," but that, "[f]aced

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128 *Id.*

129 Securities Exchange Act Rel. No. 100181 (May 20, 2024), 89 Fed. Reg. 45715 (May 23, 2024).

130 *Id.* at n.11.

131 *See* Letter from Michael Simon, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission at 9 (Oct. 28, 2019).

with financial penalties for missed deadlines, the Participants may not be able to fully address legitimate industry concerns or accommodate requests for delays with respect to future deadlines."[132] CAT LLC has engaged in good faith to help address NIA Electronic RFQ Responses and other concerns relevant to the ability of Industry Members to meet their CAT reporting obligations. CAT LLC should not be penalized financially for seeking in good faith to resolve a difficult interpretive issue for the benefit of Industry Members.

(ii) 2023 Verbal Quotes Exemption

CAT LLC does not believe that the Commission's May 19, 2023 order granting temporary exemptive relief relating to certain verbal floor activity and unstructured verbal and electronic upstairs activity (the "2023 Verbal Quotes Exemption") affects the conclusion that FAMs 1 through 3 have been satisfied. The 2023 Verbal Quotes Exemption, which was issued on May 19, 2023, is not relevant for purposes of FAM Periods 1 through 3, which only cover the period through December 31, 2021. The relevant exemption for this time period is the Commission's November 12, 2020 order, which granted relief for the same activity through July 31, 2023 (the "2020 Verbal Quotes Order").[133] The Commission has stated that, "to the extent that the Participants are availing themselves of exemptive relief from a CAT NMS Plan requirement, such requirement shall not be included in the requirements for a Financial Accountability Milestone, provided that the conditions of the exemption are satisfied."[134] Here, the 2020

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132 *Id.* at 10.

133 Securities Exchange Act Rel. No. 90405, 85 Fed. Reg. 73544 (Nov. 18, 2020) (the "2020 Verbal Quotes Exemption").

134 *See, e.g.*, Securities Exchange Act Rel. No. 89051 (June 11, 2020), 85 Fed. Reg. 36631, 36633 (June 17, 2020). The straightforward reading of the Commission's statement is that compliance

Verbal Quotes Order was in effect and the conditions of the exemption were satisfied as of December 31, 2021, and therefore may be relied upon for purposes of determining compliance with FAM Periods 1 through 3.[135]

(iii) November 2023 Order

CAT LLC does not believe that the Commission's November 2, 2023 order granting relief from certain CAT NMS Plan requirements (the "November 2023 Order") affects the conclusion that FAMs 1 through 3 have been satisfied. The November 2023 Order is not relevant for purposes of FAM Periods 1 through 3, which only cover the period through December 31, 2021. As described in the November 2023 Order, the relevant exemptive orders for this time period were issued on December 16, 2020, which also states that "the Commission has determined that the Participants have sufficiently complied with the conditions set forth in the prior Orders and with the technical requirements for Quarterly Progress Reports set forth in section 6.6(c) of the CAT NMS Plan, including for purposes of determining compliance with any applicable Financial Accountability Milestones."[136] The November 2023 Exemption Order is consistent with the Commission's repeated statements in the FAM adopting release that it would have "authority to grant exemptive relief from any requirement associated with a particular

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with the conditions of an exemption will be measured as of the deadline for a particular FAM Period.

135 As a condition to the 2020 Verbal Quotes Exemption, the Commission required that the Participants provide a written status update on the reporting of these quotes and orders by July 31, 2022, including the estimated costs of reporting these quotes and orders and an implementation plan for the reporting of these quotes and orders. As noted, the 2020 Verbal Quotes Order was in effect and the conditions of the exemption were satisfied as of December 31, 2021, and therefore may be relied upon for purposes of determining compliance with FAM Periods 1 through 3. In any event, on June 3, 2022, the Participants provided the required written status update. *See* Letter from Michael Simon, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission (June 3, 2022).

136 *Id.* at 77129 n.12.

Financial Accountability Milestone," citing Section 36 of the Exchange Act and Rule 608.[137] Similarly, the CAT NMS Plan expressly contemplates the Commission's ability to grant exemptive relief from any CAT NMS Plan requirement.[138]

(iv) Executing Broker Reporting

CAT LLC also completed the requirements of FAM Period 2, including the required linkages, by December 31, 2020. Although Participant exchanges may report the Executing Broker to CAT differently in certain situations, these reporting differences are irrelevant for linkage purposes as the fields used for CAT Executing Broker are not used for linkage.

(10) Additional Support for Reasonableness of Historical CAT Costs

The CAT Funding Model approved by the Commission permits the recovery of reasonable costs in each of the categories of CAT costs sought to be recovered via Historical CAT Assessment 1.[139] As described in detail above and in further detail below, the CAT costs to be recovered for each category are reasonable. The following discusses in further details how each of the following costs are reasonable: (1) costs

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137 FAM Adopting Release at 31335 (May 22, 2020). Section 36 of the Exchange Act grants the Commission the authority to "conditionally or unconditionally exempt any person, security, or transaction . . . from any provision or provisions of [the Exchange Act] or of any rule or regulation thereunder, to the extent that such exemption is necessary or appropriate in the public interest, and is consistent with the protection of investors." 15 U.S.C. 78mm(a)(1). Under Rule 608(e) of Regulation NMS, the Commission may "exempt from [Rule 608], either unconditionally or on specified terms and conditions, any self-regulatory organization, member thereof, or specified security, if the Commission determines that such exemption is consistent with the public interest, the protection of investors, the maintenance of fair and orderly markets and the removal of impediments to, and perfection of the mechanism of, a national market system." 17 C.F.R. 242.608(e).

138 Section 12.3 of the CAT NMS Plan ("[T]o the extent the SEC grants exemptive relief applicable to any provision of this Agreement, Participants and Industry Members shall be entitled to comply with such provision pursuant to the terms of the exemptive relief so granted at the time such relief is granted irrespective of whether this Agreement has been amended.")

139 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

incurred prior to the effective date of the CAT NMS Plan; (2) cloud hosting services costs; (3) costs related to funding model filings; (4) costs related to litigation with the SEC regarding the CAT NMS Plan; (5) costs related to the Initial Plan Processor; (6) CAIS implementation costs; (7) public relations costs; (8) legal costs related to the limitation of liability provision in the CAT Reporter agreements; and (9) costs for the Chair of CAT Operating Committee. As discussed in detail below, each of these costs is reasonable and should be recoverable in accordance with the CAT Funding Model.

(A) Costs Incurred Prior to the Effective Date of CAT NMS Plan

CAT LLC believes that it is reasonable to seek recovery of costs incurred prior to when the CAT NMS Plan became effective in November 2016, such as legal and consulting fees incurred to create the CAT NMS Plan. Rule 613 specifically mandates that the CAT be created, implemented and maintained, and further provides that the CAT NMS Plan include a proposed allocation of estimated costs to fund the creation, implementation and maintenance of the CAT among the Participants (referred to as "plan sponsors"), and between the Participants and Industry Members (referred to as "members of the plan sponsors").[140] Consistent with Rule 613, the CAT NMS Plan, as approved by the Commission, specifically authorizes charging Industry Members fees for costs reasonably incurred prior to the date of the approval of the CAT NMS Plan by the Commission in November 2016, including legal and consulting costs. Section 11.1(c) of the CAT NMS Plan states that:

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140 *See, e.g.*, Rule 613(a)(1)(vii)(D) of the CAT NMS Plan.

> [i]n determining fees on Participants and Industry Members the Operating Committee shall take into account fees, costs and expenses (including legal and consulting fees and expenses) reasonably incurred by Participants on behalf of the Company prior to the Effective Date in connection with the creation and implementation of the CAT.

Accordingly, the CAT NMS Plan specifically permits the recovery of costs, including legal and consulting costs, reasonably incurred prior to November 2016 in connection with the creation and implementation of the CAT.

Furthermore, the costs incurred to create and implement the CAT prior to the effective date of the CAT NMS Plan ("Pre-Formation Costs") were reasonable both in scope and amount, in accordance with the requirements of Section 11.1(c) of the CAT NMS Plan. During the four-year period from 2012 to 2016, a total of $13,842,881 in Pre-Formation Costs were incurred. This is an average of approximately $3.5 million per year over this period. The Pre-Formation Costs fell into three categories: legal costs, consulting costs and public relations costs. This includes legal costs of $3,196,434; consulting costs of $10,589,273; and public relations costs of $57,174. The legal, consulting and public relations services were performed by WilmerHale, Deloitte and Peppercomm, respectively. The selection considerations and fees for these three firms are described in detail above and are described further below. The Pre-Formation Costs are direct costs of CAT, which have been funded entirely by the Participants through non-interest-bearing notes. The Pre-Formation Costs do not include the significant costs incurred by each of the individual Participants in responding to the adoption of Rule 613.

The Pre-Formation Costs are reasonable and appropriate as they reflect the extensive efforts that were necessary to create the CAT NMS Plan as mandated after the SEC's adoption of Rule 613. As described in more detail below, these efforts included,

among other things, developing a plan for selecting the Plan Processor, soliciting and evaluating bids, engaging a diverse set of market participants and the SEC in the development of the Plan, interacting with the SEC in their oversight of the development of the Plan, and seeking appropriate exemptive relief to address areas of concern in Rule 613.[141]

(i) Request for Proposal ("RFP")

The Participants determined to utilize an RFP to ensure that potential alternative solutions for creating the Plan could be presented and considered, and that a detailed and meaningful cost-benefit analysis could be performed. The SEC supported the use of an RFP, and approved its use as it is described in extensive detail in the CAT NMS Plan.[142]

In the context of the SEC's adoption of Rule 613, commenters urged the Commission to utilize an RFP process to assist in the planning and design of the NMS plan.[143] Specifically, the Commission explained:

> In this regard, several commenters suggested that the Commission undergo a RFP or request for information ("RFI") process to create and implement a consolidated audit trail. Specifically, FIF urged the Commission to perform a RFP process "to determine the best technical solution for developing a consolidated audit trail." FIF suggested that the Commission ''should outline a set of goals and guiding principles they are striving to achieve as part of the adopted CAT filing and leave the determination of data elements and other technical requirements to [an] industry working group." Similarly, Direct Edge suggested that

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141 The Participants described in detail the process for drafting the CAT NMS Plan in its original filing of the CAT NMS Plan. *See* Letter from Mike Simon, on behalf of the Participants of the CAT NMS Plan, to Brent J. Fields, Secretary, Commission (Sept. 30, 2014). A non-exclusive list of filings and activities associated with CAT, including certain pre-2016 filings, are available on the SEC's website: https://www.sec.gov/divisions/marketreg/rule613-info.

142 *See* detailed discussion of RFP questions in Appendix C of the CAT NMS Plan, and incorporation of RFP requirements in Appendix D at D-2.

143 For example, in its comments on proposed Rule 613, FIF suggested "that the SROs should select the processor through a 'request for proposal.'" Rule 613 Adopting Release at 45785.

> Commission staff should form and engage in a working group to develop an RFP for publication by the Commission. DirectEdge explained that an RFP process would facilitate the identification of the costs and benefits of the audit trail, as well as the consideration of a wider range of technological solutions. Further, commenters, including Broadridge Financial Solutions, Inc., a technology provider, also requested more specific information about the audit trail system to better assess the Commission's initial cost estimates and to determine the best approach to the consolidated audit trail.[144]

In response to these comments, the Commission modified Rule 613 to require the Participants to address certain important considerations regarding the features and details of the NMS plan and to extend the timeframe for submission of the CAT NMS Plan by the Participants from the 90 days as originally proposed to 270 days, in part, to accommodate a process that would address these considerations.[145] As the SEC noted, "[i]n light of the numerous specific requirements of Rule 613, the Participants concluded that publication of a request for proposal ('RFP') was necessary to ensure that potential alternative solutions to creating the consolidated audit trail can be presented and considered by the Participants and that a detailed and meaningful cost/benefit analysis can be performed, both of which are required considerations to be addressed in the CAT NMS Plan."[146]

The SEC specifically recognized that the Participants planned to use an RFP when it approved the Selection Plan, and stated that the RFP was a reasonable approach.[147] As the SEC described in its approval order for the Selection Plan, "[t]he Participants filed the [Selection] Plan to govern how the SROs will proceed with formulating and submitting

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144 Rule 613 Adopting Release at 45738-39.

145 Rule 613 Adopting Release at 45739.

146 Securities Exchange Act Rel. No. 71596 (Feb. 21, 2014), 79 Fed. Reg. 11152, 11152 (Feb. 27, 2014) ("Selection Plan Approval Order").

147 *Id.*

the CAT NMS Plan—and, as part of that process, how to review, evaluate, and narrow down the bids submitted in response to the RFP ('Bids')—and ultimately choosing the plan processor that will build, operate, and maintain the consolidated audit trail ('Plan Processor')."[148] After evaluating the Selection Plan, including the use of an RFP process, the Commission stated that it "believes the [Selection] Plan is reasonably designed to govern the process by which the SROs will formulate and submit the CAT NMS Plan, including the review, evaluation, and narrowing down of Bids in response to the RFP, and ultimately choosing the Plan Processor that will build, operate, and maintain the consolidated audit trail."[149]

On February 26, 2013, the Participants published an RFP soliciting bids from parties interested in serving as the plan processor for the CAT. Initially, 31 firms submitted intentions to bid. In the following months, the Participants engaged with potential bidders with respect to, among other things, the selection process, selection criteria, and potential bidders' questions and concerns. On March 21, 2014, the Participants received ten bids in response to the RFP.

