

**SUPPORTING STATEMENT**  
**for the Paperwork Reduction Act Information Collection Submission for**  
**the Consolidated Audit Trail NMS Plan (NMS Plan Required to be Filed under**  
**Commission Rule 613)**  
**(OMB Control No. 3235-0671)**

A. Justification

This submission is being made pursuant to the Paperwork Reduction Act of 1995, 44 U.S.C. Section 3501 et. seq. The collection of information is in connection with a National Market System (NMS) Plan required to be filed with the Commission under Rule 613.

1. Necessity of Information Collection

The Commission believes that the regulatory data infrastructure on which FINRA and the national securities exchanges (the “Participants”) and the Commission have relied and must in some instances still rely is generally outdated and inadequate to effectively oversee a complex, dispersed and highly automated national market system. In performing their oversight responsibilities, prior to the introduction of the Consolidated Audit Trail (“CAT”) regulators had to attempt to cobble together disparate data from a variety of existing information systems lacking in completeness, accuracy, accessibility, and/or timeliness—a model that neither supported the efficient aggregation of data from multiple trading venues, nor yielded the type of complete and accurate market activity data needed for robust market oversight.

Prior to the introduction of CAT, FINRA and some of the exchanges maintained their own separate audit trail systems for certain segments of this trading activity, which varied in scope, required data elements and format. In performing their market oversight responsibilities, Participant and Commission staffs, prior to CAT, and even some today as they wait for full implementation of CAT, had to rely heavily on data from these various Participant audit trails. However, there were shortcomings in the completeness, accuracy, accessibility, and timeliness of these existing audit trail systems. Some of these shortcomings are a result of the disparate natures of the systems, which make it impractical, for example, to follow orders through their entire lifecycle as they may be routed, aggregated, re-routed, and disaggregated across multiple markets. The lack of key information in the audit trails that would be useful for regulatory oversight, such as the identity of the customers who originate orders, or even the fact that two sets of orders may have been originated by the same customer, is another shortcoming.

Though Participant and Commission staffs also have access to sources of market activity data other than Participant audit trails, these systems each had, and have, their own drawbacks. For example, data obtained from the electronic blue sheet system and equity cleared reports comprise only trade executions, and not orders or quotes. In addition, like data from existing audit trails, data from these sources lacks key elements important to regulators, such as the identity of the customer in the case of equity cleared

reports. Furthermore, recent experience with implementing incremental improvements to the electronic blue sheet system has illustrated some of the overall limitations of the current technologies and mechanisms used by the industry to collect, record, and make available market activity data for regulatory purposes.<sup>1</sup>

Recognizing these shortcomings, on July 11, 2012, the Commission adopted Rule 613 of Regulation NMS under the Act.<sup>2</sup> Rule 613 required the Participants to submit an NMS plan to create, implement, and maintain the consolidated audit trail (“CAT”) 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 in a single, consolidated data source.<sup>3</sup>

On February 27, 2015, the Participants submitted the CAT NMS Plan.<sup>4</sup> On April 27, 2016, the Commission published a notice soliciting comments from the public (“CAT NMS Plan Notice”).<sup>5</sup> On November 15, 2016, the Commission approved the CAT NMS Plan (“CAT NMS Plan Order”), including the information collections proposed in the CAT NMS Plan Notice and certain additional information collections that were the

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<sup>1</sup> See Securities Exchange Act Release No. 64976 (July 27, 2011), 76 FR 46960 (August 3, 2011) (“Large Trader Release”).

<sup>2</sup> See Securities Exchange Act Release No. 67457 (July 18, 2012), 77 FR 45722 (August 1, 2012) (“Adopting Release”); see also Securities Exchange Act Release No. 62174 (May 26, 2010), 75 FR 32556 (June 8, 2010) (“Proposing Release”).

<sup>3</sup> See 17 CFR 242.613(a)(1), (c)(1), (c)(7).

<sup>4</sup> See Letter from Participants to Brent J. Fields, Secretary, Commission, dated February 27, 2015. The Participants filed the CAT NMS Plan on September 30, 2014. See Letter from the Participants, to Brent J. Fields, Secretary, Commission, dated September 30, 2014. The CAT NMS Plan filed on February 27, 2015, was an amendment to and replacement of the Initial CAT NMS Plan (the “Amended and Restated CAT NMS Plan”). On December 24, 2015, the Participants submitted an Amendment to the Amended and Restated CAT NMS Plan. See Letter from Participants to Brent J. Fields, Secretary, Commission, dated December 23, 2015 (the “Amendment”). On February 9, 2016, the Participants filed with the Commission an identical, but unmarked, version of the Amended and Restated CAT NMS Plan, dated February 27, 2015, as modified by the Amendment. Unless the context otherwise requires, the “CAT NMS Plan” shall refer to the Amended and Restated CAT NMS Plan, as modified by the Amendment.

<sup>5</sup> See Securities Exchange Act Release No. 77724 (April 27, 2016), 81 FR 30613 (May 17, 2016). The burdens associated with the CAT NMS Plan Notice were submitted under OMB number 3235-0671 which relates to the NMS Plan required to be filed under Rule 613.

subject of a supplemental information collections submission.<sup>6</sup> The CAT NMS Plan Order information collections that were first noticed in the CAT NMS Plan Notice were approved by OMB on March 9, 2017.<sup>7</sup> The supplemental submission information collections were approved by OMB on July 10, 2017.

This instant information collections submission incorporates both the information collections that were first noticed in the CAT NMS Plan Notice and approved by OMB on March 9, 2017 with the supplemental submission information collections that were approved by OMB on July 10, 2017.

Subsequent to the five prior information collections completed relating to the CAT NMS Plan Notice and CAT NMS Plan Order as of July 2020, the Commission believes one additional information collection has been completed—specifically, a one-time independent audit of the fees, costs, and expenses incurred by the Participants on behalf of CAT NMS, LLC prior to the Effective Date<sup>8</sup> of the Plan.<sup>9</sup> In addition, certain information collection requirements have completed the implementation stage, although certain ongoing costs remain, including: (1) development of a Central Repository tasked with the receipt, consolidation, and retention of reported order and execution information submitted by Participants and their members;<sup>10</sup> (2) the requirement that each Participant, and any member of such Participant, record and electronically report to the Central

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<sup>6</sup> See Securities Exchange Act Release No. 79318 (November 15, 2016), 81 FR 84696 (November 23, 2016). The supplemental information collections burdens associated with the CAT NMS Plan Order were submitted under OMB number 3235-0671 which relates to the NMS Plan required to be filed under Rule 613. The Commission further acknowledged that the CAT NMS Plan filed by the Participants contains provisions in addition to those required by the Commission in Rule 613. These additional requirements include the inclusion of OTC Equity Securities, the availability of historical data for not less than six years in a manner that is directly available and searchable without manual intervention from the Plan Processor, a complete symbology database to be maintained by the Plan Processor, including the historical symbology, as well as issue symbol information and data using the listing exchange symbology format. See CAT NMS Plan, supra note 4, at Sections 1.1 and 6.5(b)(I); Appendix C, Section A.1(a); Appendix D, Section 2.

<sup>7</sup> The CAT NMS Plan published for comment reflects exemptive relief granted by the Commission that provided the flexibility for the Participants to propose, in the CAT NMS Plan, alternative approaches to certain requirements of Rule 613. See Securities Exchange Act Release No. 77265 (March 1, 2016), 81 FR 11856 (March 7, 2016) (“Exemption Order”).

<sup>8</sup> The “Effective Date” is the date the Commission approved the CAT NMS Plan, which is November 15, 2016. See supra note 6.

<sup>9</sup> See CAT NMS Plan Order, supra note 6, at 84940.

<sup>10</sup> See 17 CFR 242.613.

Repository details for each order and Reportable Event documenting the life of an order through the process of original receipt or origination, routing, modification, cancellation, and execution (in whole or in part) for each NMS security;<sup>11</sup> (3) the requirement that the CAT NMS Plan require the Central Repository to collect and retain on a current and continuous basis NBBO information for each NMS security, transaction reports reported pursuant to an effective transaction reporting plan, and Last Sale Reports reported pursuant to the Options Price Reporting Authority Plan;<sup>12</sup> (4) the requirement that the CAT NMS Plan must require that every national securities exchange and national securities association develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail;<sup>13</sup> (5) an annual requirement that that the CAT LLC financials be (i) in compliance with GAAP, (ii) be audited by an independent public accounting firm, and (iii) be made publicly available;<sup>14</sup> and (6) a requirement that each Participant conduct background checks for its employees and contractors that will use the CAT System.<sup>15</sup>

## 2. Purposes and Use of the Information Collection

The Commission believes that the CAT NMS Plan, once fully implemented, will improve the quality of the data available to regulators in four areas that affect the ultimate effectiveness of core regulatory efforts—completeness, accuracy, accessibility and timeliness.<sup>16</sup> The improvements in these data qualities would substantially improve regulators’ ability to perform analysis and reconstruction of market events, and market analysis and research to inform policy decisions, as well as perform regulatory activities, in particular market surveillance, examinations, investigations, and other enforcement functions.

### A. Central Repository

Rule 613 states that the CAT NMS Plan shall provide for the creation and maintenance of a Central Repository.<sup>17</sup> The Central Repository is required to receive, consolidate and retain the data required to be submitted by the Participants and their

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<sup>11</sup> See 17 CFR 242.613(c)(1), (c)(5), (c)(6), (c)(7).

<sup>12</sup> See 17 CFR 242.613(e)(7).

<sup>13</sup> See 17 CFR 242.613(f).

<sup>14</sup> Id.

<sup>15</sup> Id. The Commission believes that these background checks are necessary to ensure that only authorized and qualified persons are using the CAT System.

<sup>16</sup> See Adopting Release, supra note 2, at 45727 (discussing four “qualities” of trade and order data that impact the effectiveness of core Participant and Commission regulatory efforts: accuracy, completeness, accessibility, and timeliness).

<sup>17</sup> See 17 CFR 242.613(e)(1).

broker-dealer members.<sup>18</sup> Participant and Commission staffs would have access to the data for regulatory purposes.<sup>19</sup>

### B. Data Collection and Reporting

The Commission believes that the data collected and reported to the Central Repository pursuant to the requirements of the CAT NMS Plan (as required by Rule 613) would be used by regulators to monitor and surveil the securities markets and detect and investigate activity, whether on one market or across markets. The data collected and reported to the Central Repository would also be used by regulators for the evaluation of tips and complaints and for complex enforcement inquiries or investigations, as well as inspections and examinations. Further, the Commission believes that regulators would use the data collected and reported to the Central Repository to conduct timely and accurate analysis of market activity for reconstruction of broad-based market events in support of regulatory decisions.

### C. Collection and Retention of National Best Bid and National Best Offer Information, Last Sale Data and Transaction Reports

The CAT NMS Plan must require the Central Repository to collect and retain National Best Bid and National Best Offer (“NBBO”) information, transaction reports, and Last Sale Reports in a format compatible with the order and event information collected pursuant to Rule 613(c)(7).<sup>20</sup> Participant and Commission staffs could use this data to easily search across order, NBBO, and transaction databases. The Commission believes that having the NBBO information in a uniform electronic format compatible with order and event information would assist Participants in enforcing compliance with federal securities laws, rules, and regulations, as well as their own rules.<sup>21</sup> The Commission also believes that a CAT NMS Plan requiring the Central Repository to collect and retain the transaction reports and Last Sale Reports in a format compatible with the order execution information would aid regulators in monitoring for certain market manipulations.<sup>22</sup>

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<sup>18</sup> Id. The Commission notes that the CAT NMS Plan refers to a member of a national securities exchange or of a national securities association as an “Industry Member.” See CAT NMS Plan, supra note 4, at Section 1.1.

<sup>19</sup> See 17 CFR 242.613(e)(2).

<sup>20</sup> See 17 CFR 242.613(e)(7).

<sup>21</sup> The Commission and Participants use the NBBO to, among other things, evaluate members for compliance with numerous regulatory requirements, such as the duty of best execution or Rule 611 of Regulation NMS. See 17 CFR 242.611; see also, e.g., ISE Rule Options 5, Section 2 and Phlx Rule 1084.

<sup>22</sup> Rules 613(e)(7)(ii) and (iii) require that transaction reports reported pursuant to an effective transaction reporting plan and Last Sale Reports reported pursuant to the

#### D. Surveillance

The CAT NMS Plan (as required by Rule 613(f)) contains a requirement that the Participants develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information in the consolidated audit trail.<sup>23</sup> This requirement is intended to position regulators to make full use of the consolidated audit trail data in order to carry out their regulatory obligations. In addition, because trading and potentially manipulative activities could take place across multiple markets, and the consolidated audit trail data would trace the entire lifecycle of an order from origination to execution or cancellation, new or enhanced surveillance systems may also enable regulators to investigate potentially illegal activity that spans multiple markets more efficiently.

#### E. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) requires the CAT NMS Plan to require the Participants to provide the Commission a written assessment of the CAT's operation at least every two years, once the CAT NMS Plan is effective.<sup>24</sup> The CAT NMS Plan states that the Chief Compliance Officer would oversee the assessment.<sup>25</sup> These assessments would aid Participant and Commission staffs in understanding and evaluating any deficiencies in the operation of the consolidated audit trail and to propose potential improvements to the CAT NMS Plan. The Commission believes the written assessments would allow

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OPRA Plan be reported to the Central Repository. This requirement should allow regulators to evaluate certain trading activity. For example, trading patterns of reported and unreported trades may cause Participant or Commission staffs to make further inquiries into the nature of the trading to ensure that the public was receiving accurate and timely information regarding executions and that market participants were continuing to comply with trade reporting obligations under Participant rules. Similarly, patterns in the transactions that are reported and unreported to the consolidated tape could be indicia of market abuse, including failure to obtain best execution for customer orders or possible market manipulation. The Commission and the Participants would be able to review information on trades not reported to the tape to determine whether they should have been reported, whether Section 31 fees should have been paid, and/or whether the trades are part of a manipulative scheme.

<sup>23</sup> See CAT NMS Plan, supra note 4, at Section 6.10(a). See also 17 CFR 242.613(f).

<sup>24</sup> 17 CFR 242.613(b)(6). As discussed in Section 12.A.e., infra, Section 6.6 of the Plan changed the frequency of the assessment contemplated by Rule 613(b)(6) from biannual to annual.

<sup>25</sup> See CAT NMS Plan, supra note 4, at Section 6.6(a)(ii). See also id. at Section 6.6(a)(i).

Participants and Commission staffs to periodically assess whether such potential improvements would enhance market oversight. Moreover, the Commission believes these assessments would help inform the Commission regarding the likely feasibility, costs, and impact of, and the Participants' approach to, the consolidated audit trail evolving over time. The Commission believes that the assessments will focus the Plan Processor and Participants on critical technological and other developments, and should help ensure that CAT technology is up-to-date, resilient and secure, and provides accurate CAT Data.