(ii) Selection Plan

On September 4, 2013, the Participants filed with the Commission a national market system plan to govern the process for Participant review of the bids submitted in response to the RFP, the procedures for evaluating the bids, and, ultimately, selection of

148 *Id*. at 11153

149 *Id*. at 11159.

the plan processor (the "Selection Plan").[150] The Commission approved the Selection Plan as filed on February 21, 2014.[151] In approving the Selection Plan, the Commission concluded that "it is reasonably designed to achieve its objective of facilitating the development of the CAT NMS Plan and the selection of the Plan Processor."[152]

The Selection Plan divided the review and evaluation of bids, and the selection of the plan processor, into various stages. Specifically, pursuant to the Selection Plan, a selection committee reviewed all bids and determined which bids contained sufficient information to allow the Participants to meaningfully assess and evaluate the bids. The ten submitted bids were deemed "Qualified Bids," and so passed to the next stage, in which each bidder presented its bids to the Participants on a confidential basis. On July 1, 2014, after conducting careful analysis and comparison of the bids, the Selection Committee voted and selected a shortlist of six eligible bidders. The Selection Committee determined which shortlisted bidders would be provided the opportunity to revise their bids. After the Selection Committee assessed and evaluated the revised bids, the Selection Committee selected the plan processor via two rounds of voting by the Participants, as described in the Selection Plan.

The Selection Plan established an Operating Committee responsible for formulating, drafting, and filing with the Commission the CAT NMS Plan and for ensuring that the Participants' joint obligations under Rule 613 were met in a timely and efficient manner. In formulating the CAT NMS Plan, the Participants also engaged

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150 *See* Securities Exchange Act Rel. No. 70892 (Nov. 15, 2013), 78 Fed. Reg. 69910 (Nov. 21, 2013).

151 *See* Selection Plan Approval Order.

152 Selection Plan Approval Order at 11160.

multiple persons across a wide range of roles and expertise, engaged the consulting firm Deloitte as project manager, and engaged the law firm WilmerHale to serve as legal counsel in drafting the Plan. Within this structure, the Participants focused on, among other things, comparative analyses of the proposed technologies and operating models, development of funding models to support the building and operation of the CAT, and detailed review of governance considerations. Given the complexity and scope of developing the CAT NMS Plan, these efforts were extensive.

When it approved the CAT NMS Plan in 2016, the Commission reiterated its belief that the Selection Plan remains a "reasonable approach," that "the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor," and that "the process set forth in the Selection Plan should be permitted to continue":

> In approving the Selection Plan, the Commission stated that the Selection Plan is reasonably designed to achieve its objective of facilitating the development of the CAT NMS Plan and the selection of the Plan Processor. The Commission also found that the Selection Plan is reasonably designed to govern the process by which the SROs will formulate and submit the CAT NMS Plan, including the review, evaluation, and narrowing down of Bids in response to the RFP, and ultimately choosing the Plan Processor that will build, operate, and maintain the consolidated audit trail. The Commission believes that the process set out in the Selection Plan for selecting a Plan Processor remains a reasonable approach, which will facilitate the selection of Plan Processor through a fair, transparent and competitive process and that no modifications to the Selection Plan are required to meet the approval standard. . . . In response to the comment that offered support for a specific Bidder, the Commission agrees with the Participants that the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor and thus believes that the process set forth in the Selection Plan should be permitted to continue.[153]

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153 *See* CAT NMS Plan Approval Order at 84737.

(iii) Engagement with Market Participants and SEC

During the process of developing the CAT NMS Plan, the Participants engaged in extensive and meaningful dialogue with market participants and the SEC. To this end, the Participants created a website to update the public on the progress of the CAT NMS Plan, published a request for comment on multiple issues related to the Plan, held multiple public events to inform the industry of the progress of the CAT and to address inquiries, and formed, and later expanded, a DAG to solicit more input from a representative industry group.[154]

The DAG included representatives of Participants and Industry Members and conducted meetings to discuss, among other things, technical and operational aspects the Participants were considering for the Plan. The Participants issued press releases soliciting participants for the DAG, and a wide spectrum of firms was deliberately chosen to provide insight from various industry segments affected by CAT. The DAG meetings included discussions of topics such as option market maker quote reporting, requirements for capturing Customer IDs, timestamps and clock synchronization, reporting requirements for order handling scenarios, costs and funding, error handling and corrections, and potential elimination of systems made redundant by the CAT. From the inception of the DAG through September 2014, the DAG participated in 36 meetings, as well as a variety of DAG subcommittee meetings.

(iv) Request for Exemption from Certain Requirements under Rule 613

Following multiple discussions between the Participants and both the DAG and

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154 *See* Section D(11) of Appendix C of the CAT NMS Plan.

the bidders, as well as among the Participants themselves, the Participants recognized that some provisions of Rule 613 would not permit certain solutions to be included in the Plan that the Participants, in coordination with the DAG, determined advisable to effectuate the most efficient and cost-effective CAT. Specifically, "the SROs reached the conclusion that additional flexibility in certain of the minimum requirements specified in Rule 613 would allow them to propose a more efficient and cost-effective approach without adversely affecting the reliability or accuracy of CAT Data, or its security and confidentiality."[155] Consequently, the Participants submitted a request for exemptive relief from certain provisions of Rule 613 regarding: (1) options market maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) CAT-Order-IDs on allocation reports; and (5) timestamp granularity.[156] The Participants filed two supplements to the request for exemptive relief.[157]

After reviewing the exemptive request, the Commission determined that it was appropriate in the public interest and consistent with the protection of investors to grant the requested exemptive relief.[158] In granting the exemptive relief, the Commission stated:

> [T]he Commission is persuaded to provide flexibility in the discrete areas discussed in the Exemption Request so that the alternative approaches can be included in the CAT NMS Plan and subject to notice and comment. Doing so could allow for more efficient and cost-effective approaches than

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155 Securities Exchange Rel. No. 77265 (Mar. 1, 2016), 81 Fed. Reg. 11856 (Mar. 7, 2016) ("2016 Exemptive Order").

156 Letter from Robert Colby, FINRA, on behalf of the SROs, to Brent J. Fields, Secretary, Commission (Jan. 30, 2015).

157 *See* Letter from Robert Colby, FINRA, on behalf of the SROs, to Brent J. Fields, Secretary, Commission (Apr. 3, 2015); Letter from the SROs to Brent J. Fields, Secretary, Commission (Sept. 2, 2015).

158 *See* 2016 Exemptive Order.

> otherwise would be permitted. The Commission at this stage is not deciding whether the proposed approaches detailed below are more efficient or effective than those in Rule 613. However, the Commission believes the proposed approaches should be within the permissible range of alternatives available to the SROs.[159]

The Commission further stated that the requested exemptive relief is consistent with the protection of investors. The Commission noted that:

> Doing so will provide the public an opportunity to consider and comment on whether these proposed alternative approaches would indeed be more efficient and cost-effective than those otherwise required by Rule 613, and whether such approaches would adversely affect the reliability or accuracy of CAT Data or otherwise undermine the goals of Rule 613. Moreover, if—as the SROs represent—efficiency gains and cost savings would result from including the proposed approaches in the CAT NMS Plan without adverse effects, then the resultant benefits could potentially flow to investors (*e.g.*, lower broker-dealer reporting costs resulting in fewer costs passed on to Customers).[160]

The Participants incorporated the exemptive relief into the proposed CAT NMS Plan, which was noticed for comment, and the Commission ultimately approved the CAT NMS Plan with the more efficient and cost-effective alternative approaches described in the exemptive relief. Accordingly, the Participants believe that the costs incurred in developing the exemptive request were critical to the creation of a better CAT than was originally contemplated by Rule 613, and therefore should be recoverable as part of Historical CAT Assessment 1.

(v) Request for Extensions for Filing the CAT NMS Plan

Rule 613(a)(1) under Regulation NMS required the Participants to jointly file the

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159 *Id.* at 11857.

160 *Id.*

CAT NMS Plan on or before April 28, 2013, less than a year after the adoption of Rule 613. In recognition of the complexity of the project to create the CAT NMS Plan as well as industry interest in limiting or eliminating certain requirements of Rule 613 (*e.g.*, addressing the reporting of options market maker quotes), the Participants requested two extensions of the deadline to file the CAT NMS Plan. The Participants described the need for additional time as follows:

> The SROs stated in their Request Letter that they do not believe that the 270-day time period provided for in Rule 613(a)(1) provides sufficient time for the development of the RFP, formulation and submission of bids, and review and evaluation of such bids. The SROs also stated that they believe additional time beyond the 270 days provided for in Rule 613(a)(1) is necessary in order to provide sufficient time for effective consultation with and input from the industry and the public on the proposed solution chosen by the SROs for the creation of the consolidated audit trail at the conclusion of the RFP process and the NMS plan itself.[161]

In recognition of the need for additional time to refine the technical description of and requirements for the CAT and to allow for additional evaluation of the proposed cost and funding considerations, the SEC granted two extensions of this deadline.[162] The SEC determined that both extensions were appropriate, in the public interest, and consistent with the protection of investors.[163] In reaching this conclusion, the Commission stated that "it understands that the creation of a consolidated audit trail is a significant undertaking and that a proposed NMS plan must include detailed information and

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161 Securities Exchange Act Rel. No. 69060 (Mar. 7, 2013),78 Fed. Reg. 15771, 15772 (Mar. 12, 2013) ("March 2013 Exemptive Order").

162 *See* March 2013 Exemptive Order; Securities Exchange Act Rel. No. 71018 (Dec. 6, 2013), 78 Fed. Reg. 75669 (Dec. 12, 2013) ("December 2013 Exemptive Order").

163 March 2013 Exemptive Order at 15772; December 2013 Exemptive Order at 75670.

discussion about many things."[164] The SEC also noted the following:

> This additional time to complete the RFP process should allow the SROs to engage in a more thoughtful and comprehensive process for the development of an NMS plan. In this regard, the Commission notes that the additional time to solicit comment from the industry and the public at certain key points in the development of the NMS plan could identify issues that can be resolved earlier in the development of the consolidated audit trail and prior to filing the NMS plan with the Commission.[165]

Given the Commission's recognition of the reasonableness and value of the extension of the deadline to file the CAT NMS Plan, the Participants believe that the costs incurred in developing the extension request were important to the process of developing the CAT NMS Plan, and therefore should be recoverable as part of Historical CAT Assessment 1.

(vi) Submission and Approval of the CAT NMS Plan

After extensive analyses and discussions with the DAG, bidders, market participants and the SEC staff, the Participants finalized the draft of the CAT NMS Plan and filed the CAT NMS Plan with the SEC on September 30, 2014. Following additional discussions, the Participants filed several amendments to the CAT NMS Plan during 2015 and 2016. With these additional changes, the SEC published the CAT NMS Plan for notice and comment in May 2016.[166] Following the comment period, the SEC approved the Plan in November 2016.[167]

(vii) Legal Costs Incurred Prior to the Effective Date of the CAT NMS Plan

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164 March 2013 Exemptive Order at 15772.

165 *Id.* at 15773.

166 *See* Securities Exchange Act Rel. No. 77724 (Apr. 27, 2016), 81 Fed. Reg. 30614 (May 17, 2016).

167 *See* CAT NMS Plan Approval Order.

The Pre-Formation Costs include legal costs of $3,196,434. The legal services were performed by WilmerHale. The selection considerations and fees for WilmerHale were described in detail above. Prior to the creation of CAT LLC, WilmerHale was engaged to represent the consortium of SROs, not the individual Participants. For administrative purposes, FINRA agreed to receive such legal bills, although such costs were shared among the Participants. Therefore, the legal costs incurred with respect to WilmerHale do not include legal costs incurred by the individual Participants. These pre-formation legal costs are described in detail above and are further described below:

- Analyzed various legal matters associated with the Selection Plan and drafted an amendment to Selection Plan;
- Assisted with the RFP and bidding process for the CAT Plan Processor;
- Analyzed legal matters related to the DAG;
- Drafted the CAT NMS Plan, analyzed various items related to the CAT NMS Plan, and responded to comment letters on the CAT NMS Plan;
- Provided legal support for the formation of the legal entity, the governance of the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding, and Other Products) and the DAG, and governance support during the transition to the new governance structure under the CAT NMS Plan;
- Drafted exemptive requests;
- Provided interpretations related to the CAT NMS Plan;
- Provided support with regard to discussions among the exchanges, FINRA and other third parties, such as Deloitte;
- Provided tax advice with regard to CAT's status as a tax-exempt organization; and

- Provided support with regard to discussions with the SEC and its staff, including with
respect to addressing interpretive and implementation issues.

(viii) Consulting Costs Incurred Prior to the Effective Date of the CAT NMS Plan

The Pre-Formation Costs include consulting costs of $10,589,273. The consulting services were performed by Deloitte. The selection considerations and fees for Deloitte were described in detail above. Prior to the creation of CAT LLC, for administrative purposes, Deloitte was engaged by FINRA to provide consulting services related to CAT, but the costs were shared by the consortium of SROs per agreement. Therefore, the consulting costs incurred with respect to Deloitte do not include consulting costs incurred by the individual Participants. The pre-formation consulting costs include the following:

- Established and implemented program operations for the CAT project, including the program management office and workstream design;

- Assisted with the Plan Processor selection process, including but not limited to, the development of the RFP and the bidder evaluation process, and facilitation and consolidation of the Participants' independent reviews;

- Assisted with the development and drafting of the CAT NMS Plan, including conducting cost-benefit studies, reviewing technical requirements of other NMS plans, analyzing OATS and CAT requirements, and drafting appendices to the Plan;

- Provided governance support to the CAT, including governance support prior to the adoption of the CAT NMS Plan, which involved support for the full committee of exchanges and FINRA as well as subcommittees of this group (*e.g.*, Joint Subcommittee Group, Technical, Industry Outreach, Cost and Funding, and Other Products) and the DAG;

- Provided support for updating the SEC on the progress of the development of the CAT;

- Provided support for industry outreach sessions, including with regard to program design and agenda development, program support and logistics and coordination; and

- Provided support in fact finding, drafting content and meeting coordination for WilmerHale with regard to the CAT and the development of the CAT NMS Plan.

Such Pre-Formation Costs did not include costs related to the Chair of the CAT NMS Plan Operating Committee, as the CAT NMS Plan had not yet been adopted.