F. Independent Audit of Expenses Incurred Prior to Effective Date

The Commission understands that the Participants intend to recover, through CAT fees, the amounts spent on the development of the CAT to date. Section 6.6(a)(i) of the CAT NMS Plan requires the Participants to provide to the Commission, and make public, an independent audit of fees, costs and expenses incurred by the Participants on behalf of the Company, prior to the Effective Date, in connection with the creation and implementation of the CAT, at least one month prior to submitting any rule filing to establish initial fees to the Commission. Because the Company made such audited financial statements available on August 5, 2021,<sup>26</sup> this collection is now complete and no further burden is expected.

G. Assessment of Industry Member Bulk Access to Reported Data

Section 6.6(a)(iv) of the CAT NMS Plan requires the Participants to provide a written report discussing the feasibility, benefits and risks of allowing an Industry Member to bulk download the Raw Data it submitted to the Central Repository, within 24 months of effectiveness of the Plan. Commenters expressed a desire for bulk access to their own data for surveillance and internal compliance purposes, as well as to facilitate the error correction process. While the Participants did not permit such access in the Plan, citing security and cost concerns, they did represent that they would consider allowing bulk access to the audit trail data reported by Industry Members once CAT is operational. The Commission believes it is important to consider the potential efficiencies of allowing Industry Members bulk access to their own CAT data, so long as such access does not impact the security of the CAT Data, and accordingly added this requirement.

H. Assessment of Errors in Customer Information Fields

Section 6.6(a)(v) of the CAT NMS Plan requires the Participants to submit a written assessment of the nature and extent of errors in the Customer information submitted to the Central Repository and whether the correction of certain data fields should be prioritized, within 36 months of effectiveness of the Plan. The Commission believes that requiring such an assessment, which was intended to coincide with the date

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<sup>26</sup> See <https://www.catnmsplan.com/audited-financial-statements>.

all Industry Members are reporting to the CAT, could help ensure that the accuracy of CAT Data is achieved in the most prompt and efficient manner.

#### I. Report on Impact of Tiered Fees on Market Liquidity

Section 6.6(a)(vi) of the CAT NMS Plan requires the Participants to submit a written report on the impact of tiered-fees on market liquidity, including an analysis of the impact of the tiered-fee structure on Industry Members provision of liquidity, within 36 months of effectiveness of the Plan.<sup>27</sup> To help determine whether the Plan's funding model actually achieves the Participants' stated objective, the Commission believes it is appropriate to require them to prepare such an assessment of the impact of tiered fees once the CAT becomes fully operational.

#### J. Assessment of Material Systems Change on Error Rate

The CAT NMS Plan requires the Participants to provide the Commission a written assessment of the projected impact of any Material Systems Change on the Maximum Error Rate, prior to the implementation of any Material Systems Change. The Commission believes that Material Systems Changes either could result in new challenges for CAT Reporters or simplify the means for reporting data. In either case, the appropriateness of the Maximum Error Rate could be impacted, and thus warrant a change. Accordingly, the Commission believes it appropriate to require the Participants to provide the Commission an assessment of the projected impact on the Maximum Error Rate, including any recommended changes thereto, prior to the implementation of any Material Systems Change.

#### K. Financial Statements

Section 9.2 of the CAT NMS Plan requires that the financials of the Consolidated Audit Trail, LLC ("CAT LLC") be (i) in compliance with GAAP, (ii) be audited by an independent public accounting firm, and (iii) be made publicly available.<sup>28</sup> The

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<sup>27</sup> Participants are currently seeking to change the fee structure, including eliminating the tiered-fee structure. See Securities Exchange Act Release No. 97151 (Mar. 13, 2023) 88 FR 17086 (Mar. 21, 2023). That request remains pending before the Commission.

<sup>28</sup> The Participants conduct the activities of the CAT through the CAT LLC, a jointly owned limited liability company formed under Delaware state law. The CAT LLC is charged with creating, implementing and maintaining the CAT. The Participants previously formed a Delaware Limited Liability company named CAT NMS, LLC for the purpose of conducting activities related to the consolidated audit trail, but formed Consolidated Audit Trail, LLC to replace and serve as the CAT NMS Plan on August 29, 2019. See Securities Exchange Act Release No. 87149 (September 27, 2019), 84 FR 52905 (October 3, 2019). The



Commission believes that this requirement will promote will promote greater accuracy and greater transparency with respect to the Company's financial accounting.

#### L. Background Checks

Section 6.1(g) of the CAT NMS Plan requires that each Participant conduct background checks for its employees and contractors that will use the CAT System. The Commission believes that this is appropriate in order to ensure that only authorized and qualified persons are using the CAT System.

#### 3. Consideration Given to Information Technology

Several of the information collections associated with the CAT NMS Plan involve the use of electronic information collection techniques. Rule 613 states that the CAT NMS Plan shall provide for the creation and maintenance of the Central Repository,<sup>29</sup> which is required to receive, consolidate and retain the data required to be submitted electronically by the Participants and their members.<sup>30</sup> The CAT NMS Plan requires CAT Reporters to report data to the Central Repository either in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format.<sup>31</sup> The CAT NMS Plan also requires the Central Repository to collect and retain on a current and continuing basis, in a format compatible with the Participant and member data, all data including NBBO information, transaction reports, and Last Sale Reports.<sup>32</sup> Additionally, the CAT NMS Plan (as required by Rule 613(f)) also requires that the Participants develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information in the consolidated audit trail.<sup>33</sup>

The Commission believes it is important to require the electronic submission of the information required by Rule 613 to ensure that the CAT can capture in a timely, accurate and accessible manner all of the information necessary to efficiently and effectively monitor cross-market trading activity in today's highly automated and dispersed markets. The Commission believes that, as part of operating their businesses, the Participants are already accustomed to handling large volumes of data and may already have in place electronic trading, routing and reporting systems. Most Participants maintain audit trails that contain the trade and order data that they obtain from their

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LLC through which Participants conduct the activities of CAT is referred to as "CAT LLC" in this Supporting Statement.

<sup>29</sup> See 17 CFR 242.613(e)(1).

<sup>30</sup> Id.

<sup>31</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section A.1(b).

<sup>32</sup> See id. at Section 6.5(a)(ii). See also 17 CFR 242.613(e)(7), (e)(8).

<sup>33</sup> See CAT NMS Plan, supra note 4, at Section 6.10(a). See also 17 CFR 242.613(f).

members and each equity and options exchange keeps an audit trail of orders and trades that occur on its market. To improve upon the status quo, the consolidated audit trail would need to impose electronic information collection and reporting requirements. The CAT NMS Plan states, "... each equities and options exchange is built on its own unique platform, utilizes unique entry protocols and requirements and thus creates uniquely formatted audit trails. The existence of multiple non-integrated audit trails has direct consequences on the accuracy and efficiency of regulatory oversight."<sup>34</sup> As trading venues have become more automated, and trading systems have become computerized, trading volumes have increased significantly and trading has become more dispersed across more trading centers and therefore more difficult to monitor and trace. Audit trail data for securities that are traded on multiple venues is fragmented across multiple data sources, with each regulator generally having direct access only to data generated on the trading venues it regulates. The Commission believes that the CAT NMS Plan will bring audit trail data related to trading on all venues into the Central Repository where it could be accessed by all regulators.

The Commission believes that the collection of information requirement "Background Checks" would involve the use of electronic submission and collection techniques. The Commission believes that these would be background checks using fingerprints that would be submitted either in hard copy or electronically to the Attorney General of the United States for identification and processing.

Commission staff does not believe that improvements in information technology would have any impact on the burdens associated with the CAT NMS Plan (in fact, improvements in information technology may reduce any burdens associated with the Plan), nor that any obstacles exist to reducing such burdens.

#### 4. Duplication

The CAT NMS Plan requires the collection and reporting of certain information that national securities exchanges and national securities associations, as well as their members, already collect and report pursuant to both Federal Rules and the rules of those exchanges and associations. However, as required by Rule 613, the CAT NMS Plan requires the Participants to collect additional and more detailed information, and to report the information to the Central Repository in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format for consolidation and storage.

In an effort to ensure identification and avoidance of unnecessary duplicative rules and requirements, Rule 613 requires the CAT NMS Plan to discuss a plan to eliminate existing rules and systems (or components thereof) that will be rendered duplicative by the consolidated audit trail, including identification of such rules and systems (or components thereof).<sup>35</sup> To the extent that any existing rules or systems

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<sup>34</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(ii)(A).

<sup>35</sup> See Rule 613(a)(1)(ix).

related to monitoring quotes, orders, and executions provide information that is not rendered duplicative by the consolidated audit trail, Rule 613 requires an analysis of: (A) whether the collection of such information remains appropriate;<sup>36</sup> (B) if still appropriate, whether such information should continue to be separately collected or should instead be incorporated into the consolidated audit trail;<sup>37</sup> and (C) if no longer appropriate, how the collection of such information could be efficiently terminated; the steps the plan sponsors propose to take to seek Commission approval for the elimination of such rules and systems (or components thereof); and a timetable for such elimination, including a description of how the plan sponsors propose to phase in the consolidated audit trail and phase out such existing rules and systems (or components thereof).<sup>38</sup>

In accordance with Rule 613, the CAT NMS Plan provides information regarding when the Participants intend to initiate and conclude identification of: duplicative rules and systems, partially duplicative rules and systems, non-duplicative rules or systems related to monitoring quotes, orders and executions, and the timing of Participant rule and system changes due to any elimination or modification of Commission rules as a result of the implementation of CAT.<sup>39</sup> Further, the Plan discusses when the Participants will file proposed rule changes to implement the rule modifications or deletions and elimination of the relevant rules and systems.<sup>40</sup>

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<sup>36</sup> See Rule 613(a)(1)(ix)(A).

<sup>37</sup> See Rule 613(a)(1)(ix)(B).

<sup>38</sup> See Rule 613(a)(1)(ix)(C).

<sup>39</sup> On August 14, 2020, FINRA filed with the Commission a proposed rule change to delete the OATS Rules once members were effectively reporting to the CAT. Securities Exchange Act Release No. 89679 (Aug. 26, 2020) 85 F.R. 54661 (Sept. 1, 2020). On November 30, 2020, the Commission approved the proposed rule change, as amended by Amendment No. 1. Securities Exchange Act Release No. 90535 (Nov. 30, 2020) 85 F.R. 78395 (Dec. 4, 2020). On June 23, 2021, FINRA filed with the Commission a proposed rule change and notice of immediate effectiveness setting forth the basis for its determination that the accuracy and reliability of the CAT met the standards approved by the Commission for purposes of eliminating the OATS Rules. Securities Exchange Act Release No. 92239 (June 23, 2021) 86 F.R. 34293 (June 29, 2021). Effective September 1, 2021, FINRA retired the OATS system. References to firms with or without OATS reporting obligations therefore are the firms' status as an OATS reporter prior to September 1, 2021.

<sup>40</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section C.9. These changes have already begun taking place. In addition to the OATS retirement supra n.27, FINRA has begun eliminating rules that create duplicative requirements with the CAT NMS Plan. See, e.g., Securities Exchange Act Release No. 34-97181, (Mar. 21, 2023), 88 F.R. 18199 (Mar. 27, 2023) (amending FINRA rules to address duplicative requirements).

With the exception of the “Background Checks” information collection, the proposed collection of information requirements pertain solely to the CAT LLC or the operation of the CAT System and, is not required elsewhere. We are not aware of any collection of information requirements that conflict with or substantially duplicate the proposed collection of information requirements.

With respect to the “Background Checks” collection of information, Section 6.1(g) of the CAT NMS Plan requires each Participant to conduct background checks of its employees and contractors that will use the CAT System. While Section 6.1(g) may result in a duplication of requirement because other rules currently require Participants to conduct fingerprint-based background checks,<sup>41</sup> the Commission believes that there will be no duplication of effort because if an employee or contractor of a Participant who will be a CAT user is already subject to a Participant’s existing background check requirements, we anticipate that those requirements would satisfy the proposed background checks requirements of the CAT NMS Plan. Further, if such Participant believes that its employees and contractors should be subject to a more stringent or different background check requirement to be a CAT user than currently required by the Participant, then there will be no duplication of effort because the proposed background check requirements would be more rigorous or different and thus differ from the Participant’s existing background check requirements.

## 5. Effect on Small Entities

The CAT NMS Plan would have an effect on small entities. The CAT NMS Plan requires Participants to enforce compliance by their members with the provisions of Rule 613 and the Plan through self-regulatory organization (“SRO”) rules that require their members to comply with the requirements of Rule 613 and the CAT NMS Plan.<sup>42</sup> These rules would apply to all broker-dealers—including those that are small entities. Commission rules generally define a broker-dealer as a small entity for purposes of the Exchange Act and the Regulatory Flexibility Act if the broker-dealer had a total capital of less than \$500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared, and it is not affiliated with any person (other than a natural person that is not a small entity).

Thus, small broker-dealers would be responsible for complying with the CAT NMS Plan’s requirements for regularly reporting to the Central Repository the required

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<sup>41</sup> See e.g., 17 CFR 240.17f-2(a) (OMB Control Number 3235-0029); 17 CFR 240.17f-2(c) (OMB Control Number 3235-0034). Additionally, most Participants currently have rules that permit them to conduct fingerprint-based background checks of contractors. See e.g., BOX Rule 10080; CBOE Rule 7.10; ISE Rule Options 6E, Section 8; Nasdaq Rule General 2, Section 13; NYSE Rule 28; and IEX Rule 1.180.

<sup>42</sup> The CAT NMS Plan states that the Participants will endeavor to promulgate consistent rules requiring compliance by their members with the provisions of Rule 613 and the Plan. See *id.* at Section 3.11. See also 17 CFR 242.613(g)(2).

order and transaction data, and would need to either modify their existing order handling and trading systems to comply with the CAT NMS Plan, or rely on outside vendors to provide a functionality that would provide information to the Central Repository.

The Commission notes that some small firms currently may not have systems in place to report audit trail data as they may have been exempted from reporting data to FINRA's Order Audit Trail System ("OATS") because they do not engage in activities that would have incurred OATS reporting obligations, or they may have been excluded or exempted under FINRA's OATS reporting rules. Small firms that were excluded from OATS reporting due to their size would have CAT reporting responsibilities under the Plan because the Plan makes no provision to exempt or exclude them, as FINRA did with OATS reporting.<sup>43</sup>

The Commission estimates, based on FOCUS filings with the Commission, that as of the third quarter of 2022, there were approximately 742 Commission-registered broker-dealers that would be considered small entities for purposes of the statute. Each of these brokers-dealers, assuming that they would be subject to CAT reporting obligations, would be required to comply with the CAT NMS Plan required under Rule 613.<sup>44</sup>

To minimize the burden of complying with the collecting and reporting requirements in the CAT NMS Plan, the CAT NMS Plan provides that small broker-dealers must begin reporting data to the Central Repository within three years of approval of the CAT NMS Plan, while large broker-dealers must begin reporting such data within two years of approval.<sup>45</sup> Thus, small broker-dealers would be given additional time to ready themselves for compliance with the collection and reporting requirements in the CAT NMS Plan. The Commission notes that as of February 2023, large broker dealers

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<sup>43</sup> See FINRA Rule 7470 (Exemption to the Order Recording and Data Transmission Requirements). The Rule provided that, for good cause shown, FINRA could exempt a member from its recording and reporting requirements if: (1) the member and current control affiliates and associated persons of the member had not been subject within the last five years to any final disciplinary action, and within the last ten years to any disciplinary action involving fraud; (2) the member had annual revenues of less than \$2 million; (3) the member did not conduct any market making activities in NMS stock or OTC securities; (4) the member did not execute principal transactions with its customers; and (5) the member did not conduct clearing or carrying activities for other firms. This authority sunsetted on July 11, 2020

<sup>44</sup> The Commission understands that some registered broker-dealers either trade in asset classes not currently included in the definition of Eligible Security or do not trade at all (e.g., broker-dealers for the purposes of underwriting, advising, private placements).

<sup>45</sup> See CAT NMS Plan, *supra* note 4, at Section 6.4; see also 17 CFR 242.613(a)(3)(v) and (vi).

and small broker dealers have begun to report at least some required data to the Central Repository,

## 6. Consequences of Not Conducting Collections

If the Commission were to not require the collections (or were to require the collections on a less frequent basis), the Commission believes that this could impact its objective to create a comprehensive consolidated audit trail that allows regulators to efficiently and accurately track all activity throughout the U.S. markets in National Market System (NMS) securities. The Commission believes the collections would improve the completeness, accuracy, accessibility and timeliness of data available to regulators and therefore improve regulators' ability to perform regulatory activities, in particular market surveillance, examinations, investigations, and other enforcement functions, as well as analysis and reconstruction of market events, and market analysis and research to inform policy decisions. Regulators depend on data for many of these activities and the improvements in the data qualities would thus improve the efficiency and effectiveness of such regulatory activities.

If the Commission were to not require the collections (or were to require the collections on a less frequent basis), the Commission believes that this could impact the implementation of the CAT. The Commission believes that the CAT NMS Plan would improve the completeness, accuracy, accessibility and timeliness of the data available to regulators. To ensure that the Plan is implemented in accordance with these objectives, the Commission believes the audit, assessments and reports prepared by the Participants are necessary.

The Plan imposes certain information collections burdens that were not in the Plan as originally proposed by the Participants. First, the Plan requires that the Participants provide the Commission, and make public, at least one month prior to submitting any rule filing to establish initial fees for CAT Reporters, an independent audit of the fees, costs, and expenses incurred by the Participants on behalf of the Company prior to the Effective Date of the Plan. Participants made independent audit statements for CAT LLC and its predecessor CAT NMS LLC for the period prior to the Effective Date available on August 5, 2021.<sup>46</sup> Because this collection is now complete, the Commission assumes no further burden will be associated with the collection.

Second, the Plan requires the Participants to submit to the Commission a written report, within 24 months of effectiveness of the Plan, discussing the feasibility, benefits, and risks of allowing an Industry Member to bulk download the Raw Data that it has submitted to the Central Repository. Commenters on the CAT NMS Plan Notice expressed a desire to have bulk access to their own data for surveillance and internal compliance purposes, as well as to facilitate the error correction process. The Commission believes it is important to consider the potential efficiencies of allowing Industry Members bulk access to their own CAT data, so long as such access does not impact the security of the CAT Data. Without this assessment, the Commission and the

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<sup>46</sup> See <https://www.catnmsplan.com/audited-financial-statements>.

Participants will not have sufficient information to consider the tradeoffs of bulk access, and therefore not be able to fully consider whether to permit Industry Members bulk access to their own CAT Data.

Third, the Plan requires the Participants to provide the Commission with a written assessment, within 36 months of effectiveness of the Plan, of the nature and extent of errors in the Customer information submitted to the Central Repository and whether the correction of certain data fields over others should be prioritized. The Commission believes that requiring such an assessment could help ensure that the accuracy of CAT Data is achieved in the most prompt and efficient manner. Without this assessment, the Commission believes that unanticipated issues concerning the accuracy of the customer information fields may go unidentified and negatively impact the overall accuracy of CAT Data.

Fourth, the Plan requires the Participants to provide the Commission with a written report, 36 months after effectiveness of the Plan, on the impact of tiered fees on market liquidity, including an analysis of the impact of the tiered-fee structure on Industry Members' provision of liquidity. One commenter on the CAT NMS Plan Notice expressed concern that use of a tiered fee structure could discourage displayed quotes and, in response, the Participants explained that one of the reasons they chose to use a tiered-fee funding model was to limit disincentives to provide liquidity. To help determine whether the Plan's funding model actually achieves the Participants' stated objective, the Commission believes it appropriate to require them to prepare such an assessment of the impact of tiered fees once the CAT becomes fully operational. Without this assessment, the Participants and the Commission could lack insight into whether the fee model affects liquidity provision and market quality, which could hamper any necessary adjustments to the Funding Model<sup>47</sup>.

Fifth, the Plan requires the Participants to provide the Commission a written assessment of the projected impact of any Material Systems Change on the Maximum Error Rate, prior to the implementation of any Material Systems Change. The Commission believes that Material Systems Changes either could result in new challenges for CAT Reporters or simplify the means for reporting data. In either case, the appropriateness of the Maximum Error Rate could be impacted, and thus warrant a change. Without this assessment, the Participants and the Commission may lack a thorough understanding of how a particular Material Systems Change would impact Error Rates and whether to temporarily adjust the Error Rates around that Material Systems Change.

Sixth, the Plan requires that the CAT LLC's financials be (i) in compliance with GAAP, (ii) be audited by an independent public accounting firm, and (iii) be made publicly available. The Commission believes that this requirement will promote greater transparency with respect to the Company's financial accounting. Without this requirement, that purpose will not be achieved.

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<sup>47</sup> This information request may ultimately be unnecessary, should Participants' proposed changes to the fee structure be approved. See supra n. 27.

Finally, the Plan requires that each Participant conduct background checks for its employees and contractors that will use the CAT System. The Commission believes that this requirement is appropriate to ensure that only authorized and qualified persons are using the CAT System. Without this requirement, that purpose would not be achieved.

7. Inconsistencies with Guidelines in 5 CFR 1320.5(d)(2)

The information collection “Data Collection and Reporting” requires respondents to record and report information to the Central Repository information more frequently than quarterly;<sup>48</sup> specifically, certain information must be recorded contemporaneously with a Reportable Event and reported to the Central Repository by 8:00 a.m. ET on the trading day following the day such information has been recorded by a Participant or broker-dealer industry member,<sup>49</sup> and other information must be reported by 8:00 a.m. ET on the trading day following the day a broker-dealer member receives such information.<sup>50</sup>

In addition, the “Data Collection and Reporting” information collection requires respondents to submit confidential information to the Central Repository, such as the terms of an order,<sup>51</sup> customer account information,<sup>52</sup> and information sufficient to identify a customer.<sup>53</sup> Relatedly, the information collection requirement that the Participants develop and implement new surveillance systems, or enhance existing surveillance systems, reasonably designed to make use of consolidated audit trail information<sup>54</sup> is intended to enable Participants to better monitor trading through use of this confidential information. As described in Item 10 below, Rule 613 includes

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<sup>48</sup> The CAT NMS Plan did not provide an estimated frequency of reporting for Participants and broker-dealers.

<sup>49</sup> See 17 CFR 242.613(c)(3); see also CAT NMS Plan, supra note 4, at Section 6.3(b), Section 6.4(b).

<sup>50</sup> See 17 CFR 242.613(c)(4); see also CAT NMS Plan, supra note 4, at Section 6.4(b).

<sup>51</sup> See 17 CFR 242.613(c)(7); see also CAT NMS Plan, supra note 4, at Section 6.3(d), Section 6.4(d).

<sup>52</sup> See 17 CFR 242.613(c)(7)(viii)(B); see also CAT NMS Plan, supra note 4, at Appendix C, Section A.1(A)(iii).

<sup>53</sup> See 17 CFR 242.613(c)(7)(viii)(A); see also CAT NMS Plan, supra note 4, at Section 6.4(ii)(A)(C).

<sup>54</sup> See 17 CFR 242.613(f).



requirements that the CAT NMS Plan must contain to protect the confidentiality of this information<sup>55</sup> and these requirements are detailed in the CAT NMS Plan.<sup>56</sup>

The Commission notes that the information collection “Written Assessment of the Operation of the Consolidated Audit Trail” would likely contain confidential information concerning any deficiencies of the Consolidated Audit Trail and a plan for improvements. The CAT NMS Plan requires the Participants to submit to the Commission the written assessment annually.<sup>57</sup> To the extent that the Commission receives confidential information pursuant to the CAT NMS Plan, such information will be kept confidential, subject to the provisions of applicable law.

The information collections “Assessment of Material Systems Changes on Error Rates” and “Background Checks” could potentially require the Participants to report and disclose information more frequently than quarterly.

In addition, the information collections: “Bulk Access to Reported Data”; “Errors in Customer Information”; “Impact of Tiered Fees on Market Liquidity”; and “Assessment of Material Systems Changes on Error Rates” may require the Participants to submit confidential information to the Commission. To the extent the Commission receives confidential information pursuant to the CAT NMS Plan, such information will be kept confidential, subject to the provisions of applicable law.

#### 8. Consultations Outside the Agency

The required Federal Register notice with a 60-day comment period soliciting comments on this collection of information was published. No public comments were received.

#### 9. Payment or Gift

Not applicable. The Commission has not provided any payment or gift to the respondents.

#### 10. Confidentiality

The Commission believes that the CAT NMS Plan would require the collection and reporting of confidential information, including Personally Identifiable Information<sup>58</sup>

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<sup>55</sup> See 17 CFR 242.613(a)(1)(iv), 613(b)(6), 613(e)(4)(i), 613(e)(4)(i)(A).

<sup>56</sup> See CAT NMS Plan, *supra* note 4, at Section 6.1(b), Section 6.2(b), Section 6.5(f)(i), Section 6.5(iv), Section 6.9, Section 6.12, Appendix D, Section 4.

<sup>57</sup> See CAT NMS Plan, *supra* note 4, at Section 6.6(a)(i).

<sup>58</sup> The term “Personally Identifiable Information,” as used by OMB, refers to information which can be used to distinguish or trace an individual’s identity,

("PII"), to identify customers. The Commission previously issued relief that exempts the national securities exchanges and FINRA from collecting or retaining the most sensitive PII data for natural persons: (1) individual social security numbers and individual taxpayer identification numbers; (2) dates of birth; and (3) account numbers. In issuing relief, the Commission stated that it shared the concerns raised by market participants, industry representatives, and the participants to the CAT NMS Plan regarding the collection of PII and agreed that only information necessary to achieve regulatory objectives should be reported to the CAT, and as a result of the relief, broker-dealers are required to report only name, address, and birth year for natural persons.<sup>59</sup> The CAT NMS Plan contains several provisions that provide respondents with assurances that confidential information would be protected.

Rule 613 requires the CAT NMS Plan to contain several provisions relating to the security of the information. Specifically, Rule 613(a)(1)(iv) requires the Participants to discuss the security and confidentiality of the information reported to the Central Repository in the Plan.<sup>60</sup> Rule 613(b)(6) provides that the Plan must include a provision requiring the Participants to provide to the Commission, at least every two years after effectiveness of the national market system plan, a written assessment of the operation of the consolidated audit trail, which would include an evaluation of the performance of the consolidated audit trail's system security.<sup>61</sup> Rule 613(e)(4)(i) also requires that the Plan include policies and procedures, including standards, to be used by the CAT Plan Processor to ensure the security and confidentiality of all information reported to the Central Repository.<sup>62</sup> The plan sponsors, and employees of the plan sponsors and Central Repository, would be required to agree to use appropriate safeguards to ensure the confidentiality of such data.<sup>63</sup> Further, Rule 613 requires that the CAT NMS Plan require that audit trail data may not be used by the Participants other than for surveillance or other regulatory purposes.<sup>64</sup>

The CAT NMS Plan provides that the CAT Plan Processor is responsible for the security and confidentiality of all CAT Data received and reported to the Central Repository, including during all communications between CAT Reporters and the Plan Processor, data extraction, data manipulation and transformation, loading to and from the

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such as their name, social security number, biometric records, etc. alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name, etc. See OMB Memorandum M-07-16 (May 22, 2007).

<sup>59</sup> Exchange Act Release No. 88393 (March 17, 2020), 85 FR 16152 (March 20, 2020).

<sup>60</sup> 17 CFR 242.613(a)(1)(iv).

<sup>61</sup> 17 CFR 242.613(b)(6).

<sup>62</sup> 17 CFR 242.613(e)(4)(i).

<sup>63</sup> 17 CFR 242.613(e)(4)(i)(A).

<sup>64</sup> Id.

Central Repository, and data maintenance by the Central Repository.<sup>65</sup> The Plan Processor must, among other things, require that individuals with access to the Central Repository agree to use CAT Data only for appropriate surveillance and regulatory activities and to employ safeguards to protect the confidentiality of CAT Data.<sup>66</sup>

In addition, the Plan Processor must develop a comprehensive information security program, as well as a training program that addresses the security and confidentiality of all information accessible from the consolidated audit trail and the operational risks associated with accessing the Central Repository.<sup>67</sup> The Plan Processor must also designate one of its employees as the Chief Information Security Officer; among other things, the Chief Information Security Officer is responsible for creating and enforcing appropriate policies, procedures, and control structures regarding data security.<sup>68</sup> The Technical Specifications, which the Plan Processor must publish, must include a detailed description of the data security standards for the consolidated audit trail.<sup>69</sup>

Appendix D of the CAT NMS Plan sets forth minimum data security requirements for CAT that the Plan Processor must meet.<sup>70</sup> For example, Appendix D enumerates various connectivity, data transfer, and encryption requirements, such as that the CAT System must have encrypted internet connectivity, CAT Reporters must connect to CAT infrastructure using secure methods such as private lines or virtual private network connections over public lines, CAT Data must be encrypted at-rest and in-flight using industry standard best practices.<sup>71</sup> Additional requirements regarding data storage, data access, breach management, and PII data are also specified in Appendix D.<sup>72</sup> Further, the Participants must establish and enforce policies and procedures that ensure the confidentiality of the CAT Data obtained from the Central Repository, limit the use of CAT Data obtained from the Central Repository solely for surveillance and regulatory purposes,<sup>73</sup> implement effective information barriers between each Participant's regulatory and non-regulatory staff with regard to CAT Data, and limit access to CAT

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<sup>65</sup> See CAT NMS Plan, supra note 4, at Section 6.5(f)(i), (iv).

<sup>66</sup> Id. at Section 6.5(f)(i).

<sup>67</sup> Id. at Sections 6.1(m), 6.12.

<sup>68</sup> Id. at Section 6.2(b).

<sup>69</sup> Id. at Section 6.9.

<sup>70</sup> Id. at Appendix D, Section 4.

<sup>71</sup> Id. at Appendix D, Section 4.1.2.

<sup>72</sup> Id. at Appendix D, Section 4.1.3–4.1.6.

<sup>73</sup> The Commission notes that regulatory purposes includes, among other things, market surveillance, examinations, investigations, and other enforcement functions, analysis and reconstruction of market events, and market analysis and research to inform policy decisions.