(ix) Public Relations Costs Incurred Prior to the Effective Date of the CAT NMS Plan

The Pre-Formation Costs include public relations costs of $57,174. The public relations services were performed by Peppercomm. The selection considerations and fees for Peppercomm are described in detail above. The costs related to Peppercomm were shared among the SROs. Therefore, the public relations costs do not include public relations costs incurred by the individual Participants. The pre-formation public relations costs include services related to communications with the public regarding the CAT, including monitoring developments related to the CAT (*e.g.*, congressional efforts, public comments and reaction to proposals, press coverage of the CAT), reporting such developments to CAT LLC, and drafting and disseminating communications to the public regarding such developments as well as reporting on developments related to the CAT.

(B) Cloud Hosting Services

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs related to cloud hosting services as a part of Historical CAT Assessments. CAT LLC believes that the costs related to cloud hosting services described in detail above are reasonable and appropriate given the strict data

processing timelines and storage requirements imposed by the Commission-approved CAT NMS Plan and should be recoverable as a part of Historical CAT Assessment 1.

(i) Reasonableness of AWS Costs Given the Requirements of the CAT NMS Plan

CAT LLC believes that the costs for the cloud hosting services are reasonable, both in terms of the level of the fees paid by CAT LLC for cloud hosting services provided by AWS and the scope of the services performed by AWS for CAT LLC. CAT LLC believes that both the scope and amount of the costs for cloud hosting services are reasonable given the current requirements of the CAT NMS Plan adopted pursuant to Rule 613, including the strict data processing timeline, storage and other technical requirements under the Commission-approved CAT NMS Plan.

CAT LLC believes that the level of fees for the cloud hosting services is reasonable, taking into consideration a variety of factors, including the expected volume of data and the breadth of services provided and market rates for similar services.

CAT LLC also believes that the scope of services provided by AWS for the CAT are appropriate given the current requirements of the Commission-approved CAT NMS Plan. As described above, the cloud hosting services costs reflect a variety of factors including, among other things:

- Breadth of Cloud Activities. AWS was engaged by FCAT, the Plan Processor, to provide a broad range of services to the CAT, including data ingestion, data management, and analytic tools. Services provided by AWS necessary to the CAT include storage services, databases, compute services, and other services (such as networking, management tools and development operations ("DevOps") tools). AWS also was engaged to provide the various environments for CAT, such as the development, performance testing, test and production environments, which are required by the CAT NMS Plan.

- High Data Volume. The cost for AWS services for the CAT is a function of the volume of CAT Data. While it is not linear, the greater the amount of CAT Data, the greater the cost of AWS services to the CAT. The data volume handled by AWS now far exceeds the original volume estimates for the CAT.

- Plan Requirements. The cost for AWS services also reflects the technical requirements necessary to meet the stringent performance and other requirements for processing CAT Data. These Plan-dictated processing timelines, storage, testing, security and other technical requirements are significant drivers of AWS costs.

- Cost Avoidance Efforts. CAT LLC and FCAT have engaged in ongoing efforts to seek to avoid and minimize AWS costs where permissible under the Plan. Accordingly, these cost avoidance efforts have limited the extent of AWS costs.

In addition, various requirements of the CAT NMS Plan adopted pursuant to Rule 613 contribute to the significant cloud hosting services costs, and that various Plan requirements could be amended or removed without affecting the regulatory purpose of the CAT. Indeed, CAT LLC has repeatedly sought exemptive relief and filed amendments to the CAT NMS Plan, and has even filed suit against the Commission, to seek to revise or eliminate certain costly requirements related to the CAT. However, despite these efforts, absent the Commission granting exemptive relief or approving cost savings amendments to the CAT NMS Plan, CAT LLC, the Participants and Industry Members are all required to comply with such requirements.

(ii) Effect of CAT Design on CAT Costs

(a) Efficient CAT Design

CAT is reasonably designed to efficiently and effectively utilize cloud computing and storage services, given the requirements of the Commission-approved CAT NMS Plan, including requirements related to security, operational reliance and quality assurance, and maintainability.

The Plan Processor uses state-of-the-art software that meets the strict security standards of the CAT NMS Plan. CAT utilizes a big data processing framework that is extensively used by large data processing companies, such as Apple, Meta, Netflix, IBM and Google. As such, it has substantial commercial support and support in the open-source community. It is also well suited for use with regard to iterative types of algorithms and query functions and analytics that the CAT requires, and it provides the heightened security necessary for the CAT.

The development and implementation of the design of CAT is not and has not been static. CAT LLC and the Plan Processor are always evaluating new innovations and service offerings from AWS and other providers to seek to maximize efficiency and cost avoidance while still satisfying the requirements of the CAT NMS Plan. These efforts have led to substantial savings to date. The cloud hosting costs for 2023 were less than the cloud hosting costs for 2022 by $8 million despite processing seven trillion more events in 2023 due to the efficiency and cost avoidance efforts for cloud hosting services. For example, when AWS introduced new storage options, FCAT adopted the cost-efficient new storage option after establishing that the new offering would satisfy the security and other standards of the CAT NMS Plan. This change led to millions of dollars of savings in storage costs. Similarly, when AWS introduced a new compute processor, FCAT adopted this new compute processor, which lead to millions of dollars in savings in compute costs. However, in other cases, new cloud technology developments could not be implemented in CAT because they would not satisfy the security or other requirements of the CAT NMS Plan.

When evaluating the design of the CAT, it must be kept in mind that the CAT is

not a typical commercial technology project. The ability to make use of technology approaches that may lead to cost avoidance is also subject to the restrictive requirements of the CAT NMS Plan, such as processing timeframes, requirements for retention of data versions, query requirements, and security standards. Because such requirements are set forth in the CAT NMS Plan, any modification of such requirements are subject to the time-consuming process of amending the CAT NMS Plan or seeking an exemption from the relevant requirement. For example, CAT LLC recently has filed an amendment to address several of these expensive Plan requirements.[168]

(b) CAT Was Designed to Minimize Industry Member Effort

The CAT System also was designed to minimize the extent to which Industry Members would need to alter their systems to report to CAT. During the design process, Industry Member groups argued that it would make more sense financially for the CAT to accommodate differences in industry systems, than for all Industry Members to change their systems. Moreover, such design choices would facilitate consistency, uniformity and accuracy in reporting. Requiring the CAT to make such accommodations may increase CAT costs while accommodating CAT Reporters.

Based on the requirements in the CAT NMS Plan and/or in response to industry requests for functionality to be embedded with the Plan Processor to streamline or limit Industry Member system changes, the CAT has been designed to limit the effect on Industry Members. The following provides examples of such accommodations:

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168 *See, e.g.*, Securities Exchange Act Rel. No. 99938 (Apr.10, 2024), 89 Fed. Reg. 26983 (Apr. 16, 2024); Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, Secretary, Commission (Mar. 27, 2024) (proposing amendments to the CAT NMS Plan for $23 million in annual savings).

- Industry Member Reporting. In light of the complexity of Industry Member market activity, the CAT's order reporting and linkage scenarios document for Industry Members is over 800 pages in length, addressing nearly 200 scenarios.[169] The Industry Member Technical Specifications allow for dozens of specific event types, which drive complexity for the Plan Processor, but streamline reporting for Industry Members. Furthermore, the Plan Processor greatly expanded Industry Member linkage requirements to support, among other things, child events and supplemental events, allowing for "stateless as-you-go" and "batch end-of-day" reporting when all data is available. Accordingly, CAT takes on the significant cost and effort of providing the required linkages between CAT events; correspondingly, Industry Members are not required to perform this costly task.

- File Submission Process. The CAT was designed to accommodate the varying needs of CAT Reporters with regard to the file submission process. For example, in a 2018 letter, FIF stated that "[t]he SFTP-based submission process is cumbersome, exposes industry members to unnecessary complexity, and puts the burden of support on the CAT Reporter rather than imbedding more functionality into the Plan Processor."[170] Currently, FCAT provides two mechanisms for submitting files: SFTP via a private network, and the Web via Reporter Web Portal.

- Error Corrections. The industry also emphasized the need for the CAT to provide error correction tools and functionalities to identify, rectify and re-submit corrections within the required timeframe. For example, FIF stated in a 2018 letter the following:

> To be clear, if OATS-like error correction tools are not made available on Day 1, hundreds of firms will be required to create and test their own tools or obtain vendor alternatives prior to the CAT Go-Live Date. Proprietary tools will require additional system builds, access to and ingestion of CAT data to perform system validation, and testing which will further stress the limited number of subject matter experts ("SMEs") dedicated to the implementation of CAT reporting. Should this occur, inevitably firms (especially small firms who lack the necessary IT staff to write code and develop proprietary systems), may be put in the position of passing onto investors the cost required to build hundreds of redundant systems.[171]

CAT provides various tools to help Industry Members identify and rectify errors.

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169 *See* CAT Industry Member Reporting Scenarios v.4.10 (Oct. 21, 2022).

170 Letter from Janet Early, FIF, to Thesys CAT (Mar. 29, 2018).

171 Letter from Christopher Bok, FIF, to Jay Clayton, Chair, Commission, at 4 (Dec. 11, 2018).

- Data Ingestion Format. The industry also recommended that CAT adopt a flexible input format that provides an option for Industry Members to submit data in formats that are already in use to reduce costs and potential reporting errors. For example, FIF argued the following:

> FIF CAT WG is not proposing a specific format; rather, we are proposing flexibility of input formats which includes support of existing formats (*e.g.*, OATS, FIX) as well as a baseline specification where all fields are defined, and normalized. The input formats must be clearly and thoroughly defined in Technical Specifications, including FAQs.
>
> Mandating a uniform format for reporting data to the CAT simplifies the task for the Central Repository of consolidating/storing data, but it puts the burden on each CAT Reporter to accurately translate their current (*e.g.*, OATS) reporting information into a uniform CAT interface. However, that is likely to yield more errors because it is very dependent on accurate, complete and timely information (Technical Specifications, FAQs, meta-data, competent CAT help desk) available to CAT Reporters, availability of sophisticated CAT test tools to validate interface protocols, and the skill levels of the estimated 300+ unique CAT Reporters/Submitters during Phase 1 of CAT. Concentrating the responsibility of data conversions with the Central Repository is a reasonable trade-off that should yield fewer errors, and greater accuracy.[172]

CAT provides such a flexible input format.

(c) Effect of Initial Plan Processor Design

The costs for cloud hosting services are appropriate and have not been adversely affected by the original design and approaches of the Initial Plan Processor. FCAT's design costs are the result of the requirements of the Commission-approved CAT NMS Plan.

When FCAT took over as the Plan Processor from Thesys, it utilized certain

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[172] Letter from Mary Lou Von Kaenel, Managing Director, FIF, to Brent Fields, Secretary, Commission at 92 (July 18, 2016), https://www.sec.gov/comments/4-698/4698-13.pdf.

aspects of the technical specifications created by Thesys in its design. However, FCAT has not maintained aspects of the original design that would not be appropriate for the CAT. FCAT revised and enhanced the original technical specifications of the CAT System to increase its efficiency and efficacy, and to ensure its compliance with the CAT NMS Plan. For example, the Initial Plan Processor's approach utilized many more fields than FCAT's approach, which relies on additional linkages. With the additional linkages, the CAT System takes on more of the CAT-related burdens than the Industry Members. Such an approach serves to facilitate consistency, uniformity and accuracy in reporting.

Moreover, FCAT did not utilize the system built by the Initial Plan Processor; it rebuilt the CAT System based on revised technical specifications. For example, the Initial Plan Processor used an on-premises processing approach which was not geared toward the huge amounts of data stored in the CAT, while FCAT adopted a cloud-based solution in response to such data demands.

Furthermore, given the very short timeframe to develop the CAT System and the prior optimization of certain query tools (*e.g.*, Diver) for regulatory use with significant amounts of data, FCAT determined to rely upon certain existing FINRA tools and adapt them for use with the CAT.

(iii) Consideration of AWS Alternatives

CAT LLC continues to support the selection of AWS as the cloud hosting services provider for CAT given the compliance, operational, and security requirements of the CAT. Independent analyses confirm these conclusions, noting that "AWS is an excellent choice for either strategic or tactical use and recommends considering AWS for

almost all cloud IaaS or IaaS+PaaS scenarios."[173] AWS provides the following benefits to CAT, among others:

- Broad Suitability. AWS has a long track record of successfully serving cloud customers with mission-critical projects.

- Proven Scalability. AWS has demonstrated that it is capable of building and delivering services on a large scale.

- Track Record of Innovation. AWS continues to rapidly innovate, both in terms of new domains of capability and at a fundamental level, thereby facilitating innovation for its customers.

- Resiliency/Dependability. Another benefit of AWS is its resiliency; it has a strong track record of stable services. As noted in a review of cloud service providers, "[c]ustomers like to have a broad set of options for resilience and for their cloud providers to have a strong track record of stable services (continuously available, without operational quirks). Only AWS fulfills both desires."[174]

- Technical and Customer Support. AWS consistently provides high-quality technical and customer support and engagement. Given the size, scope and regulatory importance of CAT, customer support and engagement that CAT has with the highest levels of AWS are very important to the success of the CAT.

- Scale. AWS is capable of supporting large-scale solutions, which is critical given the size and magnitude of the CAT.

- Security. AWS provides the security features necessary for the CAT.

In addition, the nature of the CAT, including the amount of data it must process and the size of its data footprint, does not allow for a multi-cloud solution as this would be cost prohibitive and greatly increase the security boundary and associated risk profile of the CAT. For example, a multi-cloud hosting option would increase costs, complexity, and risk for operations with regard to, for example, DevOps, production support, and

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173 *See, e.g.*, Lydia Leong and Adrian Wong, Solution Comparison for Strategic Cloud Integrated IaaS and PaaS Providers (July 28, 2023) ("Strategic Cloud Assessment Article").