Data to designated persons.<sup>74</sup> However, a Participant may use the Raw Data<sup>75</sup> it reports to the Central Repository for “commercial or other” purposes if not prohibited by applicable law, rule or regulation.<sup>76</sup>

The Participants will not be submitting the Background Check information to the Commission and the Commission is not collecting this information; however, if the Commission receives any confidential information pursuant to the CAT NMS Plan, such information will be kept confidential, subject to the provisions of applicable law.

To the extent that the Commission receives confidential information pursuant to the CAT NMS Plan, such information will be kept confidential, subject to the provisions of applicable law.

#### 11. Sensitive Questions

The SEC does not collect information about individuals, but rather, Rule 613 is collected by the CAT NMS Plan Processor (FINRA CAT), which is managed by self-regulatory organizations (national securities exchanges and FINRA), therefore, a PIA, SORN, and PAS are not required.

#### 12. Burden of Information Collection

The Commission estimates that the information collection requirements of Rule 613 will apply to 1,375 respondents who will incur an average aggregate total of approximately 4,931,332 burden hours per year to comply with the requirements. The hour burden is calculated as discussed below.

Rule 613 applies to the 25 Participants (the 24 national securities exchanges and the one national securities association (FINRA)) currently registered with the Commission.<sup>77</sup> This is an increase of 1 Participant from the previous Paperwork

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<sup>74</sup> See CAT NMS Plan, supra note 4, at Section 6.5(f)(ii), (g).

<sup>75</sup> Raw data is defined as “Participant Data and Industry Member Data that has not been through any validation or otherwise checked by the CAT System.” Id. at Section 1.1.

<sup>76</sup> Id. at Section 6.5(f)(i).

<sup>77</sup> The Participants are: BOX Exchange LLC, Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe C2 Exchange, Inc, Cboe Exchange, Inc., Financial Industry Regulatory Authority, Inc., Investors Exchange LLC, Long-Term Stock Exchange, Inc., MEMX LLC, Miami International Securities Exchange LLC, MIAX Emerald, LLC, MIAX PEARL, LLC, Nasdaq BX, Inc., Nasdaq GEMX, LLC, Nasdaq ISE, LLC, Nasdaq MRX, LLC, Nasdaq PHLX LLC, The NASDAQ Stock Market LLC, New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc.,

Reduction Act Analysis. The Commission also estimates that Rule 613 applies to 1,350 broker-dealers.<sup>78</sup>

A. Burden on National Securities Exchanges and National Securities Associations

a. Central Repository

Rule 613 requires the Participants to jointly establish a Central Repository tasked with the receipt, consolidation, and retention of the reported order and execution information. The Participants previously issued a request for proposal soliciting Bids from entities to act as the consolidated audit trail's Plan Processor, and selected Thesys Technologies, LLC as the Consolidated Audit Trail Plan Processor on January 17, 2017.<sup>79</sup> On February 27, 2019, the Participants announced that FINRA has been selected

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NYSE Chicago, Inc. and NYSE National, Inc. The Commission has adjusted its estimates pertaining to the Participants due to the addition of one new Participant (from 24 Participants in 2020 Paperwork Reduction Act analysis to 25 Participants in the instant Paperwork Reduction Act analysis).

<sup>78</sup> The Commission understands that there are approximately 3,510 broker-dealers, as of December 2022; however, not all broker-dealers are expected to have CAT reporting obligations. The Participants previously reported that approximately 1,800 broker-dealers quoted or executed transactions in NMS Securities, Listed Options or OTC Equity Securities and would likely have CAT reporting obligations. The Commission previously revised this estimate to 1,500 as of 2020, and now revises that estimate to 1,350 broker-dealers quoting or executing transactions in NMS Securities, Listed Options or OTC Equity Securities, and would likely have CAT reporting obligations. The Commission believes that this is consistent with the reduced number of broker-dealers overall (from 4,138 to approximately 3,734 in 2020, to now 3,510 broker-dealers). This determination is based on experience and knowledge gained in discussions with Participants and the Plan Processor during the development of the consolidated audit trail.- The Commission further believes that this reduction is a reduction in the number of Small OATS-Reporting Broker-Dealers, which was previously calculated by identifying all other categories of CAT reporting broker-dealers and determining that the remaining number of the estimated 1,350 broker-dealers were Small OATS-Reporting Broker-Dealers. The Commission understands that the approximately 2,160 remaining registered broker-dealers either trade in asset classes not currently included in the definition of Eligible Security or do not trade at all (e.g., broker-dealers for the purposes of underwriting, advising, private placements).

<sup>79</sup> See "SROs Select Thesys Technologies, LLC as Consolidated Audit Trail Plan Processor," <https://www.prnewswire.com/news-releases/sros-select-thesys-technologies-llc-as-consolidated-audit-trail-plan-processor-300392226.html>.

as Plan Processor, replacing Thesys Technologies, LLC.<sup>80</sup> The Plan Processor is responsible for building, operating, administering and maintaining the Central Repository.

The Plan’s Operating Committee, which consists of one voting representative of each Participant,<sup>81</sup> is responsible for the management of CAT LLC,<sup>82</sup> including the Central Repository, acting by majority or Supermajority Vote, depending on the issue. In managing the Central Repository, among other things, the Operating Committee has the responsibility to authorize the following actions of the CAT LLC: (1) interpreting the Plan;<sup>83</sup> (2) determining appropriate funding-related policies, procedures and practices consistent with Article XI of the CAT NMS Plan;<sup>84</sup> (3) terminating the Plan Processor; (4) selecting a successor Plan Processor (including establishing a Plan Processor Selection Subcommittee to evaluate and review Bids and make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor);<sup>85</sup> (5) entering into, modifying or terminating any Material Contract;<sup>86</sup> (6) making any Material Systems Change;<sup>87</sup> (7) approving the initial Technical Specifications or any Material Amendment to the Technical Specifications proposed by the Plan Processor;<sup>88</sup> (8) amending the Technical Specifications on its own motion;<sup>89</sup> (9) approving the Plan Processor’s appointment or removal of the CCO, CISO, or any Independent Auditor in accordance with Section 6.1(b) of the CAT NMS Plan;<sup>90</sup> (10) approving any recommendation by the CCO pursuant to Section 6.2(a)(v)(A) of the CAT NMS Plan;<sup>91</sup> (11) selecting the members of the Advisory Committee;<sup>92</sup> (12) selecting the Operating

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<sup>80</sup> See “CAT NMS Selects FINRA as Consolidated Audit Trail Plan Processor” available at: [https://www.catnmsplan.com/wp-content/uploads/2019/02/CAT\\_FINRA\\_Press\\_Release\\_FINAL.pdf](https://www.catnmsplan.com/wp-content/uploads/2019/02/CAT_FINRA_Press_Release_FINAL.pdf).

<sup>81</sup> See *id.* at Section 4.2(a).

<sup>82</sup> See *supra* note 28.

<sup>83</sup> See CAT NMS Plan, *supra* note 4, at Section 4.3(a)(iii).

<sup>84</sup> See *id.* at Section 4.3(a)(vi).

<sup>85</sup> See *id.* at Section 4.3(b)(i).

<sup>86</sup> See *id.* at Section 4.3(b)(iv).

<sup>87</sup> See *id.* at Section 4.3(b)(v).

<sup>88</sup> See *id.* at Section 4.3(b)(vi).

<sup>89</sup> See *id.* at Section 4.3(b)(vii).

<sup>90</sup> See *id.* at Section 4.3(b)(iii).

<sup>91</sup> See *id.* at Section 4.3(a)(iv).

<sup>92</sup> See *id.* at Section 4.3(a)(ii).

Committee chair;<sup>93</sup> and (13) determining to hold an Executive Session of the Operating Committee.<sup>94</sup>

Additionally, in managing the Central Repository, the Operating Committee has the responsibility and authority, as appropriate, to: (1) direct the CAT LLC to enter into one or more agreements with the Plan Processor obligating the Plan Processor to perform the functions and duties contemplated by the Plan to be performed by the Plan Processor, as well as such other functions and duties the Operating Committee deems necessary or appropriate;<sup>95</sup> (2) appoint as an Officer of the Company the individual who has direct management responsibility for the Plan Processor's performance of its obligations with respect to the CAT;<sup>96</sup> (3) approve policies, procedures, and control structures related to the CAT System that are consistent with Rule 613(e)(4), Appendix C and Appendix D of the CAT NMS Plan that have been developed and will be implemented by the Plan Processor;<sup>97</sup> (4) approve any policy, procedure or standard (and any material modification or amendment thereto) applicable primarily to the performance of the Plan Processor's duties as the Plan Processor;<sup>98</sup> (5) for both the CCO and CISO, render their annual performance reviews and review and approve their compensation;<sup>99</sup> (6) review the Plan Processor's performance under the Plan at least once each year, or more often than once each year upon the request of two Participants that are not Affiliated Participants;<sup>100</sup> (7) in conjunction with the Plan Processor, approve and regularly review (and update as necessary) SLAs governing the performance of the Central Repository;<sup>101</sup> (8) maintain a Compliance Subcommittee for the purpose of aiding the CCO as necessary;<sup>102</sup> and (9) designate by resolution one or more Subcommittees it deems necessary or desirable in furtherance of the management of the business and affairs of the Company.<sup>103</sup>

The Commission previously estimated the initial burden over the 12-month period after the effectiveness of the CAT NMS Plan within which the Participants would be

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<sup>93</sup> See id. at Section 4.3(a)(i).

<sup>94</sup> See id. at Section 4.3(a)(v).

<sup>95</sup> See id. at Section 6.1(a).

<sup>96</sup> See id. at Section 4.6(b).

<sup>97</sup> See id. at Section 6.1(c).

<sup>98</sup> See id. at Section 6.1(e).

<sup>99</sup> See id. at Section 6.2(a)(iv) and Section 6.2(b)(iv).

<sup>100</sup> See id. at Section 6.1(n).

<sup>101</sup> See id. at Section 6.1(h).

<sup>102</sup> See id. at Section 4.12(b).

<sup>103</sup> See id. at Section 4.12(a).

required to select an initial Plan Processor<sup>104</sup> and begin reporting to the Central Repository.<sup>105</sup> The Participants have subsequently selected a Plan Processor and have begun reporting to the Central Repository, so the Commission deems the initial burden of this information collection is completed.<sup>106</sup>

For its ongoing time burden and cost estimates associated with the management of the Central Repository, the Commission is relying on estimates provided in the CAT NMS Plan for the development of the CAT NMS Plan, which the Participants “have accrued, and will continue to accrue,”<sup>107</sup> and have described in the CAT NMS Plan as “reasonably associated with creating, implementing, and maintaining the CAT upon the Commission’s adoption of the CAT NMS Plan.”<sup>108</sup>

The Commission believes that the activities of the Operating Committee overlap with those undertaken by the Participants to develop the CAT NMS Plan. The CAT NMS Plan describes the costs incurred by the Participants to develop the CAT NMS Plan as including “staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration.”<sup>109</sup> For the management of the Central Repository, the Operating Committee has comparable responsibilities. As part of its overall management of the Central Repository, the Operating Committee has responsibility for decisions associated with the technical requirements of the Central Repository.<sup>110</sup> Furthermore, the Operating Committee is required to authorize the

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<sup>104</sup> Rule 613(a)(3)(i) requires the selection of the Plan Processor within 2 months after effectiveness of the CAT NMS Plan. See 17 CFR 242.613(a)(3)(i).

<sup>105</sup> Rule 613(a)(3)(iii) requires the Participants to provide to the Central Repository the data required by Rule 613(c) within one year after effectiveness of the CAT NMS Plan. See 17 CFR 242.613(a)(3)(iii).

<sup>106</sup> See “CAT NMS Announces Initiation of Reporting to the Consolidated Audit Trail,” CAT NMS, LLC (November 16, 2018), available at: <https://www.catnmsplan.com/wp-content/uploads/2018/11/Press-Release-CAT-Launch-final.pdf>.

<sup>107</sup> See id. at Appendix C, Section B.7(b)(iii).

<sup>108</sup> See id.

<sup>109</sup> See id.

<sup>110</sup> For example, the Operating Committee would be required to authorize the following actions of the CAT LLC: entering into, modifying or terminating any Material Contract (see id. at Section 4.3(b)(iv)); making any Material Systems Change (see id. at Section 4.3(b)(v)); amending the Technical Specifications on its own motion (see id. at Section 4.3(b)(vii)); and approving the initial Technical Specifications or any Material Amendment to the Technical Specifications



selection of the members of the Advisory Committee,<sup>111</sup> comprising members of the Industry, to advise the Participants on the implementation, operation, and administration of the Central Repository.<sup>112</sup> Because the responsibilities of the Operating Committee are similar to those described in the CAT NMS Plan for the development of the CAT NMS Plan itself, the Commission believes that it is reasonable to use the CAT NMS Plan estimates as the basis for its burden and cost estimates for the ongoing management of the Central Repository.

Each Participant contributes an employee and a substitute for the employee to serve on the Operating Committee oversees the Central Repository.

The Operating Committee will continue to be responsible for the management of the Central Repository. The Commission estimates that each of the Participants would incur an average ongoing annual time burden of 576 burden hours associated with the continued management of the Central Repository, for an aggregate annual estimate of 14,400 burden hours across the Participants (576 x 25).<sup>113</sup> The Commission believes it is

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proposed by the Plan Processor (see id. at Section 4.3(b)(vi)). Further, the Operating Committee would be able to approve policies, procedures, and control structures related to the CAT System that are consistent with Rule 613(e)(4), Appendix C and Appendix D of the CAT NMS Plan that have been developed and will be implemented by the Plan Processor (see id. at Section 6.1(c)); and in conjunction with the Plan Processor, approve and regularly review (and update as necessary) SLAs governing the performance of the Central Repository (see id. at Section 6.1(h)).

<sup>111</sup> See id. at Section 4.3(a)(ii).

<sup>112</sup> See id. at Section 4.13(d).

<sup>113</sup> The Commission is basing this estimate on the hour burden estimate provided in the CAT NMS Plan for the development of the CAT NMS Plan. The Commission notes that the CAT NMS Plan describes the hour burden estimate for the development of the CAT NMS Plan as a burden the Participants will continue to accrue; therefore, the Commission believes that it is reasonable to use this burden estimate as the basis for its ongoing hour burden estimate for the maintenance of the Central Repository, particularly as the Commission believes the reasons for the staff time incurred for the development of the CAT NMS Plan would be comparable to those of the staff time to be incurred by the Operating Committee for the continued management of the Central Repository. See id. (stating "...the Participants have accrued, and will continue to accrue, direct costs associated with the development of the CAT NMS Plan. These costs include staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration. The

reasonable to assume that the ongoing aggregate annual internal burden, across all Participants, associated with the continued management of the Central Repository does not increase or decrease with changes to the number of Participants.

b. Data Collection and Reporting

Rule 613(c)(1) requires the CAT NMS Plan to provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a Participant, and further to document the life of the order through the process of routing, modification, cancellation and execution (in whole or in part) of the order.<sup>114</sup> Rule 613(c) requires the CAT NMS Plan to impose requirements on Participants to record and report CAT information to the Central Repository in accordance with specified timelines.<sup>115</sup>

Rule 613(c) requires the CAT NMS Plan to require the collection and reporting of some information that Participants already collect to operate their business and are required to maintain in compliance with Section 17(a) of the Exchange Act and Rule 17a-1 thereunder.<sup>116</sup> For instance, the Commission believes that the national securities exchanges keep records pursuant to Section 17(a) of the Exchange Act and Rule 17a-1 thereunder in electronic form, of the receipt of all orders entered into their systems, as well as records of the routing, modification, cancellation, and execution of those orders. However, Rule 613 requires the CAT NMS Plan to require the Participants to collect and report additional and more detailed information, and to report the information to the Central Repository in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format for consolidation and storage.

The CAT NMS Plan provides estimated costs for hardware, software, third-party providers, and Participants' full-time employees ("FTE's) to be incurred by the

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Participants estimate that they have collectively contributed 20 FTEs in the first 30 months of the CAT NMS Plan development process"). (20 FTEs / 30 months) = 2/3 FTEs per month for all of the Participants to continue management of the Central Repository. Converting this into burden hours, (2/3 FTEs) x (12 months) x (1,800 burden hours per year) = 14,400.72 ongoing annual burden hours for all of the Participants to continue management of the Central Repository. (14,400 ongoing annual burden hours for all Participants / 25 Participants) = 576 ongoing annual burden hours for each Participant to continue management of the Central Repository.

<sup>114</sup> 17 CFR 242.613(c)(1). See also CAT NMS Plan, supra note 4, at Section 6.3.

<sup>115</sup> 17 CFR 242.613(c). See also CAT NMS Plan, supra note 4, at Section 6.3.

<sup>116</sup> 15 U.S.C. 78q(a); 17 CFR 240.17a-1.

Participants to report CAT Data.<sup>117</sup> For these estimates, the Commission is relying on the estimates provided by the Participants because it believes that the Plan's estimates for Participants to report CAT Data are reliable since all of the Participants provided estimates, and most Participants have experience collecting audit trail data, as well as knowledge of both the requirements of Rule 613 as well as their current business practices. The Commission notes that the Participants provided these numbers based on a study (the "Participants Study") that was distributed to 19 Participants on August 11, 2014. The Commission has divided certain numbers provided by the Participants Study by 19 in order to calculate estimates of burdens and/or costs per Participant, where appropriate, and further adjusted calculations to account for the increased number of Participants (25).<sup>118</sup>

The Commission notes that throughout this Paperwork Reduction Act analysis, it is categorizing the FTE cost estimates for the Participants, as well as the broker-dealer respondents, that were provided in the CAT NMS Plan as an internal compliance cost not an actual Item 13 cost. The Commission: (1) divided the FTE cost estimates by a divisor of \$424,350, which is the Commission's estimated average salary for a full-time equivalent employee in the securities industry in a job category associated with regulatory data reporting;<sup>119</sup> and then (2) multiplied the quotient by 1,800 (the number of

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<sup>117</sup> Third-party provider costs are generally legal and consulting costs, but may include other outsourcing. The template used by respondents is available at <http://catnmsplan.com/PastEvents/> under the Section titled "6/23/14" at the "Cost Study Working Template" link.

<sup>118</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(i)(A)(1). Specifically, estimates relating to Data Collection and Reporting (Participants) and Surveillance, as described below, have been modified based on this approach.

<sup>119</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(ii)(C), at n.192. The Participants represented that the cost per FTE is \$401,440. The \$401,440 figure used in the CAT NMS plan was based on a Programmer Analyst's salary (\$193 per hour) from SIFMA's *Management & Professional Earnings in the Securities Industry 2008*, multiplied by 40 hours per week, then multiplied by 52 weeks per year. The Commission updated this number to include recent salary data for other job categories associated with regulatory data reporting in the securities industry, using the hour and multiple methodology used by the Commission in its paperwork burden analyses. The Commission has used \$424,350 as its annual cost per FTE for purposes of its hourly burden estimates. The \$424,350 FTE cost = 25% Compliance Manager + 75% Programmer Analyst (0.25) x (\$283 per hour x 1,800 working hours per year) + (0.75) x (\$220 per hour x 1,800 working hours per year). The \$283 per hour figure for a Compliance Manager and the \$220 per hour figure for a Programmer Analyst are from SIFMA's *Management & Professional Earnings in the Securities Industry 2013*, modified by the Commission to account for an 1,800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead.

hours a full-time equivalent employee is estimated to work per year). The Commission believes it is appropriate to use the same calculation now because the Commission continues to rely on estimated costs and figures provided by the Plan Participants in the CAT NMS Plan.

The Commission previously estimated initial burden hours to develop and implement the needed systems changes to capture the required information and transmit it to the Central Repository in compliance with the Rule for each Participant. As noted above, the Participants have begun reporting to the consolidated audit trail and thus the Commission believes that this information collections requirement is complete for the Participants.<sup>120</sup>

However, the Commission estimates that Rule 613 would impose on each Participant ongoing annual burdens associated with, among other things, personnel time to monitor each Participant's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provided the following average aggregate FTE internal compliance cost that the Participants were expecting to incur to maintain data reporting systems to be in compliance with Rule 613: \$7,300,000 in anticipated annual FTE costs for operational, technical/development, and compliance functions related to data reporting.<sup>121</sup> Based on this estimate provided in the CAT NMS Plan, the Commission believes that it would take each Participant 1,629 ongoing burden hours per year<sup>122</sup> to continue compliance with Rule 613. Therefore, the Commission estimates that the estimated aggregate ongoing burden for all Participants would be approximately 40,725 hours.<sup>123</sup> Based on the anticipated burden hours and the revised estimated salary per FTE, the aggregate internal cost of compliance to Participants would be approximately \$11,748,167 per year.<sup>124</sup>

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<sup>120</sup> See, *supra*, note 106.

<sup>121</sup> See CAT NMS Plan, *supra* note 4, at Appendix C, Section B.7(b)(iii)(B)(2).

<sup>122</sup>  $(\$7,300,000 \text{ in anticipated Participant annual FTE costs}) / (19 \text{ Participants}) = \$384,210.53 \text{ in anticipated per Participant annual FTE costs. } (\$384,210.53 \text{ in anticipated per Participant FTE costs}) / (\$424,350 \text{ FTE cost per Participant}) = 0.905 \text{ anticipated FTEs per Participant. } (0.905 \text{ FTEs}) \times (1,800 \text{ working hours per year}) = 1,629 \text{ burden hours per Participant to maintain CAT Data reporting. The Commission is using the approximate salary for a FTE at the time the Participants provided the estimate to calculate burden hours, because the } \$7,300,000 \text{ estimated costs were based on that approximate salary. Because the estimated salary has risen, the aggregate cost per participant has also risen, although the individual Participant burden hours have remained steady.}$

<sup>123</sup>  $40,725 \text{ annual burden hours} = (25 \text{ Participants}) \times (1,629 \text{ annual burden hours}).$

<sup>124</sup> The Commission is using \$519,256 as its annual cost per FTE for purposes of its cost estimates.  $519,256 \text{ FTE cost} = 25\% \text{ Compliance Manager} + 75\% \text{ Programmer Analyst } (0.25) \times (\$344 \text{ per hour} \times 1,800 \text{ working hours per year}) + (0.75) \times (\$267 \text{ per}$

The Commission estimates that it would take the Participants approximately 40,725 burden hours per year to maintain systems changes needed to comply with the data reporting requirements of the consolidated audit trail [(1,629 ongoing burden hours) x (25 Participants)]. The estimated aggregate cost has risen to \$11,748,167 from \$7,300,000, because of the additional Participant and because the Commission has revised its estimated costs for FTE to reflect inflation. This estimated burden has changed because the Commission is now applying this estimation to 25 Participants.<sup>125</sup>

c. Collection and Retention of NBBO, Last Sale Data and Transaction Reports

Rule 613(e)(7) provides that the CAT NMS Plan must require the Central Repository to collect and retain on a current and continuous basis NBBO information for each NMS security, transaction reports reported pursuant to an effective transaction reporting plan, and Last Sale Reports reported pursuant to the Options Price Reporting Authority (“OPRA”) Plan.<sup>126</sup>

Additionally, the CAT NMS Plan must require the Central Repository to maintain this data in a format compatible with the order and event information consolidated and stored pursuant to Rule 613(c)(7).<sup>127</sup> Further, the CAT NMS Plan must require the Central Repository to retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of Rule 613 for a period of not less than five years in a convenient and usable uniform electronic format that is directly available and searchable electronically without any manual intervention.<sup>128</sup> The Commission notes that the CAT NMS Plan includes these data as “SIP Data” to be collected by the Central Repository.<sup>129</sup> The Commission believes the burden associated with SIP Data is included in the burden to the Participants associated with the implementation and maintenance of the Central Repository.

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hour x 1,800 working hours per year). The \$344 per hour figure for a Compliance Manager and the \$267 per hour figure for a Programmer Analyst are from SIFMA’s *Management & Professional Earnings in the Securities Industry 2013*, modified to account for inflation as of December 2022. These numbers are further modified by the Commission to account for an 1,800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead. .905 anticipated FTEs per Participant x 519,256 per FTE= \$469,926.68 per Participant per year. \$469,926.68 x 25 Participants = \$11,748,167.

<sup>125</sup> See supra notes 117 and 118, and accompanying text.

<sup>126</sup> See 17 CFR 242.613(e)(7).

<sup>127</sup> Id.

<sup>128</sup> See 17 CFR 242.613(e)(8).

<sup>129</sup> See CAT NMS Plan, supra note 4, at Section 6.5(a)(ii).

d. Surveillance

Rule 613(f) provides that the CAT NMS Plan must require that every national securities exchange and national securities association develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail. Rule 613(a)(3)(iv) provides that the CAT NMS Plan must require that the surveillance systems be implemented within fourteen months after effectiveness of the CAT NMS Plan.

The CAT NMS Plan states that the estimated total initial FTE internal compliance cost to the Participants to implement surveillance programs within the Central Repository is \$17,500,000 for operational, technical/development, and compliance staff to be engaged in the creation of surveillance programs.<sup>130</sup> Because it has been more than fourteen months since the CAT NMS Plan became effective, the Commission assumes that these costs have already been incurred and are no longer applicable for purposes of future estimates.

The CAT NMS Plan states that the estimated total annual FTE internal compliance cost associated with the ongoing maintenance of surveillance programs for the Participants would be \$66,700,000 for internal operational, technical/development, and compliance staff to be engaged in the maintenance of surveillance programs.<sup>131</sup> Based on the estimates provided in the CAT NMS Plan, the Commission estimates that the ongoing annual internal hour burden to maintain the new or enhanced surveillance systems reasonably designed to make use of the consolidated audit trail data for each Participant would be approximately 14,891.4 hours,<sup>132</sup> for an aggregate annual burden of

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<sup>130</sup> See id. at Appendix C, Section B.7(b)(iii)(B)(2).

<sup>131</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(B)(2). This number is not adjusted for inflation, and is therefore lower than the costs would be based on costs today. The aggregate annual cost to Participants today would be approximately \$107,395,122, accounting for both inflation and the additional Participant.

<sup>132</sup>  $(\$66,700,000 \text{ in anticipated ongoing FTE costs}) / (19 \text{ Participants}) = \$3,510,526.31 \text{ in anticipated ongoing FTE costs per Participant. } (\$3,510,526.31 \text{ in anticipated ongoing FTE costs per Participant}) / (\$424,350 \text{ FTE cost per Participant}) = 8.273 \text{ anticipated FTEs per Participant. } (8.273 \text{ FTEs}) \times (1,800 \text{ working hours per year}) = 14,891.4 \text{ ongoing burden hours per Participant to maintain the new or enhanced surveillance systems. The Commission used the estimated cost of a FTE without adjustment for inflation because the anticipated ongoing costs were similarly not adjusted for inflation.}$

372,285 burden hours.<sup>133</sup> This estimated burden has changed because the Commission is now applying this estimation to 25 Participants, and because the Commission has adjusted the method in which it estimates the per-Participant burden, by using the estimation provided in the Participants Study, adjusted by the number of Participants that contributed to the relevant CAT NMS Plan estimation (19).<sup>134</sup>

e. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) provides that the CAT NMS Plan must require the Participants to provide the Commission a written assessment of the consolidated audit trail's operation at least every two years, once the CAT NMS Plan is effective.<sup>135</sup> The assessment must address, at a minimum, with respect to the consolidated audit trail: (i) an evaluation of its performance; (ii) a detailed plan for any potential improvements to its performance; (iii) an estimate of the costs associated with any such potential improvements; and (iv) an estimated implementation timeline for any such potential improvements, if applicable.<sup>136</sup> Thus, the Participants must, among other things, undertake an analysis of the consolidated audit trail's technological and computer system performance.

Section 6.6 of the CAT NMS Plan, as approved by the Commission, requires the assessment contemplated by Rule 613(b)(6) to be submitted on an annual basis. Section 6.6 of the Plan also requires the Participants to provide an estimate of the costs associated with any potential improvements to the performance of the CAT, including an assessment of the potential impact on competition, efficiency and capital formation. Section 6.6 of the Plan also requires the annual assessment to consider the benefits of potential improvements to the CAT, including to investor protection.<sup>137</sup>

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<sup>133</sup> (14,891.4 annual burden hours per Participant to maintain new or enhanced surveillance systems) x (25 Participants) = 372,285 aggregate annual burden hours. Using the revised cost per FTE supra note 124, the approximate annual cost per Participant is \$ 4,295,804.89 (519,256 x 8.273 FTEs). The aggregate annual cost to Participants would therefore be \$107,395,122.

<sup>134</sup> See supra notes 117 and 118 and accompanying text.

<sup>135</sup> 17 CFR 242.613(b)(6).

<sup>136</sup> Id.

<sup>137</sup> The Participants' annual written assessment must also include: (1) an evaluation of the information security program of the CAT to ensure that the program is consistent with the highest industry standards for protection of data; (2) an evaluation of potential technological upgrades based upon a review of technological developments over the preceding year, drawing on necessary technological expertise, whether internal or external; (3) an assessment of efforts to reduce the time to restore and recover CAT Data at a back-up site; (4) an assessment of how the Plan Processor and SROs are monitoring Error Rates and

The CAT NMS Plan also states that the CCO will oversee the assessment required by Rule 613(b)(6), and would allow the Participants to review and comment on the assessment before it is submitted to the Commission.<sup>138</sup> The CCO is an employee of the Plan Processor and would be compensated by the Plan Processor.<sup>139</sup> The Commission assumes that the overall cost and associated burden on the Participants to implement and maintain the Central Repository includes both the compensation for the Plan Processor as well as its employees for the implementation and maintenance of the Central Repository.

The Commission estimates that it would take each Participant approximately 150 annual burden hours of internal legal, compliance, business operations, and information technology staff time to review and comment on the assessment prepared by the CCO of the operation of the CAT. Therefore, the Commission estimates that the ongoing annual burden of submitting a written assessment each year would be 150 ongoing burden hours per Participant, for an estimated aggregate annual ongoing burden of 3,750 hours.<sup>140</sup>

The Commission estimates that it would take the Participants a total of approximately 3,750 hours per year to review, comment on, and submit the written assessment to the Commission [(150 ongoing burden hours) x (25 Participants)].

f. Assessment of Industry Member Bulk Access to Reported Data

Section 6.6(a)(iv) of the CAT NMS Plan requires the Participants to provide a written report discussing the feasibility, benefits, and risks of allowing an Industry Member to bulk download the Raw Data it submitted to the Central Repository, within 24 months of effectiveness of the Plan.