174 Strategic Cloud Assessment Article.

networking. Similarly, with regard to security, a multi-cloud solution would increase risk, including with regard to the need for data transfers between cloud providers and the expansion of the security boundary. With regard to labor, a multi-cloud solution would lose economies of scale due to the need to support unique cloud requirements. Accordingly, the use of single-cloud solution continues to provide advantages with regard to cost, complexity, and risk. Indeed, "[t]he best practice is to focus on a single primary strategic provider."[175]

Furthermore, if another cloud service provider were determined to be a better match for the CAT at some future date, switching cloud service providers would be a very significant, expensive and time-consuming effort. Such an effort would likely be a 10-to-15-year commitment at a substantial expense. Such a move would require the replication or redesign of the underlying cloud environments (*e.g.*, organizational setup, identify management, accounts, environments, DevOps tooling likes release management/config management/network management), as the new provider likely would not have the same infrastructure and software. Once that process has been completed, an exabyte of CAT data would need to be securely migrated to the new platform.

(C) Funding Model Filings

CAT LLC believes that the recovery of costs related to the development of the funding model is appropriate, and that the amount and scope of such costs, as described above, are reasonable.

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175 *Id.*

Funding the CAT is a critical aspect of Rule 613 and the CAT NMS Plan. Article XI of the CAT NMS Plan describes in detail the requirements for funding the CAT, and the Participants are required to comply with and enforce compliance with the funding requirements of the CAT NMS Plan, just as with other aspects of the Plan. Accordingly, the development and implementation of a funding model for the CAT is as much a part of the requirements of the CAT NMS Plan as the development and operation of the CAT System. CAT LLC sees no reason to distinguish the efforts to develop a funding model from, for example, efforts to develop the CAT System, in seeking to recover reasonable CAT costs.

Moreover, in approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . legal costs."[176] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . legal . . . costs."[177] In keeping with these provisions, this filing provides a brief description of reasonably budgeted legal costs above. These legal costs include costs related to the development of the CAT Funding Model.

In addition, the legal costs incurred for the assistance in developing the CAT Funding Model are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. As described above, the specialized services were

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176 Section 11.1(a)(i) of the CAT NMS Plan.

177 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

performed by experienced counsel at negotiated rates for such services that reflect both the extent of the services and market rates. Moreover, the scope of the legal costs associated with the development of the funding model reflect the complexity of the task in satisfying the detailed requirements of the CAT NMS Plan, the standards of the Exchange Act, and the many perspectives of the different market constituents potentially affected by or interested in the funding model, including Industry Members, Participants and investors. The many and varied comments by market participants on CAT funding over the years demonstrate the complexity of the task.

(D) Costs Related to Litigation with the SEC

CAT LLC believes that the recovery of legal costs related to the litigation with the SEC regarding the CAT NMS Plan is appropriate, and that the amount and scope of such costs, as described above, are reasonable.

As a preliminary matter, as discussed above, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT Assessments.[178] Moreover, CAT LLC initiated such litigation, and incurred the related legal costs, because it was critical to address the Commission's interpretations of the CAT NMS Plan. Among other things, such interpretations threatened to impose unnecessary costs on the CAT, which would be borne by the Participants and Industry Members. Indeed, in response to the litigation, the Commission provided exemptive relief that allowed alternative, more cost-effective approaches to the implementation of the CAT. Specifically, in the 2023 exemptive order, the Commission stated:

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178 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

> The conditional exemptive relief in this Order allows for the implementation of alternative regulatory solutions that continue to advance the regulatory goals that Rule 613 and the CAT NMS Plan were intended to promote, while reducing the implementation and operational costs, burdens, and/or difficulties that would otherwise be incurred by the Participants and Industry Members that must fund the CAT.[179]

CAT LLC believes it is reasonable and appropriate to incur costs to limit the need to incur even greater costs due to certain interpretations of the Plan.

In addition, the legal costs incurred during the litigation are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. As described above, the specialized services were performed by experienced counsel at market rates for such services. As such, the legal costs related to this litigation incurred during the period covered by Historical CAT Assessment 1 were reasonable.

Finally, Industry Members will directly benefit from the result of the litigation because it has addressed CAT NMS Plan requirements that would have imposed significantly greater costs on the CAT. Accordingly, it is reasonable and appropriate that the costs of such litigation be included in the Historical CAT Costs 1.

(E) Costs Related to the Initial Plan Processor

CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017, which was the date by which Participants were required to begin reporting to the CAT, due to the delay in the commencement of reporting to the CAT. As discussed above, the Participants determined to exclude all CAT costs incurred from November 15, 2017 through

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179 Settlement Exemptive Order at 77129-30.

November 15, 2018, which includes $37,852,083 in Thesys costs incurred from November 15, 2017 through November 15, 2018 (as well as other CAT costs during this period). The remaining Thesys costs incurred after November 15, 2018 are the $19,628,791 in capitalized developed technology costs for the period from November 16, 2018 through February 2019 incurred in the development of the CAT by the Initial Plan Processor, as well as a transition fee for the transition from the Initial Plan Processor to the successor Plan Processor. The Participants would remain responsible for 100% of these $19,628,791 in costs.

CAT LLC believes that it is appropriate to recover costs related to the services performed by the Initial Plan Processor prior to November 15, 2017. CAT LLC notes that the development and implementation of the CAT System, while unprecedented in scope and design, is like any other large and innovative technology project in that, inevitably, there were adjustments and refinements in the technical approach as the project developed, even with substantial planning efforts and oversight prior to the build. This is even more likely when the project faces a very tight implementation schedule, such as the one imposed by the Commission in Rule 613 and the CAT NMS Plan. However, an adjusted approach does not mean that the funds were not valid expenditures and should not be recovered.

The reasonableness of Thesys costs should be evaluated by the Commission as of the time they were incurred, not in hindsight. As detailed above, the Commission concluded in 2016 that "the competitive bidding process to select the Plan Processor is a reasonable and effective way to choose a Plan Processor," and that "the process set forth

in the Selection Plan should be permitted to continue."[180] Following this process, the Participants notified the Commission of the selection of Thesys as the Initial Plan Processor on January 17, 2017.[181] At the time, neither the Commission nor the industry argued that the selection of the Initial Plan Processor was unreasonable or otherwise inconsistent with the CAT NMS Plan, nor did they predict the selection would result in unanticipated delays in the implementation of the CAT System. On the contrary, on April 4, 2017, the President of SIFMA wrote that "SIFMA looks forward to commencing work with the SROs and Thesys."[182]

As noted in the CAT Funding Model Approval Order, "[i]n Rule 613, the Commission made the determination that the costs of the CAT should be shared by the Participants and Industry Members."[183] If the CAT Funding Model had existed on Day 1, the risk of any unanticipated costs or challenges associated with the Initial Plan Processor would have been fairly and reasonably shared among the Participants and Industry Members on an ongoing basis. Given that the Commission concluded in 2012 that the costs of the CAT would be shared by the Participants and Industry Members, it is not fair or reasonable to determine in hindsight that all of the risk involved in developing the CAT should be allocated entirely to the Participants.

(F) CAIS Implementation Costs

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180 CAT NMS Plan Approval Order at 84737.

181 Letter from the Participants to Brent J. Fields, Secretary, SEC (Jan. 18, 2017), https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf.

182 Letter from Kenneth E. Bentsen, Jr., SIFMA, to Participants re: Selection of Thesys as CAT Processor (Apr. 4, 2017), https://www.sifma.org/wp-content/uploads/2017/05/SIFMA-Submits-Comment-Letter-to-SRO-on-the-selection-of-Thesys-as-the-CAT-Processor.pdf.

183 CAT Funding Model Approval Order at 62650.

CAT LLC believes that the recovery of CAIS-related costs is appropriate, and that the amount and scope of such costs, as described above, are reasonable, and that the reasonableness of historical costs should be evaluated by the Commission as of the time they were incurred, not in hindsight.

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable CAIS operating costs as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . CAIS operating fees."[184] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . CAIS operating fees."[185] In keeping with these provisions, this filing provides a brief description of reasonably budgeted CAIS operating fees.

In addition, CAT LLC determined that the CAIS operating fees described above are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. The "CAIS Operating Costs" for Historical CAT Assessment 1 total $9,480,587, with Pre-FAM costs of $2,072,908, FAM 1 costs of $254,998, FAM 2 costs of $1,590,298, and FAM 3 costs of $5,562,383. As described above, the CAIS operating fees were incurred with regard to two categories of CAIS-related efforts: (1) the acceleration of the reporting of LTIDs; and (2) the development of the CAIS Technical Specifications and the building of CAIS. These two categories of costs are discussed in more detail below.

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184 Section 11.1(a)(i) of the CAT NMS Plan.

185 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

(i) LTID Reporting

During the period covered by Historical CAT Assessment 1, the CAIS operating costs included costs related to the acceleration of the reporting of LTIDs earlier than originally contemplated during this period at the request of the SEC and in accordance with exemptive relief granted by the SEC.[186] As the SEC approved in this exemptive relief, the Participants proposed "to require the reporting of LTIDs to the CAT in Phases 2c and 2d, instead of with the rest of Customer Account Information in Phase 2e, which potentially could result in an earlier elimination of broker-dealer recordkeeping, reporting and monitoring requirements of the Large Trader Rule."[187] To implement the reporting of LTIDs to the CAT, the following steps were taken during the period covered by Historical CAT Assessment 1:

- After FCAT developed the LTID Technical Specifications, the LTID Technical Specifications were published on January 31, 2020, with additional updates provided to the LTID Technical Specifications through April 2021.[188]
- The LTID account information testing environment opened on August 24, 2020.
- The LTID account information reporting production environment opened on December 14, 2020.
- CAT Reporters were required to request their production readiness certification for account information related to LTIDs by the deadline of April 9, 2021.
- The LTID account information reporting for Phases 2a, 2b and 2c for Large Industry Members went live on April 26, 2021.

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186 *See* Phased Reporting Exemptive Relief Order at 23079-80.

187 *Id.* at 23078-79, n.70.

188 The LTID Technical Specifications, including original drafts and updated versions, are available on the Industry Member Specifications page of the CAT website (https://www.catnmsplan.com/specifications/im).

- The LTID account information reporting for Phases 2d for Large Industry Members went live on December 13, 2021.

- The LTID account information reporting for Phases 2a, 2b, 2c and 2d for Small Industry Members went live on April 26, 2021.

Throughout this project, FCAT and CAT LLC worked closely with the industry on LTID and CAIS reporting. Between December 2019 and December 2021, at least 57 checkpoint calls, webinars, and technical working group meetings with industry representatives were hosted to address issues and to educate CAT Reporters regarding LTID and CAIS reporting.[189]

The LTID reporting project was successfully completed in a timely fashion, and the fees related to the project were reasonable. Accordingly, CAT LLC appropriately seeks to recover such costs via Historical CAT Assessment 1.

(ii) CAIS Reporting

During the period covered by Historical CAT Assessment 1, FCAT began the development of the full CAIS Technical Specifications and the building of CAIS. The CAIS Technical Specifications were developed during this period as follows:

- Iterative drafts of the CAIS Technical Specifications were published on June 30, 2020, December 1, 2020, and January 1, 2021.[190]

- The full, final CAIS Technical Specifications were published on January 29, 2021.

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189 Such contact points with the industry are described in detail on the Events webpage of the CAT website (https://www.catnmsplan.com/events).

190 The CAIS Technical Specifications, including original drafts and updated versions, are available on the Industry Member Specifications page of the CAT website (https://www.catnmsplan.com/specifications/im).

- Updated versions of the CAIS Technical Specifications were published throughout 2021.[191]

As discussed above, FCAT and CAT LLC frequently engaged with the industry regarding the development of CAIS, hosting regular checkpoint calls, webinars, and technical working group meetings with industry representatives to address any issues, including addressing the interplay between Industry Members' existing customer systems and CAIS, and to educate CAT Reporters regarding LTID and CAIS reporting. Such engagement was critical to the CAIS development process as the CAIS project was unprecedented in terms of its content, scope and complexity.

During this period, FCAT also commenced the building of the CAIS system in accordance with the CAIS Technical Specifications during the period covered by Historical CAT Assessment 1. The CAIS system was ready for industry testing shortly after the end of this period in January 2022.

The CAIS Technical Specifications and the CAIS system, as developed during this period, continue to be in use today. Industry Members have been required to report, and have continuously reported, required data to CAIS on a daily basis since November 7, 2022, consistent with interim reporting obligations. The CAIS system accepts and validates the CAIS data submitted by Industry Members and provides Industry Members with initial feedback on data errors. In light of the unprecedented nature of the CAIS system, certain changes to the system, such as changes related to error corrections and the CAIS regulatory portal, were necessary to finalize CAIS reporting. FCAT worked to

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[191] Six updated versions of the CAIS Technical Specifications were published during 2021, in March, May, June, August, October and December.

address these remaining issues,[192] and, as of May 31, 2024, FCAT indicated that it had achieved the final CAIS reporting milestone. Accordingly, CAT LLC appropriately seeks to recover CAIS operating costs via Historical CAT Assessment 1.

(G) Public Relations Costs

CAT LLC believes that the recovery of public relations costs is appropriate and that the amount and scope of such costs, as described above, are reasonable.

The Commission has long recognized that external public relations costs are reasonably associated with creating, implementing and maintaining the CAT. In the CAT NMS Plan Approval Order, the Commission estimated that the Participants had collectively spent approximately $2,400,000 in preparation of the CAT NMS Plan on external public relations, legal, and consulting costs, and estimated that the Participants would continue to incur external public relations costs associated with maintaining the CAT upon approval of the CAT NMS Plan.[193]

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for public relations services as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the reasonably budgeted CAT costs shall include . . . public relations costs."[194] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . public

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192 *See, e.g.*, CAT Q4 2023 Quarterly Progress Report (Jan. 30, 2024) (https://www.catnmsplan.com/sites/default/files/2024-01/CAT-Q4-2023-QPR.pdf).

193 CAT NMS Plan Approval Order at 84917-18.

194 Section 11.1(a)(i) of the CAT NMS Plan.

relations costs."[195] In keeping with these provisions, a brief description of reasonable public relations costs are described above.