The Commission estimates that it would take each Participant approximately 15 initial, one-time burden hours of internal legal, compliance, business operations, and

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addresses the application of Error Rates based on product, data element or other criteria; (5) a copy of the evaluation required by Section 6.8(c) of the Plan as to whether industry standards have evolved such that: (i) the clock synchronization standard in Section 6.8(a) should be shortened; or (ii) the required timestamp in Section 6.8(b) should be in finer increments; and (6) an assessment of whether any data elements should be added, deleted or changed. See CAT NMS Plan Order, supra note 6, at Section IV.H.

<sup>138</sup> See CAT NMS Plan, supra note 4, at Section 6.6.

<sup>139</sup> Id. at Section 6.2(a).

<sup>140</sup> 3,750 ongoing annual burden hours = (150 ongoing annual burden hours) x (25 Participants).



information technology staff time to prepare and submit the assessment.<sup>141</sup> Therefore, the Commission estimates that the initial one-time burden of submitting a written assessment would be 15 initial burden hours per Participant, for an estimated aggregate initial burden of approximately 375 hours.<sup>142</sup> Annualized over three years, this would be an average annual burden of 5 hours per Participant or 125 hours for all Participants.

The Commission estimates that it would take the Participants an aggregate average of approximately 125 hours per year to submit a written report detailing the Participants' consideration of bulk access by Industry Members (15 initial, one-time burden hours amortized over three years) x (25 Participants). This burden has changed because of the increased number of Participants (25 Participants instead of 24 Participants).

g. Assessment of Errors in Customer Information Fields

Section 6.6(a)(v) of the CAT NMS Plan requires the Participants to submit a written assessment of errors in the customer information submitted to the Central Repository and whether to prioritize the correction of certain data fields over others, within 36 months of effectiveness of the Plan.

The Commission estimates that it would take each Participant approximately 24 initial, one-time burden hours of internal legal, compliance, and information technology staff time to prepare and submit the assessment of errors.<sup>143</sup> Therefore, the Commission

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<sup>141</sup> The Commission estimates that 15 internal burden hours = (Computer Operations Department Manager at 2 hours) + (Senior Database Administrator at 5 hours) + (Senior Systems Analyst at 2 hours) + (Systems Analyst at 2 hours) + (Attorney at 2 hours) + (Assistant General Counsel at 2 hours).

<sup>142</sup> 375 initial one-time internal burden hours = (15 initial, one-time burden hours per Participant) x (25 Participants).

<sup>143</sup> The Commission estimates that 24 internal burden hours = (Computer Operations Department Manager at 3 hours) + (Senior Database Administrator at 4 hours) + (Senior Systems Analyst at 2 hours) + (Systems Analyst at 2 hours) + (Compliance Attorney at 5 hours) + (Attorney at 4 hours) + (Assistant General Counsel at 4 hours). The Commission believes that the assessment of the errors in the customer information submitted to the Central Repository and the prioritization of the correction of certain data fields over others would require the time of certain information technology staff and their managers. A Database Administrator would be involved in analyzing the errors in the customer information submitted to the Central Repository and in suggesting any changes to the Central Repository, and Systems Analysts would assess the impact of any proposed changes to the Central Repository on other systems. Further, the Commission believes that the prioritization of the correction of data fields would require the input of compliance and legal staff, and that legal staff would need to review the assessment before it is submitted.

estimates that the initial, one-time burden of preparing and submitting a written assessment would be 24 initial, one-time burden hours per Participant (8 hours per Participant when annualized over three years), for an estimated aggregate initial, one-time burden of approximately 600 hours.<sup>144</sup>

When annualized over three years, the average aggregate burden on Participants is approximately 200 hours per year to submit the written assessment of errors in the customer information fields (24 initial, one-time burden hours amortized over three years) x (25 Participants). This burden has changed because of the increased number of Participants (25 Participants instead of 24 Participants).

#### h. Report on Impact of Tiered Fees on Market Liquidity

Section 6.6(a)(vi) of the CAT NMS Plan requires the Participants to submit a written report to study the impact of tiered-fees on market liquidity, including an analysis of the impact of the tiered-fee structure on Industry Members provision of liquidity, within 36 months of effectiveness of the Plan.

The Commission estimates that it would take each Participant approximately 18.75 initial, one-time burden hours of internal legal and business operations staff time to prepare and submit the report studying the impact of tiered fees on market liquidity. Therefore, the Commission estimates that the initial, one-time burden of preparing and submitting the report studying the impact of tiered fees on market liquidity would be 18.75 initial, one-time burden hours per Participant (6.25 hours per year when annualized over three years), for an estimated aggregate initial, one-time burden of approximately 468.75 hours (approximately 156 hours per year when annualized over three years).<sup>145</sup>

The Commission thus estimates that it would take the Participants an aggregate average of approximately 156 hours per year to prepare and submit the report studying the impact of tiered fees on market liquidity (18.75 initial, one-time burden hours amortized over three years) x (25 Participants). This burden has changed because of the increased number of Participants (25 Participants instead of 24 Participants).

#### i. Assessment of Material Systems Change on Error Rate

Section 6.6(a)(vii) of the CAT NMS Plan requires a written assessment of the projected impact of any Material Systems Change on the Maximum Error Rate, prior to the implementation of any Material Systems Change.

The Commission estimates that the CAT may have four Material Systems Changes per year. Based on this estimate, the Commission estimates that each

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<sup>144</sup> 600 initial, one-time burden hours = (24 initial, one-time burden hours per Participant) x (25 Participants).

<sup>145</sup> 450 initial, one-time burden hours = (18 initial, one-time burden hours) x (25 Participants).

Participant would incur approximately 5.21 burden hours to prepare and submit each assessment, or approximately 20.84 annual burden hours per year,<sup>146</sup> for an aggregate, ongoing estimate of approximately 130.25 burden hours per report,<sup>147</sup> or an aggregate ongoing estimate of approximately 521 burden hours per year.<sup>148</sup>

j. Background Checks

Section 6.1(g) of the CAT NMS Plan requires each Participant to conduct background checks of its employees and contractors that will use the CAT System. The Commission estimates that this requirement will impact approximately 1,771 users.<sup>149</sup> Because the CAT is operational, the Commission assumes that the initial burden for background checks has been completed, and the only applicable burden is the ongoing one as new employees may be onboarded.

The Commission estimates that the ongoing internal burden hours for each Participant would be approximately 4.23 annual burden hours,<sup>150</sup> for an aggregate annual burden hour amount of approximately 106 burden hours.<sup>151</sup> This burden has changed due to the elimination of the one-time initial burden and an increase in the number of Participants (25 Participants instead of 24).

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<sup>146</sup> The Commission estimates that there would be four Material System Changes per year.  $(521 \text{ burden hours per report}) \times (4 \text{ reports per year}) = 20.84 \text{ annual burden hours per year.}$

<sup>147</sup>  $(5.21 \text{ burden hours per report}) \times 25 \text{ Participants} = 130.25 \text{ burden hours per report.}$

<sup>148</sup>  $(130.25 \text{ burden hours}) \times (4 \text{ reports per year}) = 521 \text{ annual burden hours.}$

<sup>149</sup> Previously, the Commission estimated that approximately 1,700 users would be impacted, based on conversations with Participants, when there were only 24 Participants in the CAT NMS Plan. The Commission is revising this estimate to account for 1 additional Participant.

<sup>150</sup> The Commission assumes that the finance industry has a rate of 23.87% turnover per year, based on a monthly rate for both employment separations and hires of 1.8% for the finance and insurance industry in September 2016. See <http://www.bls.gov/news.release/pdf/jolts.pdf> (news release from the Bureau of Labor Statistics, dated November 8, 2016). The Commission estimates that the Participants will have to annually conduct background checks of 23.87% of the 1,770 users, or 422.5 users per year.  $(422.5 \text{ users}) / (25 \text{ Participants}) = 16.90 \text{ users}$  that will need to be subject to background checks on an annual basis. Based on this estimate, the Commission estimates that each Participant would incur a burden of 4.23 ongoing annual burden hours =  $(\text{Compliance Manager at 15 minutes}) \times (16.90 \text{ users})$ .

<sup>151</sup>  $106 \text{ annual ongoing burden hours} = (4.23 \text{ ongoing annual burden hours per Participant}) \times (25 \text{ Participants}) \text{ rounded up.}$

## B. Burden on Broker-Dealer Members

### a. Data Collection and Reporting

Rule 613(c)(1) requires the CAT NMS Plan to provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a broker-dealer member of a Participant, and further documenting the life of the order through the process of routing, modification, cancellation and execution (in whole or in part) of the order. Rule 613(c) requires the CAT NMS Plan to impose requirements on broker-dealer members to record and report CAT information to the Central Repository in accordance with specified timelines.

The Commission's estimates delineate broker-dealer firms by whether they insource or outsource, or are likely to insource or outsource, CAT Data reporting obligations. The Commission believes that firms that reported high numbers of OATS Reportable Order Events ("ROEs")<sup>152</sup> strategically would decide to either self-report their CAT Data or outsource their CAT Data reporting functions, while the firms with the lowest levels of activity would be unlikely to have the infrastructure and specialized employees necessary to insource CAT Data reporting and would almost certainly outsource their CAT Data reporting functions. The Commission recognizes that some active firms that will likely be CAT Reporters and insource regulatory data reporting functions may not have current OATS reporting obligations because they either are not FINRA members, or because they do not trade in NMS equity securities.<sup>153</sup>

The Commission estimates that there were, prior to FINRA's OATS retirement, 126 OATS-reporting Insourcers and 45 non-OATS reporting Insourcers.<sup>154</sup> The

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<sup>152</sup> The Commission uses for its estimates the number of OATS ROEs reported by firms that reported to OATS. The Commission believes that because OATS reportable events, such as order originations, routes, and executions are now CAT Reportable Events, these two measures are likely to be highly correlated, making the number of OATS records a proxy for the anticipated level of CAT reporting. The Commission believes that the higher the number of OATS ROEs reported, the higher the anticipated number of CAT records to report. As noted below, however, the Commission anticipates that the number of CAT records would exceed the number of OATS ROEs.

<sup>153</sup> The Commission also recognizes as discussed above that some broker-dealer firms may strategically choose to outsource despite the Plan's working assumption that these broker-dealers would insource their regulatory data reporting functions.

<sup>154</sup> These were 126 OATS reporters that reported more than 350,000 OATS ROEs per month; 31 Options Market Making firms; and 14 electronic liquidity providers ("ELPs").

Commission's estimation categorizes the remaining 1,179 broker-dealers that the Plan anticipates would have CAT Data reporting obligations as Outsourcers.<sup>155</sup>

The Commission notes that the CAT NMS Plan currently implements reporting deadlines that have already passed, and that, as of September 2021, all reporting to OATS had switched reporting to the CAT. The Commission believes that it is appropriate to eliminate consideration of the initial one-time burdens of development required from broker-dealers. These estimates will, unless otherwise noted, therefore reflect only the anticipated ongoing costs to comply.

(1) Insourcers

A. Large Non-OATS-Reporting Broker-Dealers

The Commission relies on the Plan's large broker-dealer FTE estimates in estimating burden hours for large broker-dealers that can practicably decide between insourcing or outsourcing their regulatory data reporting functions.<sup>156</sup> The Commission estimates that there are 14 large broker-dealers that are not OATS reporters currently in the business of electronic liquidity provision ("ELP Firms") that would be classified as Insourcer firms.<sup>157</sup>

Additionally, the Commission estimates that there are 31 Options Market Maker broker-dealers ("OMM Firms") that may transact in options but not in equities that can be classified as Insourcer firms.<sup>158</sup> These firms may have customer orders and other activity off-exchange that would cause them to incur a CAT reporting obligation. The Commission assumes the 31 OMM Firms and 14 ELP Firms would be typical of the Plan's large non-OATS-reporting firms; for these firms, the Commission relies on the

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<sup>155</sup> These broker-dealers are assumed to already outsource data reporting services.

<sup>156</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section A.6(c).

<sup>157</sup> These broker-dealers are not FINRA members and thus have no regular OATS reporting obligations. The category of Insourcers that do not currently report OATS data includes firms that have multiple SRO memberships that exclude FINRA. This category includes Options Market Makers and at least 14 ELPs; these are firms that carry no customer accounts and directly route proprietary orders to Alternative Trading Systems.

<sup>158</sup> The Commission previously identified 39 CBOE-member broker-dealers that are not FINRA members, but are members of multiple SROs; eight of these broker-dealers were previously identified as ELPs, leaving 31 firms with multiple SRO memberships that are unlikely to be CBOE floor brokers. These 31 firms are likely to include some ELPs. This methodology implicitly assumes that there are no Options Market Makers that are not members of the CBOE.

burden hour estimates provided under Approach 1<sup>159</sup> for large non-OATS-reporting firms in the CAT NMS Plan.

Because the CAT reporting obligations have been in place for some time now, the Commission assumes that the initial one-time hour burdens associated with implementation of the system have already been incurred.

The Commission believes that the Rule would impose ongoing annual burdens associated with, among other things, personnel time to monitor each large non-OATS reporting broker-dealer's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average ongoing internal FTE count figure that a large non-OATS reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: 7.41 internal FTEs.<sup>160</sup> Based on this information, the Commission believes that it would take a large non-OATS reporting broker-dealer approximately 13,338 burden hours per year<sup>161</sup> to continue to comply with the Rule, for an estimated aggregate ongoing burden of 600,210 hours.<sup>162</sup>

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<sup>159</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(i)(A)(2). Approach 1 assumes CAT Reporters would submit CAT Data using their choice of industry protocols. Approach 2 assumes CAT Reporters would submit data using a pre-specified format. Approach 1's aggregate costs are higher than those for Approach 2 for all market participants except in one case where service bureaus have lower Approach 1 costs. For purposes of this Paperwork Reduction Act analysis, the Commission is not relying on the estimates for Approach 2 because overall the Approach 1 aggregate estimates represent the higher of the proposed approaches. The Commission believes it would be more comprehensive to use the higher of the two estimates for its Paperwork Reduction Act analysis estimates.

<sup>160</sup> Approach 1 also provided \$3,000,000 in internal FTE costs related to maintenance. The Commission believes the \$3,000,000 in ongoing internal FTE costs is the Participants' estimated cost of the 7.41 FTEs. (7.41 FTEs) x (\$401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = \$2,974,670. See CAT NMS Plan, supra note 4, at n.192. See also supra note 119.

<sup>161</sup> 13,338 ongoing burden hours = (7.41 ongoing FTEs to maintain CAT data reporting systems) x (1,800 working hours per year).

<sup>162</sup> The Commission estimates that 45 large non-OATS reporting broker-dealers would be impacted by this information collection. (45 large non-OATS reporting broker-dealers) x (13,338 burden hours) = 600,210 aggregate ongoing burden hours.

## B. Large OATS-Reporting Broker-Dealers

The Commission estimates that 126 broker-dealers, which reported more than 350,000 OATS ROEs between June 15 and July 10, 2015, would strategically decide to either self-report CAT Data or outsource their CAT data reporting functions.<sup>163</sup> To conduct its Paperwork Burden Analysis for the 126 broker-dealers, the Commission relied on the estimates used by the CAT NMS Plan of the expected FTE count that a large OATS-reporting broker-dealer would incur as a result of the implementation of the consolidated audit trail under Approach 1.<sup>164</sup> Because OATS has been retired, the Commission assumes the initial one-time implementation fees have already been covered; only the estimated ongoing maintenance costs remain.

The Commission estimates that the Rule would impose on each broker-dealer ongoing annual burdens associated with, among other things, personnel time to monitor each broker-dealer's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems which might result in additional reports to the Central Repository.

The CAT NMS Plan provides the following average ongoing internal FTE count figures that a large OATS-reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: 10.03 internal FTEs.<sup>165</sup> Based on this information the Commission believes that it would take a large OATS-reporting broker-dealer approximately 18,054 ongoing burden hours per year<sup>166</sup> to continue

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<sup>163</sup> The Commission believes this decision is strategic and discretionary because FINRA data reveals that while many broker-dealers at these activity levels self-report most or all of their regulatory data, other broker-dealers outsource most or all of their regulatory reporting at these activity levels. At lower activity levels, most, but not all, broker-dealers outsource most if not all of their regulatory data reporting. The Commission is cognizant that some broker-dealers reporting fewer than 350,000 OATS ROEs per month can and do opt to self-report their regulatory data. However, based on conversations with broker-dealers, the Commission believes that most broker-dealers at these activity levels do not have the infrastructure and specialized staff that would be required to report directly to the Central Repository, and electing to self-report would be cost-prohibitive in most but not all cases.

<sup>164</sup> See supra note 162.

<sup>165</sup> Approach 1 also provided \$4,000,000 in internal FTE costs related to maintenance. The Commission believes the \$4,000,000 in ongoing internal FTE costs is the Participants' estimated cost of the 10.03 FTEs. (10.03 FTEs) x (\$401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = \$4,026,443. See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(ii)(C), at n. 192. See also supra note 119.

<sup>166</sup> 18,054 ongoing burden hours = (10.03 ongoing FTEs for maintenance of CAT data reporting systems) x (1,800 working hours per year).

compliance with the Rule. Therefore, the Commission estimates that the average ongoing annual burden per large OATS-reporting broker-dealer would be approximately 18,054 burden hours, for an estimated aggregate burden of 2,274,804 hours.<sup>167</sup>

(2) Outsourcing Firms

A. Small OATS-Reporting Broker-Dealers

The Commission estimates that there were 806 broker-dealers that report fewer than 350,000 OATS ROEs monthly. The Commission believes that these broker-dealers generally outsourced their regulatory reporting obligations because during the period June 15 – July 10, 2015, approximately 88.9% of their 350,000 OATS ROEs were reported through service bureaus, with 730 of these broker-dealers reporting more than 99% of their OATS ROEs through one or more service bureaus.<sup>168</sup>

Because OATS was retired in September 2021, the Commission assumes that the initial one-time implementation requirements have been fulfilled. The Commission therefore estimates no additional burden hours in relation to the implementation.

Small OATS-reporting broker-dealers that outsource their regulatory data reporting will likely face internal staffing burdens and external costs associated with ongoing activity, such as maintaining any systems that transmit data to their service providers. The Commission estimates these firms would need 0.75 FTEs on an ongoing basis to maintain CAT reporting.

Based on this information, the Commission believes that it would take a small OATS-reporting broker-dealer approximately 1,350 ongoing burden hours per year<sup>169</sup> to continue compliance with the Rule. The Commission believes the burden hours would be associated with work performed by internal technology, compliance and legal staff in connection with the ongoing operation of CAT Data reporting. Therefore, the Commission estimates that the average ongoing annual burden per small OATS-reporting

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<sup>167</sup> The Commission estimates that 126 large OATS-reporting broker-dealers would be impacted by this information collection. (126 large OATS-reporting broker-dealers) x (18,054 burden hours) = 2,274,804 aggregate ongoing burden hours.

<sup>168</sup> Because of the extensive use of service bureaus in these categories of broker-dealers, the Commission assumes that these broker-dealers are likely to use service bureaus to accomplish their CAT data reporting. See *supra* note 166.

<sup>169</sup> 1,350 ongoing burden hours = (0.75 FTE for maintenance of CAT Data reporting systems) x (1,800 working hours per year).



broker-dealer would be approximately 1,350 hours, for an estimated aggregate ongoing burden of 1,088,100 hours.<sup>170</sup>

#### B. Small Non-OATS-Reporting Broker-Dealers

In addition to firms that currently report to OATS, the Commission estimates there are 373 broker-dealers that were previously exempt from OATS reporting rules due to firm size, or excluded because all of their order flow is routed to a single OATS reporter, such as a clearing firm, that would incur CAT reporting obligations.<sup>171</sup> A further 24 broker-dealers have Participant memberships only with one Participant;<sup>172</sup> the Commission believes this group is comprised mostly of floor brokers and further believes these firms would experience CAT implementation and ongoing reporting costs similar in magnitude to small equity broker-dealers that currently have no OATS reporting responsibilities.

The Commission assumes these broker-dealers would have very low levels of CAT reporting, similar to those of the lowest activity firms that currently report to OATS. Because these firms have more limited data reporting requirements than other firms, the Commission assumes these firms currently have only 0.1 full-time employees currently dedicated to regulatory data reporting activities. The Commission assumes these firms required 2 full-time employees for one year to implement CAT. The Commission assumes that, since broker-dealers have had more than one year to complete these implementation requirements since they were required to report to CAT, they have now been completed.

Because the CAT reporting deadlines have passed, the Commission assumes that those one-time initial costs have already been incurred.

Small non-OATS-reporting broker-dealers that outsource their regulatory data reporting would likely face internal staffing burdens associated with ongoing activity,

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<sup>170</sup> The Commission estimates that 806 small OATS-reporting broker-dealers would be impacted by this information collection. (806 small OATS-reporting broker-dealers x 1,350 burden hours) = 1,088,100 aggregate ongoing burden hours to ensure ongoing compliance with Rule 613.

<sup>171</sup> The Commission notes that Rule 613 does not exclude from data reporting obligations Participant members that quote or execute transactions in NMS Securities and Listed Options that route to a single market participant. See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(ii)(B)(2).

<sup>172</sup> This group comprises 24 broker-dealers that have SRO memberships only with CBOE; the Commission believes this group is comprised primarily of CBOE floor brokers and, further, believes these firms would incur CAT implementation and ongoing reporting costs similar in magnitude to small equity broker-dealers that currently have no OATS reporting responsibilities because they would face similar tasks to implement and maintain CAT reporting.

such as maintaining any systems that transmit data to their service providers. Based on conversations with market participants, the Commission estimates these firms would need 0.75 full-time employees annually to maintain CAT reporting.

Based on this information the Commission believes that it would take a small non-OATS-reporting broker-dealer 1,350 ongoing burden hours per year<sup>173</sup> to continue compliance with the Rule. Therefore, the Commission estimates that the average ongoing annual burden per small non-OATS-reporting broker-dealer would be approximately 1,350 hours, for an estimated aggregate ongoing burden of 535,950 hours.<sup>174</sup> The estimated aggregate ongoing burden has fallen because of the reduced number of estimated small non-OATS reporting broker-dealers (397 from 523).

### C. Completed Information Collections Requirements

As discussed above,<sup>175</sup> the Commission believes that three information collections requirements have been satisfied, specifically (1) a document outlining how the Participants could incorporate into the consolidated audit trail information regarding certain products that are not NMS securities;<sup>176</sup> (2) a one-time assessment of the clock synchronization standards in the Plan before reporting begins for Industry Members, which assessment shall take into account the diversity of CAT Reporters and systems;<sup>177</sup> and (3) a one-time report that discusses the Participants' assessment of implementing coordinated surveillance.<sup>178</sup> These one-time information collections have been completed by the Participants, so the Commission believes that the annual burden for each of the information collections is 0 hours.

|                           |
|---------------------------|
| Summary of Hourly Burdens |
|---------------------------|

<sup>173</sup> 1,350 ongoing burden hours = (0.75 FTEs for maintenance of CAT data reporting systems) x (1,800 working hours per year).

<sup>174</sup> The Commission estimates that 397 small non-OATS-reporting broker-dealers would be impacted by this information collection. (523 small non-OATS-reporting broker-dealers x 1,350 burden hours) = 535,950 aggregate ongoing burden hours to ensure ongoing compliance with Rule 613.

<sup>175</sup> See supra Section I.A.

<sup>176</sup> See 17 CFR 242.613(i). See also “One-Time Written Assessments,” Consolidated Audit Trail, LLC at: <https://www.catnmsplan.com/one-time-written-assessments/index.html>.

<sup>177</sup> See CAT NMS Plan Order, supra note 6, at 84940.

<sup>178</sup> Id. at 84940–84941.

| Name of Information Collection  | Type of Burden         | [A.]<br>Number of<br>Entities<br>Impacted | [B.]<br>Annual<br>Responses<br>per Entity | [C.]<br>Initial<br>Burden<br>per Entity<br>per<br>Response | [D.]<br>Initial Burden<br>Annualized<br>per Entity per<br>Response<br>[ = C ÷ 3 years] | [E.]<br>Ongoing<br>Burden per<br>Entity per<br>Response | [F.]<br>Annual<br>Burden Per<br>Entity per<br>Response<br>[ = D + E] | [G.]<br>Total Annual<br>Burden Per<br>Entity<br>[ = (D + E) * B] | [H.]<br>Total Industry<br>Burden<br>[ = G * A] | Small<br>Business<br>Entities<br>Affected |
|---|------------------------|---|---|--|--|---|--|--|--|---|
| Central Repository  | Recordkeeping          | 25  | 1   | 0  | 0  | 576   | 576  | 576  | 14,400   | 0   |
| Data Collection and Reporting<br>(Participants)   | Third Party Disclosure | 25  | 1   | 0  | 0  | 1,629   | 1,629  | 1,629  | 40,725   | 0   |
| Surveillance  | Recordkeeping          | 25  | 1   | 0  | 0  | 14,891.4  | 14,891.4   | 14,891.4   | 372,285  | 0   |
| Name of Information Collection  | Type of Burden         | [A.]<br>Number of<br>Entities<br>Impacted | [B.]<br>Annual<br>Responses<br>per Entity | [C.]<br>Initial<br>Burden<br>per Entity<br>per<br>Response | [D.]<br>Initial Burden<br>Annualized<br>per Entity per<br>Response<br>[ = C ÷ 3 years] | [E.]<br>Ongoing<br>Burden per<br>Entity per<br>Response | [F.]<br>Annual<br>Burden Per<br>Entity per<br>Response<br>[ = D + E] | [G.]<br>Total Annual<br>Burden Per<br>Entity<br>[ = (D + E) * B] | [H.]<br>Total Industry<br>Burden<br>[ = G * A] | Small<br>Business<br>Entities<br>Affected |
| Written Assessment of Operation of<br>CAT   | Reporting              | 25  | 1   | 0  | 0  | 150   | 150  | 150  | 3,750  | 0   |
| Assessment of Industry Member Bulk<br>Access to Reporter Data   | Reporting              | 25  | 1   | 15   | 5  | 0   | 5  | 5  | 125  | 0   |
| Assessment of Errors in Customer<br>Information Fields  | Reporting              | 25  | 1   | 24   | 8  | 0   | 8  | 8  | 200  | 0   |
| Report on Impact of Tiered Fees on<br>Market Liquidity  | Reporting              | 25  | 1   | 18.75  | 6.25   | 0   | 6.25   | 6.25   | 156  | 0   |
| Assessment of Material Systems<br>Change on Error Rate  | Reporting              | 25  | 4   | 0  | 0  | 5.21  | 5.21   | 20.84  | 521  | 0   |
| Background Checks   | Disclosure             | 25  | 1   | 0  | 0  | 4.23  | 4.23   | 4.23   | 106  | 0   |
| Data Collection and Reporting<br>(Large, Non-OATS Reporting<br>Broker-Dealers) - ELPs                     | Third Party Disclosure | 14  | 1   | 0  | 0  | 13,338  | 13,338   | 13,338   | 186,732  | 0   |
| Data Collection and Reporting<br>(Large, Non-OATS Reporting<br>Broker-Dealers) – Options Market<br>Makers | Third Party Disclosure | 31  | 1   | 0  | 0  | 13,338  | 13,338   | 13,338   | 413,478  | 0   |

|   |                        |   |   |  |  |  |  |   |  |   |
|---|------------------------|---|---|--|--|--|--|---|--|---|
| Data Collection and Reporting (Large OATS Reporting Broker-Dealers)     | Third Party Disclosure | 126   | 1   | 0  | 0  | 18,054   | 18,054   | 18,054  | 2,274,804  | 0   |
| Data Collection and Reporting (Small OATS Reporting Broker-Dealers)     | Third Party Disclosure | 806   | 1   | 0  | 0  | 1,350  | 1,350  | 1,350   | 1,088,100  | Estimated 345 <sup>179</sup>                        |
| <b>Name of Information Collection</b>                                   | <b>Type of Burden</b>  | <b>[A.]<br/>Number of<br/>Entities<br/>Impacted</b> | <b>[B.]<br/>Annual<br/>Responses<br/>per Entity</b> | <b>[C.]<br/>Initial<br/>Burden<br/>per Entity<br/>per<br/>Response</b> | <b>[D.]<br/>Initial Burden<br/>Annualized<br/>per Entity per<br/>Response<br/>[ = C + 3 years]</b> | <b>[E.]<br/>Ongoing<br/>Burden per<br/>Entity per<br/>Response</b> | <b>[F.]<br/>Annual<br/>Burden Per<br/>Entity per<br/>Response<br/>[ = D + E]</b> | <b>[G.]<br/>Total Annual<br/>Burden Per<br/>Entity<br/>[ = (D + E) * B]</b> | <b>[H.]<br/>Total Industry<br/>Burden<br/>[ = G * A]</b> | <b>Small<br/>Business<br/>Entities<br/>Affected</b> |
| Data Collection and Reporting (Small Non-OATS Reporting Broker-Dealers) | Third Party Disclosure | 397   | 1   | 0  | 0  | 1,350  | 1,350  | 1,350   | 535,950  | Estimated 397 <sup>180</sup>                        |
| Review of Clock Synchronization Standards                               | Reporting              | 25  | 0   | 0  | 0  | 0  | 0  | 0   | 0  | 0   |
| Coordinated Surveillance Report   | Reporting              | 25  | 0   | 0  | 0  | 0  | 0  | 0   | 0  | 0   |
| Document on Expansion to Other Securities                               | Reporting              | 25  | 0   | 0  | 0  | 0  | 0  | 0   | 0  | 0   |

179 The Commission believes that the 742 Commission-registered broker-dealers (as of 2022) that are considered “small entities” could be impacted by two categories of information collection: “data collection and reporting (small OATS-reporting broker-dealers)” and “data collection and reporting (non-OATS reporting broker-dealers).” The Commission estimates that the 397 respondents affected by the “data collection and reporting (non-OATS reporting broker-dealers)” would all be considered small entities as these firms are currently exempt from OATS reporting rules due to firm size, or are excluded because all of their order flow is routed to a single OATS reporter, or are floor brokers with an SRO membership with a single Participant. The Commission believes these broker-dealers would have very low levels of CAT reporting and would outsource CAT data collection and reporting to a third party, such as a service bureau. The Commission estimates that the remaining 345 broker-dealers (of the estimated 742 small entity broker-dealers) would be impacted by the information collection “data collection and reporting (small OATS-reporting broker-dealers).” These firms would not have been small enough to be exempt from OATS reporting, and the Commission believes that they would have had low levels of OATS reporting and would likely outsource CAT data collection and reporting to a service bureau.