In addition, CAT LLC determined that the public relations costs described above are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1. The services performed by the public relations firms through 2021 were limited in scope to assist CAT LLC, which has no employees of its own, to be better positioned to understand and address CAT matters to the benefit of all market participants and to communicate on important CAT topics with the public. In addition, the costs for these services were appropriately limited. During the 10-year period covered by Historical CAT Assessment 1, the average cost per year for these services was approximately $36,000.

(H) Legal Costs Related to the Limitation of Liability Provision in CAT Reporter Agreements

CAT LLC believes that the recovery of legal costs related to the limitation of liability provision, including costs related to the proceedings before the SEC and costs related to the proposed amendment to the Consolidated Audit Trail Reporter Agreement and the Consolidated Audit Trail Reporting Agent Agreement (the "Reporting Agreements") is appropriate and that the amount and scope of such costs as described above are reasonable.

As a preliminary matter, as discussed above, the Commission recognized that it is appropriate to recover reasonable costs for legal services as a part of Historical CAT

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195 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

Assessments.[196] In addition, CAT LLC determined that the legal costs incurred for the assistance with regard to the limitation of liability provisions are reasonable in both amount and scope and should be recoverable as a part of Historical CAT Assessment 1.

Moreover, it is critical that CAT LLC, which has no employees of its own, have the ability to fund a legal defense in litigation and other legal proceedings against it. In response to CAT LLC requiring Industry Members to agree to the limitation of liability provision to submit data to the CAT, SIFMA filed an application for review of actions taken by CAT LLC and the Participants pursuant to Sections 19(d) and 19(f) of the Exchange Act. Contemporaneously with the filing of this proceeding, SIFMA moved for a stay of the requirement that Industry Members sign a Reporter Agreement, or in the alternative, asked the Commission to further delay the launch of CAT reporting on June 22, 2020. CAT LLC must have the resources to defend itself from litigious actions by others, like these.

Although a limitation of liability provision ultimately was not adopted as proposed, it was a reasonable provision to propose for the CAT Reporter Agreements, given that such provisions are in accordance with industry norms. Limitations of liability are ubiquitous within the securities industry and have long governed the economic relationships between self-regulatory organizations and the entities that they regulate. For example, U.S. securities exchanges have adopted rules to limit their liability for losses that Industry Members incur through their use of exchange facilities.[197] Similarly, FINRA's former order audit trail, OATS, which has functioned as an integrated audit trail

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196 *See* Sections 11.1(a)(i) and 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

197 *See, e.g.*, NASDAQ Equities Rule 4626.

of order, quote, and trade data for equity securities, required FINRA members to acknowledge an agreement that includes a limitation of liability provision.[198] In addition, such a provision was intended to ensure the financial stability of the CAT. Accordingly, it was reasonable for CAT LLC to propose the use of such a provision.[199]

Furthermore, as described above, the specialized services were performed by experienced counsel at market rates for such services. Accordingly, the legal costs for the efforts related to the limitation of liability provision were reasonable.

(I) Costs for the Chair of CAT Operating Committee

CAT LLC believes that the recovery of consulting costs related to the Chair of the CAT Operating Committee is appropriate and that the amount and scope of such costs are reasonable.

As a preliminary matter, the selection of the Chair of the Operating Committee complies with the requirements of Section 4.2 of the CAT NMS Plan. The initial Chair that served during the period covered by Historical CAT Assessment was designated by a Participant as the Participant's alternate voting member. Accordingly, the Chair is a representative of the Participants, as required by the CAT NMS Plan.

In addition, in approving the CAT Funding Model, the Commission recognized that it is appropriate to recover reasonable costs for consulting as a part of Historical CAT Assessments. As approved by the SEC, the CAT NMS Plan states that "the

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198 FINRA Rule 1013(a)(1)(R) requires all applicants for FINRA Membership to acknowledge the FINRA Entitlement Program Agreement and Terms of Use, which applies to OATS. Industry Members click to indicate that they agree to its terms—including its limitation of liability provision—every time they access FINRA's OATS system to report trade information (*i.e.*, repeatedly over the course of a trading day for many Industry Members).

199 *See* Letter from Michael Simon, Chair, CAT Operating Committee, to Vanessa Countryman, Secretary, Commission (Dec. 18, 2020).

reasonably budgeted CAT costs shall include . . . consulting . . . " costs.[200] In addition, the CAT NMS Plan also requires Participants to include in their fee filings "a brief description of the amount and type of the Historical CAT Costs, including . . . consulting"[201] costs. In keeping with these provisions, a brief description of reasonable consulting costs is included in this filing, and such reasonable consulting costs include the costs related to the Chair position.

The Participants determined that the position of the Chair was a critical role for the implementation of the CAT, and an independent Chair would appropriately consider and address the views of each of the Participants. The Participants also determined that it was important to have a Chair with a strong background regarding issues related to the regulatory obligations of self-regulatory organizations, including their obligations under national market system plans. The compensation paid to the Chair is appropriate for a person with such background and skills. The average annual amount paid to the Chair from 2017 through the end of FAM 3 was $292,733.30. Separate from the Chair, CAT LLC relies upon a Leadership Team of representatives of the SROs to oversee the day-to-day implementation of the CAT NMS Plan. CAT LLC does not compensate any member of the Leadership Team.

(11) Fee Implementation Assistance for Industry Members

(A) Reconciliation of CAT Invoices

(i) Reconciliation of CAT Invoices to Underlying Trades Provided by CAT

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200 Section 11.1(a)(i) of the CAT NMS Plan.

201 Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan.

CAT LLC understands that there are three types of reconciliation processes related to the invoices:

- Reconciliation of CAT Invoices to Underlying Trades: Reconciling the CAT invoice amount to the underlying trades provided by CAT;
- Matching Trades to Books and Records: Providing the means to match the underlying trades provided by CAT with CAT invoices to other books and records independently maintained by individual CAT Reporters (*e.g.*, exchange trade journals/acknowledgements) and data sources of self-regulatory organizations independent of CAT; and
- Order Originator Identification: Providing the ability to identify the order originator for the underlying trades provided by CAT with CAT invoices, which would facilitate firms' ability to pass through CAT Fees to their customers.

As discussed further below, CAT LLC only considers the first type of process to be a "reconciliation" and the only type of process that is required under the CAT NMS Plan. CAT LLC provides the means to reconcile the CAT invoice amount to the underlying trades provided by CAT.

The CAT NMS Plan does not require CAT LLC to facilitate the second type of process: matching underlying trades for a CAT invoice with a firm's internal books and records. CAT LLC has access only to the underlying trades provided by CAT; it does not have access to a firm's internal books and records. Although beyond the requirements of the CAT NMS Plan and involving firm specific considerations, CAT LLC voluntarily has provided guidance and processes to assist CAT Reporters in their efforts to match the underlying trades with their own books and records.

The CAT NMS Plan also does not require CAT LLC to provide the ability to identify the order originator for the underlying trades for the CAT invoices. Accordingly, the billing guidance and processes do not provide CAT Reporters with the ability to

identify the order originator for the underlying trades provided by CAT with CAT invoices. CAT LLC has been working closely with CAT Reporters to explain its billing approach and to address any outstanding billing questions. But, it should not be lost that CAT LLC provides information sufficient to allow CAT Reporters to reconcile CAT invoice amounts with the underlying trades provided by CAT LLC.

(ii) Match the Underlying Trades Provided by CAT with CAT Invoices to Firms' Internal Books and Records Independent of CAT

The CAT NMS Plan does not require CAT LLC to facilitate the matching of underlying trades for a CAT invoice with a firm's internal books and records, which may consist of trading data from various sources external to CAT. Although beyond the requirements of the CAT NMS Plan and involving firm specific considerations, CAT LLC voluntarily has provided guidance and processes to assist CAT Reporters in their efforts to match the underlying trades with their own books and records.

In this regard, it is important to recognize that CAT LLC has developed a billing approach that greatly improves upon existing billing practices for similar regulatory fees (*e.g.*, fees related to Section 31). Accordingly, with the additional information voluntarily provided by CAT LLC, CAT Reporters generally will have sufficient information to match their underlying trades provided by CAT with their own internal books and records that are independent of CAT or to SRO data that is independent of CAT data. However, CAT LLC emphasizes that providing such additional information is not required by the CAT NMS Plan.

To facilitate the introduction of CAT fees, CAT LLC has worked with FCAT to develop an approach to CAT billing that is consistent with existing billing constructs

used with regard to Section 31-related sales values fees, subject to certain enhancements. Under this billing approach, FCAT is providing additional linkage elements, not necessarily provided in the Section 31-sales value fee context, to facilitate CAT Reporters' ability to match the underlying trades provided by CAT with their internal books and records and to reduce the complexity of that process. Specifically, FCAT is providing various key elements of the trade itself, such as the tradeID and branch sequence,[202] to CAT Reporters in the trade billing details provided with their CAT invoices ("Additional Trade Details"). As a result, CAT Reporters now have numerous alternative methods for matching a trade with their internal books and records where they previously did not have such matching methods in other fee contexts.

With the Additional Trade Details, CAT LLC and FCAT believe that the overwhelming majority of underlying trades provided by CAT bills can be matched with a CAT Reporter's internal books and records. CAT LLC recognizes that there may be certain cases in which such matching is more difficult given various firm-specific considerations, but believes that such instances are significantly more limited than with regard to the SRO fees charged in relation to Section 31.[203] By providing Additional Trade Details that are not available in other fee contexts, FCAT enhances the Industry

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202 *See* CAT Technical Specifications for Billing Trade Details; Trade Details Schema (https://catnmsplan.com/sites/default/files/2024-02/02.05.24-Billing-Trade-Details-Schema.json); CAT Billing Scenarios, Version 1.0 (Nov. 30, 2023) (https://www.catnmsplan.com/sites/default/files/2024-01/01.12.2024-CAT-Billing-Scenarios-v1.0.pdf).

203 For years, broker-dealers have faced similar reconciliation issues with regard to SRO fees related to Section 31. Broker-dealers have responded to this issue in the Section 31 context by exercising their discretion as to whether and the manner and extent to which they pass on those fees (*e.g.*, by rounding up its fees to the nearest cent, or decide to charge for, or not charge for, certain transactions, or assess a specific fee or incorporate the costs into other fee programs). *See, e.g.*, Securities Exchange Act Rel. No. 49928 (June 28, 2004), 69 Fed. Reg. 41060, 41072 (July 7, 2004) (noting that broker-dealers may "over-collect" Section 31-related fees charged to their clients due to rounding practices, and double-counting with regard to certain transactions).

Members' ability to match the underlying trades provided with CAT invoices with books and records and SRO data, both of which are independent of CAT data.

(iii) CAT LLC is Not Required to Facilitate CAT Reporters' Ability to Pass Through Fees to Their Customers

Similar to other regulatory fees, the CAT NMS Plan does not address the manner or extent to which CAT Executing Brokers may seek to pass any CAT fees on to their customers, nor does it impose any obligation on CAT LLC or the Plan Processor to facilitate firms' ability to do so. Accordingly, Historical CAT Assessment 1 does not address the process by which any CAT Reporters may pass through the fee to their customers. Likewise, the CAT billing approach provided by the Plan Processor is designed to address the needs of CAT Reporters with regard to the reconciliation of CAT invoices with the underlying trades provided by CAT LLC with the invoices; they are not designed to address issues related to any pass-through fees. Accordingly, facilitating CAT Reporters' ability to pass through fees to their clients is outside the scope of this fee filing. Nevertheless, as described below, CAT LLC and the Plan Processor have expended significant efforts to provide technical assistance to Industry Members regarding the implementation of Historical CAT Assessment 1, including providing Additional Trade Details that provide significant details about each underlying trade.

(a) Originating Brokers Versus Executing Brokers

In its approval of the CAT Funding Model, the Commission approved charging CAT fees to the CAT Executing Broker, rather than the originating broker. This fee filing must comply with the requirements of the CAT Funding Model, and, therefore,

charges the Historical CAT Assessment 1 to CAT Executing Brokers.

Moreover, charging originating brokers would introduce significant complexity to the billing process from the CAT's perspective, and would increase the costs of implementing CAT fees. Charging the CAT Executing Broker is simple and straightforward, and leverages a one-to-one relationship between billable events (trades) and billable parties, similar to other transaction-based fees. In contrast, for a single trade event, there may be many originating brokers, and each trade must be broken down on a pro-rata basis, to account for one or more layers of aggregation, disaggregation, and representation of the underlying orders. While CAT is indeed designed to capture and unwind complex aggregation scenarios, the data and linkages are structured to facilitate regulatory use, and not a billing mechanism that assesses fees on a distinct set of executed trades; it is not simply a matter of using existing CAT linkages. Furthermore, charging originating brokers would implicate issues related to lifecycle linkage rates, and issues related to corrections, cancellations and allocations, while charging CAT Executing Brokers would avoid such issues.

(b) Identification of Order Originator for Underlying Trades

As noted, the CAT NMS Plan does not address the manner or extent to which CAT Executing Brokers may seek to pass any CAT Fees on to their customers, nor does it impose any obligation on CAT LLC or the Plan Processor to facilitate firms' ability to do so. Nevertheless, the Additional Trade Details provided with regard to the underlying trades on CAT invoices may assist with this process. Like with Section 31-related sales value fees, however, it is not always possible to trace every fee on a transaction back to

the originating party. Industry Members have faced these issues under Section 31-related sales values fees for many years.[204] However, with the Additional Trade Details provided under the CAT billing approach, in many cases, CAT Reporters will be able to identify the order originator for the underlying trades provided by CAT with CAT invoices. In some cases, CAT LLC believes that certain issues related to certain types of market activity may implicate CAT Reporters' ability to identify the order originator for a limited set of underlying trades for the CAT invoices. Although CAT LLC does not believe that it is required to address these issues, CAT LLC and FCAT have been carefully researching and analyzing these types of issues as they are identified, and have been working voluntarily to assist CAT Reporters with these issues as necessary and when possible. In addition, CAT LLC intends to continue to provide CAT Reporters with billing guidance through FAQs, CAT Alerts and Helpdesk responses to address outstanding billing questions.

(B) Significant Technical Assistance

CAT LLC has worked with FCAT to provide significant technical assistance to Industry Members to allow the Industry Members to understand how Historical CAT Assessment 1 will be implemented and billed, including webinars, CAT alerts, mock invoices, and responses to questions posed to the FCAT Help Desk.

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204 "FINRA charges a Regulatory Transaction Fee ("RTF") to industry members to reimburse FINRA for the Section 31 fees that FINRA pays to the Commission. FINRA does not currently provide industry members with the data that industry members require for proper reconciliation of RTF fees. This has been a major problem for the industry for many years." Letter from Howard Meyerson, Managing Director, FIF, to Robert Cook, Chief Executive Officer, FINRA at 2 (Dec. 15. 2023) (https://fif.com/index.php/working-groups/category/271-comment-letters?download=2820:fif-letter-to-finra-on-pass-through-of-finra-cat-fees&view=category).

- Technical Specifications and Scenarios. CAT LLC has provided detailed technical documentation for CAT billing, including (1) technical specifications, which describe the CAT Billing Trade Details Files associated with monthly CAT invoices, including detailed information about data elements and file formats as well as access instructions, network and transport options;[205] (2) trade details schemas;[206] and (3) CAT billing scenarios.[207]

- Industry Webinars. CAT LLC has hosted two industry webinars specifically dedicated to CAT billing. The first webinar, hosted on September 28, 2023, discussed the operational implementation of the CAT Reporter billing process.[208] The second webinar, hosted on November 7, 2023, provided (1) a demonstration of the CAT Reporter Portal and how to access CAT billing documents, including CAT invoices; and (2) additional information on underlying trade details in relation to the CAT Reporter billing process and an overview of the CAT Contact Management System.[209] 485 participants and 394 participants attended the two webinars, respectively.

- CAT Alert. CAT LLC has published a detailed CAT Alert that describes how FCAT, as the Plan Processor acting on behalf of CAT LLC, will calculate applicable fees, issue invoices to and collect payment from CAT Executing Brokers.[210]

- Frequently Asked Questions (FAQs). CAT LLC also has continued to engage with the industry on billing issues by making responses to billing FAQs available on the CAT website. The FAQs address a broad range of frequently asked questions, including, for example, which Industry Members will receive invoices, how fees are calculated, when and how fees are required to be paid, how to access invoices, and how to update the billing contact. To date, responses to 27 FAQs

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205 CAT Technical Specifications for Billing Trade Details, Version 1.0 r1 (Dec. 8. 2023) (https://catnmsplan.com/sites/default/files/2023-12/12.07.2023-CAT-Techical-Specifications-for-Billing-Trade-Details-v1.0r1_CLEAN.pdf).

206 Trade Details Schema (https://catnmsplan.com/sites/default/files/2024-02/02.05.24-Billing-Trade-Details-Schema.json).

207 CAT Billing Scenarios, Version 1.0 (Nov. 30, 2023) (https://www.catnmsplan.com/sites/default/files/2024-01/01.12.2024-CAT-Billing-Scenarios-v1.0.pdf).

208 CAT Billing Webinar, Part 1 (Sept. 28, 2023) (https://www.catnmsplan.com/events/part-1-cat-billing-webinar).

209 CAT Billing Webinar, Part 2 (Nov. 7, 2023) (https://www.catnmsplan.com/events/part-2-cat-billing-webinar).

210 *See* CAT Alert 2023-02 (Oct. 12, 2023) (https://www.catnmsplan.com/sites/default/files/2023-10/10.12.23-CAT-Alert-2023-02.pdf).

are available on the CAT website, and CAT LLC will provide additional responses to FAQs as warranted.[211]

- Mock Invoices. To assist Industry Members with compliance with the commencement of Historical CAT Assessment 1, CAT LLC has been making available to CAT Executing Brokers mock invoices for Historical CAT Assessment 1 since December 2023 for billable activity occurring in November 2023. The mock invoices are in the same form as the actual, payable invoices, including both the relevant transaction data and the corresponding fee (as originally contemplated). However, no payments are required in response to such mock invoices; they are to be used solely to assist CAT Executing Brokers with the development of their processes for paying the CAT fees. Such data provides CAT Executing Brokers with a preview of the transaction data used in creating the invoices for Historical CAT Assessment 1 fees, as the data will be the same as data provided in actual invoices. Such data preview is intended to facilitate the payment of Historical CAT Assessment 1. For the November, December, and January billing periods, FCAT has generated trade detail files for 569 distinct firms that are CAT Executing Brokers. As such, CAT Reporters have actively engaged in the billing process via the mock invoices.

- Help Desk Assistance. CAT LLC also provides detailed, individualized assistance to Industry Members regarding CAT fees and the billing process through the FCAT Help Desk.[212] For example, the Help Desk has assisted with 406 cases related to the billing of CAT fees from July 2023 through March 2024.

By providing such detailed and sustained assistance to Industry Members regarding CAT fees and billing, CAT LLC has successfully addressed questions raised by Industry Members regarding the CAT fees and billing processes.

(C) Ample Preparation Time

CAT LLC has provided Industry Members with ample time to comply with the implementation of Historical CAT Assessment 1. CAT LLC originally proposed issuing

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211 *See* CAT Billing FAQs, Section V of CAT FAQs (https://www.catnmsplan.com/faq?search_api_fulltext=&field_topics=271&sort_by=field_faq_number).

212 The CAT NMS Plan requires that the Plan Processor "staff a CAT help desk, as described in Appendix D, CAT Help Desk, to provide technical expertise." Section 6.10(c)(vi) of the CAT NMS Plan. *See also* Section 10.3 of Appendix D of the CAT NMS Plan for a description of the Plan requirements for the CAT Help Desk.

the first invoices for Historical CAT Assessment 1 in December 2023 based on transactions in Eligible Securities in November 2023. In consideration of the feedback about the need for additional time to implement the new fee, CAT LLC pushed back this timeline by four months, proposing to issue the first Historical CAT Assessment 1 in April 2024 based on transactions in March 2024.[213] This filing pushes this timeline back even further for implementing Historical CAT Assessment 1, proposing to issue the first invoices for Historical CAT Assessment 1 in November 2024 based on transactions in Eligible Securities in October 2024. Moreover, as discussed above, during these additional months, FCAT has been working closely with Industry Members to provide guidance regarding their mock bills and reconciliation efforts related thereto.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the requirements of the Exchange Act. The Exchange believes that the proposed rule change is consistent with Section 6(b)(5) of the Act[214], which requires, among other things, that the Exchange's rules must be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest, and not designed to permit unfair discrimination between customers, issuers, brokers and dealers. The Exchange also believes that the proposed rule change is consistent with the provisions of Section 6(b)(4) of the Act,[215] because it provides for the equitable allocation of reasonable dues, fees and other charges

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213 *See* Exchange Act Release No. 99356 (January 17, 2024), 89 FR 10697 (February 13, 2024) (SR-MEMX-2024-01).

214 15 U.S.C. 78f(b)(6).

215 15 U.S.C. 78f(b)(4).

among members and issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers. The Exchange further believes that the proposed rule change is consistent with Section 6(b)(8) of the Act[216], which requires that the Exchange's rules not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act. These provisions also require that the Exchange be "so organized and [have] the capacity to be able to carry out the purposes" of the Act and "to comply, and . . . to enforce compliance by its members and persons associated with its members," with the provisions of the Exchange Act.[217] Accordingly, a reasonable reading of the Act indicates that it intended that regulatory funding be sufficient to permit an exchange to fulfill its statutory responsibility under the Act, and contemplated that such funding would be achieved through equitable assessments on the members, issuers, and other users of an exchange's facilities.

The Exchange believes that this proposal is consistent with the Act because it implements provisions of the Plan and is designed to assist the Exchange in meeting regulatory obligations pursuant to the Plan. In approving the Plan, the SEC noted that the Plan "is necessary and appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanism of a national market system, or is otherwise in furtherance of the purposes of the Act."[218] To the extent that this proposal implements the Plan and applies specific

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216 15 U.S.C. 78f(b)(8).

217 *See* Section 6(b)(1) of the Exchange Act.

218 CAT NMS Plan Approval Order at 84697.

requirements to Industry Members, the Exchange believes that this proposal furthers the objectives of the Plan, as identified by the SEC, and is therefore consistent with the Act.

The Exchange believes that the proposed fees paid by the CEBBs and CEBSs are reasonable, equitably allocated and not unfairly discriminatory. First, the Historical CAT Assessment 1 fees to be collected are directly associated with the costs of establishing and maintaining the CAT, where such costs include Plan Processor costs and costs related to technology, legal, consulting, insurance, professional and administration, and public relations costs. The Exchange has already incurred such development and implementation costs and the proposed Historical CAT Assessment 1 fees, therefore, would allow the Exchange to collect certain of such costs in a fair and reasonable manner from Industry Members, as contemplated by the CAT NMS Plan.

The proposed Historical CAT Assessment 1 fees would be charged to Industry Members in support of the maintenance of a consolidated audit trail for regulatory purposes. The proposed fees, therefore, are consistent with the Commission's view that regulatory fees be used for regulatory purposes and not to support the Exchange's business operations. The proposed fees would not cover Exchange services unrelated to the CAT. In addition, any surplus would be used as a reserve to offset future fees. Given the direct relationship between CAT fees and CAT costs, the Exchange believes that the proposed fees are reasonable, equitable and not unfairly discriminatory.

As further discussed below, the SEC approved the CAT Funding Model, finding it was reasonable and that it equitably allocates fees among Participants and Industry Members. The Exchange believes that the proposed fees adopted pursuant to the CAT

Funding Model approved by the SEC are reasonable, equitably allocated and not unfairly discriminatory.

(1) Implementation of CAT Funding Model in CAT NMS Plan

Section 11.1(b) of the CAT NMS Plan states that "[t]he Participants shall file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves." Per Section 11.1(b) of the CAT NMS Plan, the Exchange has filed this fee filing to implement the Industry Member CAT fees included in the CAT Funding Model. The Exchange believes that this proposal is consistent with the Exchange Act because it is consistent with, and implements, the CAT Funding Model in the CAT NMS Plan, and is designed to assist the Exchange and its Industry Members in meeting regulatory obligations pursuant to the CAT NMS Plan. In approving the CAT NMS Plan, the SEC noted that the Plan "is necessary and appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanism of a national market system, or is otherwise in furtherance of the purposes of the Act."[219] Similarly, in approving the CAT Funding Model, the SEC concluded that the CAT Funding Model met this standard.[220] As this proposal implements the Plan and the CAT Funding Model described therein, and applies specific requirements to Industry Members in compliance with the Plan, the Exchange believes that this proposal furthers the objectives of the Plan, as identified by the SEC, and is therefore consistent with the Exchange Act.

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219 CAT NMS Plan Approval Order at 84696.

220 CAT Funding Model Approval Order at 62686.

(2) Calculation of Fee Rate for Historical CAT Assessment 1 is Reasonable

The SEC has determined that the CAT Funding Model is reasonable and satisfies the requirements of the Exchange Act. Specifically, the SEC has concluded that the method for determining Historical CAT Assessments as set forth in Section 11.3 of the CAT NMS Plan, including the formula for calculating the Historical Fee Rate, the identification of the parties responsible for payment and the transactions subject to the fee rate for the Historical CAT Assessment, is reasonable and satisfies the Exchange Act.[221] In each respect, as discussed above, Historical CAT Assessment 1 is calculated, and would be applied, in accordance with the requirements applicable to Historical CAT Assessments as set forth in the CAT NMS Plan. Furthermore, as discussed below, the Exchange believes that each of the figures for the variables in the SEC-approved formula for calculating the fee rate for Historical CAT Assessment 1 is reasonable and consistent with the Exchange Act. Calculation of the Historical Fee Rate for Historical CAT Assessment 1 requires the figures for the Historical CAT Costs 1, the executed equivalent share volume for the prior twelve months, the determination of Historical Recovery Period 1, and the projection of the executed equivalent share volume for Historical Recovery Period 1. Each of these variables is reasonable and satisfies the Exchange Act, as discussed throughout this filing.

(A) Historical CAT Costs 1

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221 *Id*. at 62662-63.

The formula for calculating a Historical Fee Rate requires the amount of Historical CAT Costs to be recovered. Specifically, Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan requires a fee filing to provide:

> a brief description of the amount and type of the Historical CAT Costs, including (1) the technology line items of cloud hosting services, operating fees, CAIS operating fees, change request fees, and capitalized developed technology costs, (2) legal, (3) consulting, (4) insurance, (5) professional and administration and (6) public relations costs.

In accordance with this requirement, the Exchange has set forth the amount and type of Historical CAT Costs 1 for each of these categories of costs above.

Section 11.3(b)(iii)(B)(II) of the CAT NMS Plan also requires that the fee filing provide "sufficient detail to demonstrate that the Historical CAT Costs are reasonable and appropriate." As discussed below, the Exchange believes that the amounts set forth in this filing for each of these cost categories is "reasonable and appropriate." Each of the costs included in Historical CAT Costs 1 are reasonable and appropriate because the costs are consistent with standard industry practice, based on the need to comply with the requirements of the CAT NMS Plan, incurred subject to negotiations performed on an arm's length basis, and/or are consistent with the needs of any legal entity, particularly one with no employees.

(i) Technology: Cloud Hosting Services

In approving the CAT Funding Model, the Commission recognized that it is appropriate to recover costs related to cloud hosting services as a part of Historical CAT Assessments.[222] CAT LLC determined that the costs related to cloud hosting services

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222 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. As described above, the cloud hosting services costs reflect, among other things, the breadth of the CAT cloud activities, data volume far in excess of the original volume estimates, the need for specialized cloud services given the volume and unique nature of the CAT, the processing time requirements of the Plan, and regular efforts to seek to minimize costs where permissible under the Plan. CAT LLC determined that use of cloud hosting services is necessary for implementation of the CAT, particularly given the substantial data volumes associated with the CAT, and that the fees for cloud hosting services negotiated by FCAT were reasonable, taking into consideration a variety of factors, including the expected volume of data and the breadth of services provided and market rates for similar services.[223] Indeed, the actual costs of the CAT are far in excess of the original estimated costs of the CAT due to various factors, including the higher volumes and greater complexity of the CAT than anticipated when Rule 613 was originally adopted.

To comply with the requirements of the Plan, the breadth of the cloud activities related to the CAT is substantial. The cloud services not only include the production environment for the CAT, but they also include two industry testing environments, support environments for quality assurance and stress testing and disaster recovery capabilities. Moreover, the cloud storage costs are driven by the requirements of the Plan, which requires the storage of multiple versions of the data, from the original submitted version of the data through various processing steps, to the final version of the data.

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[223] For a discussion of the amount and type of cloud hosting services fees, *see* Sections 3(a)(2)(B)(i)(a), 3(a)(2)(B)(ii)(a), 3(a)(2)(B)(iii)(a) and 3(a)(2)(B)(iv)(A) above.

Data volume is a significant driver of costs for cloud hosting services. When the Commission adopted the CAT NMS Plan in 2016, it estimated that the CAT would need to receive 58 billion records per day[224] and that annual operating costs for the CAT would range from $36.5 million to $55 million.[225] Through 2021, the actual data volumes have been five times that original estimate. The data volumes for each period are set forth in detail above.[226]

In addition to the effect of the data volume on the cloud hosting costs, the processing timelines set forth in the Plan contribute to the cloud hosting costs. Although CAT LLC has proactively sought to manage cloud hosting costs while complying with the Plan, including through requests to the Commission for exemptive relief and an amendment to the CAT NMS Plan, stringent CAT NMS Plan requirements do not allow for any material flexibility in cloud architecture design choices, processing timelines (*e.g.*, the use of non-peak processing windows), or lower-cost storage tiers. As a result, the required CAT processing timelines contribute to the cloud hosting costs of the CAT.

The costs for cloud hosting services also reflect the need for specialized cloud hosting services given the data volume and unique processing needs of the CAT. The data volume as well as the data processing needs of the CAT necessitate the use of cloud hosting services. The equipment, power and services required for an on-premises data model, the alternative to cloud hosting services, would be cost prohibitive. Moreover, as CAT was being developed, there were limited cloud hosting providers that could satisfy all the necessary CAT requirements, including the operational and security criteria. Over

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224 Appendix D-4 of the CAT NMS Plan at n.262.

225 CAT NMS Plan Approval Order at 84801.

226 *See* Sections 3(a)(2)(B)(i)(a), 3(a)(2)(B)(ii)(a), 3(a)(2)(B)(iii)(a) and 3(a)(2)(B)(iv)(A) above.

time more providers offering cloud hosting services that would satisfy these criteria have entered the market. CAT LLC will continue to evaluate alternative cloud hosting services, recognizing that the time and cost to move to an alternative cloud provider would be substantial.

The reasonableness of the cloud hosting services costs is further supported by key cost discipline mechanisms for the CAT – a cost-based funding structure, cost transparency, cost management efforts (including regular efforts to lower compute and storage costs where permitted by the Plan) and oversight. Together, these mechanisms help ensure the ongoing reasonableness of the CAT's costs and the level of fees assessed to support those costs.[227]

(ii) Technology: Operating Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to operating fees as a part of Historical CAT Assessments.[228] CAT LLC determined that the costs related to operating fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. The operating fees include the negotiated fees paid by CAT LLC to the Plan Processor to operate and maintain the system for order-related information and to perform business operations related to the system, including compliance, security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management. CAT LLC determined that the selection of FCAT

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227 *See* Securities Exchange Act Rel. No. 97151 (Mar. 15, 2023), 88 Fed. Reg. 17086, 17117 (Mar. 21, 2023) (describing key cost discipline mechanisms for the CAT).

228 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

as the Plan Processor was reasonable and appropriate given its expertise with securities regulatory reporting, after a process of considering other potential candidates.[229] CAT LLC also determined that the fixed price contract, negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan and Rule 613, was reasonable and appropriate, taking into consideration a variety of factors, including the breadth of services provided and market rates for similar types of activity.[230] The services performed by FCAT for each period and the costs related to such services are described above.[231]

(iii) Technology: CAIS Operating Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to CAIS operating fees as a part of Historical CAT Assessments.[232] CAT LLC determined that the costs related to CAIS operating fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. The CAIS operating fees include the fees paid to the Plan Processor to operate and maintain CAIS and to perform the business operations related to the system, including compliance, security, testing, training, communications with the industry (*e.g.*, management of the FINRA CAT Helpdesk, FAQs, website and webinars) and program management. CAT LLC determined that the FCAT-negotiated fees for Kingland's CAIS-related services, negotiated on an arm's length basis with the goals of managing costs and receiving services required to comply with the CAT NMS Plan, taking into consideration a variety

229 *See* Section 3(a)(2)(B)(i)(b) above.

230 *See* Sections 3(a)(2)(B)(i)(b), 3(a)(2)(B)(ii)(b), 3(a)(2)(B)(iii)(b) and 3(a)(2)(B)(iv)(b) above.

231 *Id.*

232 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

of factors, including the services to be provided and market rates for similar types of activity, were reasonable and appropriate.[233] The services performed by Kingland for each period and the costs for each period are described above.[234]

(iv) Technology: Change Request Fees

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to change request fees as a part of Historical CAT Assessments.[235] CAT LLC determined that the costs related to change request fees described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. It is common practice to utilize a change request process to address evolving needs in technology projects. This is particularly true for a project like CAT that is the first of its kind, both in substance and in scale. The substance and costs of each of the change requests are evaluated by the Operating Committee, and approved in accordance with the requirements for Operating Committee meetings. In each case, CAT LLC determined that the change requests were necessary to implement the CAT. As described above, the change requests cover various technology changes, including, for example, changes related to CAT reporting, data feeds and exchange functionality. CAT LLC also determined that the costs for each change request were appropriate for the relevant technology change. A description of the change requests for each FAM Period and their total costs are set described above.[236] As noted above, the total costs for change requests

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233 *See* Sections 3(a)(2)(B)(i)(c), 3(a)(2)(B)(ii)(c), 3(a)(2)(B)(iii)(c) and 3(a)(2)(B)(iv)(c) above.

234 *Id*.

235 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

236 *See* Sections 3(a)(2)(B)(i)(d), 3(a)(2)(B)(ii)(d), 3(a)(2)(B)(iii)(d) and 3(a)(2)(B)(iv)(d) above.

through FAM Period 3 represent a small percentage of Historical CAT Costs 1 – that is, 0.25% of Historical CAT Costs 1.

(v) Capitalized Developed Technology Costs

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to capitalized developed technology costs as a part of Historical CAT Assessments.[237] Capitalized developed technology costs include costs related to certain development costs, costs related to certain modifications, upgrades and other changes to the CAT, CAIS implementation fees and license fees. The amount and type of costs for each period are described in more detail above.[238] CAT LLC determined that these costs are reasonable and should be included as a part of Historical CAT Costs 1.

These costs involve the activity of both the Initial Plan Processor and FCAT, as the successor Plan Processor.[239] With regard to the Initial Plan Processor, the Participants utilized an RFP to seek proposals to build and operate the CAT, receiving a number of proposals in response to the RFP. The Participants carefully reviewed and considered each of the proposals, including holding in-person meetings with each of the Bidders. After several rounds of review, the Participants selected the Initial Plan Processor in accordance with the CAT NMS Plan. CAT LLC entered into an agreement with the Initial Plan Processor in which CAT LLC would pay the Initial Plan Processor a negotiated, fixed price fee.[240] In addition, as described above, CAT LLC determined that

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237 Section 11.3(b)(iii)(B)(II)(B)(1) of the CAT NMS Plan.

238 *See* Sections 3(a)(2)(B)(i)(e), 3(a)(2)(B)(ii)(e), 3(a)(2)(B)(iii)(e) and 3(a)(2)(B)(iv)(e) above.

239 *Id.*

240 *See* Section 3(a)(2)(B)(i)(e) above.

is was appropriate to enter into an agreement with FCAT as the successor Plan Processor.[241]

(vi) Legal

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover costs related to legal fees as a part of Historical CAT Assessments.[242] CAT LLC determined that the legal costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Given the unique nature of the CAT, the number of parties involved with the CAT (including, for example, the SEC, Participants, Industry Members, and vendors) and the many regulatory issues associated with the CAT, the scope of the necessary legal services are substantial. CAT LLC determined that the scope of the legal services is necessary to implement and maintain the CAT and that the legal rates reflect the specialized services necessary for such a project. When hiring each law firm for a CAT project, CAT LLC interviewed multiple firms, and determined to hire each firm based on a variety of factors, including the relevant expertise and fees. In each case, CAT LLC determined that the hourly fee rates were in line with market rates for the specialized legal expertise. In addition, CAT LLC determined that the total costs incurred for each CAT project were appropriate given the breadth of services provided. The services performed by each law firm for each period and the costs related to such services are described above.[243]

(vii) Consulting

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241 *See* Section 3(a)(2)(B)(i)(b) above.

242 Section 11.3(b)(iii)(B)(II)(B)(2) of the CAT NMS Plan.

243 *See* Sections 3(a)(2)(B)(i)(f), 3(a)(2)(B)(ii)(f), 3(a)(2)(B)(iii)(f) and 3(a)(2)(B)(iv)(f) above.

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover consulting costs as a part of Historical CAT Assessments.[244] CAT LLC determined that the consulting costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Because there are no CAT employees[245] and because of the significant number of issues associated with the CAT, the consultants provided assistance in the management of various CAT matters and the processes related to such matters.[246] CAT LLC considered a variety of factors in choosing a consulting firm and determined to select Deloitte after an interview process.[247] CAT LLC also determined that the consulting services were provided at reasonable market rates, as the fees were negotiated annually and comparable to the rates charged by other consulting firms for similar work.[248] Moreover, the total costs for such consulting services were appropriate in light of the breadth of services provided by Deloitte. The services performed by Deloitte and the costs related to such services are described above.[249]

(viii) Insurance

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover insurance costs as a part of Historical CAT Assessments.[250] CAT LLC

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244 Section 11.3(b)(iii)(B)(II)(B)(3) of the CAT NMS Plan.

245 As stated in the filing of the proposed CAT NMS Plan, "[i]t is the intent of the Participants that the Company have no employees." Securities Exchange Act Rel. No. 77724 (Apr. 27, 2016), 81 Fed. Reg. 30614, 30621 (May 17, 2016).

246 CAT LLC uses certain third parties to perform tasks that may be performed by administrators for other NMS Plans. *See, e.g.*, CTA Plan and CQ Plan.

247 *See* Section 3(a)(2)(B)(i)(g) above.

248 *See* Sections 3(a)(2)(B)(i)(g), 3(a)(2)(B)(ii)(g), 3(a)(2)(B)(iii)(g) and 3(a)(2)(B)(iv)(g) above.

249 *Id*.

250 Section 11.3(b)(iii)(B)(II)(B)(4) of the CAT NMS Plan.

determined that the insurance costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. CAT LLC determined that it is common practice to have directors' and officers' liability insurance, and errors and omissions liability insurance. CAT LLC further determined that it was important to have cyber security insurance given the nature of the CAT, and such a decision is consistent with the CAT NMS Plan, which states that the cyber incident response plan may include "[i]nsurance against security breaches."[251] In selecting the insurance providers for these policies, CAT LLC engaged in an evaluation of alternative insurers, including a comparison of the pricing offered by the alternative insurers.[252] Based on this analysis, CAT LLC determined that the selected insurance policies provided appropriate coverage at reasonable market rates.[253]

(ix) Professional and Administration

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover professional and administration costs as a part of Historical CAT Assessments.[254] CAT LLC determined that the professional and administration costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. Because there are no CAT employees, all required accounting, financial, tax, cash management and treasury functions for CAT LLC have been outsourced at market rates. In addition, the required annual financial statement audit of CAT LLC is included in professional and administration costs, which costs are also at market rates.

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251 Section 4.1.5 of Appendix D of the CAT NMS Plan.

252 *See* Sections 3(a)(2)(B)(i)(h), 3(a)(2)(B)(ii)(h), 3(a)(2)(B)(iii)(h) and 3(a)(2)(B)(iv)(h) above.

253 *Id.*

254 Section 11.3(b)(iii)(B)(II)(B)(5) of the CAT NMS Plan.

CAT LLC determined to hire a financial advisory firm, Anchin, to assist with financial matters for the CAT. CAT LLC interviewed Anchin as well as other potential financial advisory firms to assist with the CAT project, considering a variety of factors in its analysis, including the firm's relevant expertise and fees.[255] The hourly fee rates for this firm were in line with market rates for the financial advisory services provided.[256] Moreover, the total costs for such financial advisory services was appropriate in light of the breadth of services provided by Anchin. The services performed by Anchin and the costs related to such services are described above.[257]

CAT LLC also determined to engage an independent accounting firm, Grant Thornton, to complete the audit of CAT LLC's financial statements, in accordance with the requirements of the CAT NMS Plan. CAT LLC interviewed this firm as well as another potential accounting firm to audit CAT LLC's financial statements, considering a variety of factors in its analysis, including the relevant expertise and fees of each of the firms. CAT LLC determined that Grant Thornton was well-qualified for the role given the balanace of these considerations.[258] Grant Thornton's fixed fee rate compensation arrangement was reasonable and appropriate, and in line with the market rates charged for these types of accounting services.[259] Moreover, the total costs for such financial advisory services was appropriate in light of the breadth of services provided by Grant

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255 *See* Section 3(a)(2)(B)(i)(i) above.

256 *See* Sections 3(a)(2)(B)(i)(i), 3(a)(2)(B)(ii)(i), 3(a)(2)(B)(iii)(i) and 3(a)(2)(B)(iv)(i) above.

257 *Id*.

258 *See* Section 3(a)(2)(B)(i)(i) above.

259 *See* Sections 3(a)(2)(B)(i)(i), 3(a)(2)(B)(ii)(i), 3(a)(2)(B)(iii)(i) and 3(a)(2)(B)(iv)(i) above.

Thornton. The services performed by Grant Thornton and the costs related to such services are described above.[260]

The professional and administrative costs also include costs related to the receipt of certain market data from Exegy. After performing an analysis of the available market data vendors to confirm that the data provided met the SIP Data requirements of the CAT NMS Plan and comparing the costs of the vendors providing the required SIP Data, CAT LLC determined to purchase market data from Exegy. Exegy provided the data elements required by the CAT NMS Plan, and the fees were reasonable and in line with market rates for the market data received.[261]

The professional and administrative costs also include costs related to a third party security assessment of the CAT performed by RSM. The assessment was designed to verify and validate the effective design, implementation and operation of the controls specified by NIST Special Publication 800-53, Revision 4 and related standards and guidelines. Such a security assessment is in line with industry practice and important given the data included in the CAT. CAT LLC determined to engage RSM to perform the security assessment, after considering a variety of factors in its analysis, including the firm's relevant expertise and fees. The fees were reasonable and in line with market rates for such an assessment.[262]

(x) Public Relations Costs

In approving the CAT Funding Model, the SEC recognized that it is appropriate to recover public relations costs as a part of Historical CAT Assessments.[263] CAT LLC determined that the public relations costs described in this filing are reasonable and should be included as a part of Historical CAT Costs 1. CAT LLC determined that the

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260 *Id*.

261 *See* Section 3(a)(2)(B)(i)(i) above.

262 *Id.*

263 Section 11.3(b)(iii)(B)(II)(B)(6) of the CAT NMS Plan.

types of public relations services utilized were beneficial to the CAT and market participants more generally. Public relations services were important for various reasons, including monitoring comments made by market participants about CAT and understanding issues related to the CAT discussed on the public record.[264] By engaging a public relations firm, CAT LLC was better positioned to understand and address CAT issues to the benefit of all market participants.[265] Moreover, CAT LLC determined that the rates charged for such services were in line with market rates.[266] As noted above, the total public relations costs through FAM Period 3 represent a small percentage of Historical CAT Costs 1 – that is, 0.1% of Historical CAT Costs 1.

(B) Total Executed Equivalent Share Volume for the Prior 12 Months

The total executed equivalent share volume of transactions in Eligible Securities for the 12-month period from June 2023 through May 2024 was 3,980,753,840,905.21 executed equivalent shares. CAT LLC determined the total executed equivalent share volume for the prior twelve months by counting executed equivalent shares in the same manner as it will count executed equivalent shares for CAT billing purposes.

(C) Historical Recovery Period 1

CAT LLC has determined to establish a Historical Recovery Period of 24 months for Historical CAT Assessment 1 and that such length is reasonable. CAT LLC determined that the length of Historical Recovery Period 1 appropriately weighs the need

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264 *See* Section 3(a)(2)(B)(i)(j) above.

265 *See* Sections 3(a)(2)(B)(i)(j), 3(a)(2)(B)(ii)(j), 3(a)(2)(B)(iii)(j) and 3(a)(2)(B)(iv)(j) above.

266 *Id.*

for a reasonable Historical Fee Rate 1 that spreads the Historical CAT Costs over an appropriate amount of time and the need to repay the loans notes to the Participants in a timely fashion. CAT LLC determined that 24 months for Historical Recovery Period 1 would establish a fee rate that is lower than other transaction-based fees, including fees assessed pursuant to Section 31.[267] In addition, in establishing a Historical Recovery Period of 24 months, CAT LLC recognized that the total costs for Historical CAT Assessment 1 was less than the total costs for 2022 and 2023, and therefore it would be appropriate to recover those costs in two years.

(D) Projected Executed Equivalent Share Volume for Historical Recovery Period 1

CAT LLC has determined to calculate the projected total executed equivalent share volume for the 24 months of Historical Recovery Period 1 by doubling the executed equivalent share volume for the prior 12 months. CAT LLC determined that such an approach was reasonable as the CAT's annual executed equivalent share volume has remained relatively constant in recent years. For example, the executed equivalent share volume for 2021 was 3,963,697,612,395, the executed equivalent share volume for 2022 was 4,039,821,841,560.31, and the executed equivalent share volume for 2023 was 3,868,940,345,680.6. Accordingly, the projected total executed equivalent share volume for Historical Recovery Period 1 is projected to be 7,961,507,681,810.42 executed equivalent shares.[268]

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267 As the SEC noted in the CAT Funding Model Approval Order, recent Section 31 fees ranged from $0.00009 per share to $0.0004 per share. CAT Funding Model Approval Order at 62682.

268 This projection was calculated by multiplying 3,980,753,840,905.21 executed equivalent shares by two.

(E) Actual Fee Rate for Historical CAT Assessment 1

(i) Decimal Places

As noted in the Plan amendment for the CAT Funding Model, as a practical matter, the fee filing for a Historical CAT Assessment would provide the exact fee per executed equivalent share to be paid for each Historical CAT Assessment, by multiplying the Historical Fee Rate by one-third and describing the relevant number of decimal places for the fee rate.[269] Accordingly, proposed paragraph (a)(1)(B) of the fee schedule would set forth a fee rate of $0.000013 per executed equivalent share. This fee rate is calculated by multiplying Historical Fee Rate 1 by one-third, and rounding the result to 6 decimal places. CAT LLC determined that the use of six decimal places is reasonable as it balances the accuracy of the calculation with the potential systems and other impracticalities of using additional decimal places in the calculation.

(ii) Reasonable Fee Level

The Exchange believes that imposing Historical CAT Assessment 1 with a fee rate of $0.000013 per executed equivalent share is reasonable because it provides for a revenue stream for the Company that is aligned with Historical CAT Costs 1 and such costs would be spread out over an appropriate recovery period, as discussed above. Moreover, the Exchange believes that the level of the fee rate is reasonable, as it is comparable to other transaction-based fees. Indeed, Historical CAT Assessment 1 is significantly lower than fees assessed pursuant to Section 31 (*e.g.*, $0.0009 per share to 0.0004 per share),[270] and, as a result, the magnitude of Historical CAT Assessment 1 is small, and therefore will mitigate any potential adverse economic effects or

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269 CAT Funding Model Approval Order at 62658, n.658.

270 CAT Funding Model Approval Order at 62663, 62682.

inefficiencies.[271] Furthermore, the reasonable fee rate for Historical CAT Assessment 1 further supports CAT LLC's decision to seek to recover all Historical CAT Costs prior to 2022, rather than establishing separate Historical CAT Assessments for pre-FAM, FAM 1, FAM 2 and FAM 3 costs.

(3) Historical CAT Assessment 1 Provides for an Equitable Allocation of Fees

Historical CAT Assessment 1 provides for an equitable allocation of fees, as it equitably allocates CAT costs between and among the Participants and Industry Members. The SEC approved the CAT Funding Model, finding that each aspect of the CAT Funding Model satisfied the requirements of the Exchange Act, including the formula for calculating Historical CAT Assessments as well as the Industry Members to be charged the Historical CAT Assessments.[272] In approving the CAT Funding Model, the SEC stated that "[t]he Participants have sufficiently demonstrated that the proposed allocation of fees is reasonable."[273] Accordingly, the CAT Funding Model sets forth the requirements for allocating fees related to Historical CAT Costs among Participants and Industry Members, and the fee filings for Historical CAT Assessments must comply with those requirements.

Historical CAT Assessment 1 provides for an equitable allocation of fees as it complies with the requirements regarding the calculation of Historical CAT Assessments as set forth in the CAT NMS Plan. For example, as described above, the calculation of Historical CAT Assessment 1 complies with the formula set forth in Section 11.3(b) of

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271 *Id*.

272 *See* Section 11.3(b) of the CAT NMS Plan.

273 CAT Funding Model Approval Order at 62629.

the CAT NMS Plan. In addition, Historical CAT Assessment 1 would be charged to CEBBs and CEBSs in accordance with Section 11.3(b) of the CAT NMS Plan. Furthermore, the Participants would continue to remain responsible for their designated share of Past CAT Costs through the cancellation of loans made by the Participants to CAT LLC.

In addition, as discussed above, each of the inputs into the calculation of Historical CAT Assessment 1 – Historical CAT Costs 1 (including Excluded Costs), the count for the executed equivalent share volume for the prior 12 months, the length of the Historical Recovery Period, and the projected executed equivalent share volume for the Historical Recovery Period – are reasonable. Moreover, these inputs lead to a reasonable fee rate for Historical CAT Assessment 1 that is lower than other fee rates for transaction-based fees. A reasonable fee rate allocated in accordance with the requirements of the CAT Funding Model provides for an equitable allocation of fees.

(4) Historical CAT Assessment 1 is Not Unfairly Discriminatory

Historical CAT Assessment 1 is not an unfairly discriminatory fee. The SEC approved the CAT Funding Model, finding that each aspect of the CAT Funding Model satisfied the requirements of the Exchange Act. In reaching this conclusion, the SEC analyzed the potential effect of Historical CAT Assessments calculated pursuant to the CAT Funding Model on affected categories of market participants, including Participants (including exchanges and FINRA), Industry Members (including subcategories of Industry Members, such as alternative trading systems, CAT Executing Brokers and market makers), and investors generally, and considered market effects related to equities and options, among other things. Historical CAT Assessment 1 complies with the

requirements regarding the calculation of Historical CAT Assessments as set forth in the CAT NMS Plan. In addition, as discussed above, each of the inputs into the calculation of Historical CAT Assessment 1 and the resulting fee rate for Historical CAT Assessment 1 is reasonable. Therefore, Historical CAT Assessment 1 does not impose an unfairly discriminatory fee on Industry Members.

Finally, the Exchange believes the proposed fees established pursuant to the CAT Funding Model promote just and equitable principles of trade, and, in general, protect investors and the public interest, and are provided in a transparent manner and specificity in the fee schedule. The Exchange also believes that the proposed fees are reasonable because they would provide ease of calculation, ease of billing and other administrative functions, and predictability of a fee based on fixed rate per executed equivalent share. Such factors are crucial to estimating a reliable revenue stream for CAT LLC and for permitting Exchange members to reasonably predict their payment obligations for budgeting purposes.

B. Self-Regulatory Organization's Statement on Burden on Competition

Section 6(b)(8) of the Act[274] requires that the Exchange's rules not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act. The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange notes that Historical CAT Assessment 1 implements provisions of the CAT NMS Plan that were approved by the Commission and

274 15 U.S.C. 78f(b)(8).

is designed to assist the Exchange in meeting its regulatory obligations pursuant to the Plan.

In addition, all Participants (including exchanges and FINRA) are proposing to introduce Historical CAT Assessment 1 on behalf of CAT LLC to implement the requirements of the CAT NMS Plan. Therefore, this is not a competitive fee filing, and, therefore, it does not raise competition issues between and among the Participants.

Furthermore, in approving the CAT Funding Model, the SEC analyzed the potential competitive impact of the CAT Funding Model, including competitive issues related to market services, trading services and regulatory services, efficiency concerns, and capital formation.[275] The SEC also analyzed the potential effect of CAT fees calculated pursuant to the CAT Funding Model on affected categories of market participants, including Participants (including exchanges and FINRA), Industry Members (including subcategories of Industry Members, such as alternative trading systems, CAT Executing Brokers and market makers), and investors generally, and considered market effects related to equities and options, among other things. Based on this analysis, the SEC approved the CAT Funding Model as compliant with the Exchange Act. Historical CAT Assessment 1 is calculated and implemented in accordance with the CAT Funding Model as approved by the SEC.

As discussed above, each of the inputs into the calculation of Historical CAT Assessment 1 is reasonable and the resulting fee rate for Historical CAT Assessment 1 calculated in accordance with the CAT Funding Model is reasonable. Therefore,

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[275] CAT Funding Model Approval Order at 62676-86.

Historical CAT Assessment 1 would not impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Exchange Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

Not applicable.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act[276] and Rule 19b-4(f)(2)[277] thereunder.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments:

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

276 15 U.S.C. 78s(b)(3)(A)(ii).

277 17 CFR 240.19b-4(f)(2).

- Send an email to rule-comments@sec.gov. Please include file number SR-MEMX-2024-34 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 SR-MEMX-2024-34. This file number should be included on the subject line if email 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 (https://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change 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 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-MEMX-2024-34 and should be submitted on or before [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[278]

Sherry R. Haywood,

Assistant Secretary.

[278] 17 CFR 200.30-3(a)(12).

Exhibit 5

Proposed new language is underlined; Proposed deletions are in [brackets].

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Rule 4.17. Consolidated Audit Trail Funding Fees

(a) CAT Fees.

(1) [Reserved]Historical CAT Assessment 1.

(A) Each CAT Executing Broker shall receive its first invoice for Historical CAT Assessment 1 in November 2024, which shall set forth the Historical CAT Assessment 1 fees calculated based on transactions in October 2024, and shall receive an invoice for Historical CAT Assessment 1 for each month thereafter in which Historical CAT Assessment 1 is in effect.

(B) Consolidated Audit Trail, LLC shall provide each CAT Executing Broker with an invoice for Historical CAT Assessment 1 on a monthly basis. Each month, such invoices shall set forth a fee for each transaction in Eligible Securities executed by the CAT Executing Broker in its capacity as a CAT Executing Broker for the Buyer ("CEBB") and/or the CAT Executing Broker for the Seller ("CEBS") (as applicable) from the prior month as set forth in CAT Data. The fee for each such transaction will be calculated by multiplying the number of executed equivalent shares in the transaction by the fee rate of $0.000013 per executed equivalent share.

(C) Historical CAT Assessment 1 will remain in effect until $212,039,879.34 (two-thirds of Historical CAT Costs 1) are collected from CAT Executing Brokers collectively, which is estimated to be approximately two years, but could be for a longer or shorter period of time. Consolidated Audit Trail, LLC will provide notice when Historical CAT Assessment 1 will no longer be in effect.

(D) Each CAT Executing Broker shall be required to pay each invoice for Historical CAT Assessment 1 in accordance with paragraph (b).

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