180 See, supra note 182.

### 13. Costs to Respondents

The Commission estimates that the information collection requirements of Rule 613 will apply to 1,375 respondents who will incur an average aggregate of approximately \$328,662,911 in costs per year to comply with the requirements. The cost burden is calculated as discussed below.

#### A. Costs to National Securities Exchanges and National Securities Associations

##### a. Central Repository

The Commission previously estimated what the Participants would collectively spend on external public relations, legal and consulting costs associated with the building of the Central Repository and the selection of the Plan Processor for the Central Repository. In addition, the Commission previously estimated the Participants collective costs over the 12-month period after the effectiveness of the CAT NMS Plan within which the Participants were required to select an initial Plan Processor and begin reporting to the Central Repository. However, as noted above, the Participants have selected a Plan Processor and begun reporting to the consolidated audit trail. The Commission believes it is appropriate to now only consider the ongoing costs associated with ongoing costs for operating and maintaining the Central Repository.

The Commission believes that there will be ongoing costs for operating and maintaining the Central Repository, including the cost of systems and connectivity upgrades or changes necessary to receive, consolidate, and store the reported order and execution information from Participants and their members; the costs to store data, and make it available to regulators, in a uniform electronic format, and in a form in which all events pertaining to the same originating order are linked together in a manner that ensures timely and accurate retrieval of the information; the cost, including storage costs, of collecting and maintaining the NBBO and transaction data in a format compatible with the order and event information collected pursuant to the Rule; the cost of monitoring the required validation parameters, which would allow the Central Repository to automatically check the accuracy and completeness of the data submitted and reject data not conforming to these parameters consistent with the requirements of the Rule; and the cost of compensating the CCO. The CAT NMS Plan provides that the Plan Processor would be responsible for the ongoing operations of the Central Repository.<sup>181</sup> In addition, the CAT NMS Plan states that the Participants would incur costs for public relations, legal, and consulting costs associated with maintaining the CAT upon approval of the CAT NMS Plan.<sup>182</sup> The Commission estimates that the Participants will collectively spend \$800,000 annually on external public relations, legal and consulting

<sup>181</sup> See CAT NMS Plan, supra note 4, at Section 6.1.

<sup>182</sup> See id. at Appendix C, Section B.7(b)(iii).

costs associated with the continued management of the Central Repository, or \$32,000 per Participant.<sup>183</sup>

While the CAT NMS Plan includes estimates from six bidders for the annual ongoing costs to the Participants to operate the Central Repository,<sup>184</sup> the Participants provided updated cost estimates to reflect the estimates of three final shortlisted bidders which were attempting to be the Plan Processor.<sup>185</sup> Using the revised estimates, the Commission estimates that the annual ongoing cost to the Participants to compensate the Plan Processor for building, operating and maintaining the Central Repository would be an aggregate ongoing external cost of approximately \$55 million,<sup>186</sup> or \$2,200,000 per Participant.<sup>187</sup> Therefore, the Commission estimates that each Participant would incur

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<sup>183</sup> The Commission is basing this external cost estimate on the public relations, legal and consulting external cost estimate provided in the CAT NMS Plan associated with the preparation of the CAT NMS Plan (which the Participants consider “reasonably associated with creating, implementing, and maintaining the CAT upon the Commission’s adoption of the CAT NMS Plan”). See id. (stating “the Participants have incurred public relations, legal and consulting costs in preparation of the CAT NMS Plan. The Participants estimate the costs of these services to be \$8,800,000”).  $\$2,400,000$  for all Participants over 12 months =  $(\$8,800,000/44 \text{ months between the adoption of Rule 613 and the filing of the CAT NMS Plan}) \times (12 \text{ months})$ . Because the Central Repository will have already been created, the Commission believes it is reasonable to assume that the Participants will have a lesser need for public relations, legal and consulting services. The Commission is estimating that the Participants will incur one-third of the external cost associated with development and implementation of the Central Repository to maintain the Central Repository.  $\$800,000 = (0.333) \times (\$2,400,000)$ .  $(\$800,000 / 25 \text{ Participants}) = \$32,000$  per Participant over 12 months.

<sup>184</sup> See id. at Appendix C, Section B.7(b)(i)(B).

<sup>185</sup> See Letter to Brent J. Fields, Secretary, Commission, from Participants, dated October 7, 2016, at 14–15.

<sup>186</sup> Id.

<sup>187</sup> The Participants provided a range of Bidder estimates. See id. For purposes of this Paperwork Burden Act analysis, the Commission is using the maximum operation and maintenance cost estimate.  $\$2,200,000 = \$55,000,000 / 25$  Participants. The Commission previously noted several uncertainties that may affect the Central Repository cost estimates, including (1) that the Participants had not yet selected a Plan Processor and the shortlisted bidders have submitted a wide range of cost estimates for building and operating the Central Repository; (2) the bids submitted by the shortlisted bidders may not be final because they may be revised before the final selection of the CAT Processor; and (3) neither the bidders nor the Commission can anticipate the evolution of technology and market activity with precision, as improvements in available technology may

ongoing annual external costs of approximately \$2,232,000<sup>188</sup> to maintain the Central Repository, or aggregate ongoing annual external costs across all Participants of \$55,800,000.<sup>189</sup>

b. Data Collection and Reporting

The CAT NMS Plan provides estimated costs for hardware and software, FTE costs, and third-party providers to be incurred by the Participants to report CAT Data.<sup>190</sup> For these estimates, the Commission is relying on the cost data provided by the Participants because it believes that the Plan's estimates for Participants to report CAT Data are reliable since all of the Participants provided cost estimates, and most Participants have experience collecting audit trail data, as well as knowledge of both the requirements of Rule 613 as well as their current business practices. As noted above, the Participants have begun reporting CAT Data and thus the Commission believes it is appropriate to only consider ongoing costs related to data collection and reporting.

Because the Participants have established the appropriate systems and processes required for collection and transmission of the required information to the Central Repository, the Commission estimates that Rule 613 would impose on each Participant ongoing annual burdens associated with, among other things, personnel time to monitor each Participant's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average aggregate costs that the Participants would expect to incur to maintain data

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allow the Central Repository to be built and operated at a lower cost than is currently anticipated, but if levels of anticipated market activity are materially underestimated, the capacity of the Central Repository may need to be increased, resulting in an increase in costs.

<sup>188</sup> \$2,232,000 for each Participant to maintain the Central Repository = (\$2,200,000 per Participant in ongoing annual costs to maintain the Central Repository) + (\$32,000 per Participant in ongoing annual public relations, legal and consulting costs associated with the maintenance of the Central Repository).

<sup>189</sup> \$55,800,000 for all of the Participants to maintain the Central Repository = (\$2,232,000 per Participant to compensate the Plan Processor and for external public relations, legal and consulting costs associated with the maintenance of the Central Repository) x (25 Participants).

<sup>190</sup> Third-party provider costs are generally legal and consulting costs, but may include other outsourcing. The template used by respondents is available at <http://catnmsplan.com/PastEvents/> under the Section titled "6/23/14" at the "Cost Study Working Template" link.

reporting systems to be in compliance with Rule 613: \$720,000 in annual third-party legal, consulting, and other costs<sup>191</sup> and \$14,700,000 total annual costs.<sup>192</sup>

Based on estimates provided in the CAT NMS Plan, the Commission estimates that it would cost, on average, approximately \$37,894.74 per Participant in ongoing third-party legal and consulting and other costs<sup>193</sup> and \$ 476,579.58 per Participant in total ongoing external costs.<sup>194</sup> Therefore, the Commission estimates that the annual aggregate ongoing external cost for all Participants would be approximately \$ 11,914,490<sup>195</sup>

The Commission estimates that the Participants would incur an aggregate, annual external cost of approximately \$11,914,490 to adopt and maintain systems changes needed to comply with the data reporting requirements of the consolidated audit trail [(\$ 476,579.58 in annual, ongoing external costs) x (25 Participants) = \$11,914,489.50 rounded up to \$11,914.490]. This estimate has increased from the 2020 PRA, because of the increased number of Participants and the rising costs of inflation

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<sup>191</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(B)(2). The CAT NMS Plan did not identify the other costs.

<sup>192</sup> Of the \$14,700,000 in aggregate total annual costs, \$8,020,000 is identified (subtotal of FTE costs and outsourcing), but the remaining \$6,680,000 is not identified in the CAT NMS Plan. The Commission believes that this amount may be attributed to hardware costs because the Participants have not provided any hardware costs associated with data reporting elsewhere and the Commission believes that the Participants will likely incur costs to upgrade their hardware to report data to the Central Repository.

<sup>193</sup> (\$720,000 in annual third party costs) / (19 Participants) = \$37,894.73 per Participant in anticipated annual third party costs.

<sup>194</sup> To determine the total external annual cost per Participant, the Commission subtracted the anticipated annual FTE internal compliance cost estimates for the Participants as provided in the Plan (see notes 117 through 119 and accompanying text) from the total aggregate annual costs and divided the remainder by 19 Participants, which is the number of Participants included in the initial cost estimates provided by Participants. (\$14,700,000 total aggregate annual cost to Participants) – (\$7,300,000 annual FTE —not updating because it’s an aggregate from participants cost to Participants) = \$7,400,000 (which includes the \$720,000 in total anticipated annual third party costs). (\$7,400,000) / 19 Participants = \$389,473.68 in annual external costs per Participant. 389,473.68/424,350=.917 FTE. .917 FTE x 519.256 =476,579.58 per Participant. See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(B)(1) for the Participants’ anticipated maintenance costs associated with regulatory reporting to the Central Repository.

<sup>195</sup> \$11,914,490 = (\$476,579.58 in total annual external costs) x (25 Participants rounded up).<sup>196</sup> See 17 CFR 242.613(e)(7).



c. Collection and Retention of NBBO, Last Sale Data and Transaction Reports

Rule 613(e)(7) provides that the CAT NMS Plan must require the Central Repository to collect and retain on a current and continuous basis NBBO information for each NMS security, transaction reports reported pursuant to an effective transaction reporting plan, and Last Sale Reports reported pursuant to the OPRA Plan.<sup>196</sup> Additionally, the CAT NMS Plan must require the Central Repository to maintain this data in a format compatible with the order and event information consolidated and stored pursuant to Rule 613(c)(7).<sup>197</sup> Further, the CAT NMS Plan must require the Central Repository to retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of Rule 613 for a period of not less than five years in a convenient and usable uniform electronic format that is directly available and searchable electronically without any manual intervention.<sup>198</sup> The Commission notes that the CAT NMS Plan includes these data as “SIP Data” to be collected by the Central Repository.<sup>199</sup> The Commission believes the burden associated with SIP Data is included in the burden to the Participants associated with the implementation and maintenance of the Central Repository.

d. Surveillance

Rule 613(f) provides that the CAT NMS Plan must require that every national securities exchange and national securities association develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail. Rule 613(a)(3)(iv) provides that the CAT NMS Plan must require that the surveillance systems be implemented within fourteen months after effectiveness of the CAT NMS Plan. Because the CAT NMS Plan has been effective for more than fourteen months, these initial costs should have already been incurred.

The CAT NMS Plan states that the estimated total ongoing annual cost associated with the maintenance of surveillance programs for the Participants is \$87,700,000.<sup>200</sup> This amount includes annual legal, consulting, and other costs of \$1,000,000, as well as \$66,700,000 in annual FTE internal compliance costs for internal operational, technical/development, and compliance staff to be engaged in the maintenance of

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<sup>196</sup> See 17 CFR 242.613(e)(7).

<sup>197</sup> Id.

<sup>198</sup> See 17 CFR 242.613(e)(8).

<sup>199</sup> See CAT NMS Plan, supra note 4, at Section 6.5(a)(ii).

<sup>200</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(B)(2).

surveillance programs.<sup>201</sup> Based on the estimates provided in the CAT NMS Plan,<sup>202</sup> the Commission estimates that each Participant would, on average, incur an annual ongoing external cost of approximately \$52,631.58<sup>203</sup> for outsourced legal, consulting and other costs in order to maintain the new or enhanced surveillance systems, and a total estimated ongoing external cost of \$1,105,263.16,<sup>204</sup> for an estimated aggregate ongoing external cost of \$27,631,579 across the 25 Participants to maintain the surveillance systems.<sup>205</sup>

The Commission estimates that the Participants would, therefore, incur an average aggregate, annual external cost of approximately \$27,631,579 to maintain surveillance systems reasonably designed to make use of the consolidated information contained in the consolidated audit trail [ (\$1,105,263.16 in annual, ongoing external costs) x (25 Participants) = \$27,631,579]. This burden has changed due to the increased number of Participants (25 Participants instead of 24) and the exclusion of initial development costs, which should have been concluded.

e. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) provides that the CAT NMS Plan must require the Participants to provide the Commission a written assessment of the CAT's operation at least every two years, once the CAT NMS Plan is effective.<sup>206</sup> The assessment must address, at a minimum, with respect to the consolidated audit trail: (i) an evaluation of its performance; (ii) a detailed plan for any potential improvements to its performance; (iii) an estimate of the costs associated with any such potential improvements; and (iv) an

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<sup>201</sup> Id. For purposes of the Paperwork Reduction Act analysis, the Commission is treating the FTE cost as an internal burden. See text accompanying notes 131–133, supra. The Commission also notes that based upon the data provided by the Participants, the source of the remaining \$20,000,000 in ongoing costs to maintain the new or enhanced surveillance systems is unspecified. The Commission believes that this amount may be attributed to hardware costs because the Participants have not provided any hardware costs associated with surveillance elsewhere and the Commission believes that the Participants would likely incur costs associated with maintaining the new or enhanced surveillance systems.

<sup>202</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(B)(2).

<sup>203</sup>  $\$52,631.58 = \$1,000,000$  for ongoing legal, consulting and other costs associated with maintenance of surveillance programs / 19 Participants (the number of Participants in Participants Study).

<sup>204</sup>  $(\$87,700,000$  in total ongoing surveillance costs -  $\$66,700,000$  in ongoing FTE costs) =  $\$21,000,000$  in total ongoing external costs (which includes  $\$1,000,000$  in total ongoing external third-party costs).  $\$21,000,000 / 19$  Participants (the number of Participants in Participants Study) =  $\$1,105,263.16$ .

<sup>205</sup>  $\$27,631,579 = \$1,105,263.16 \times 25$  Participants.

<sup>206</sup> 17 CFR 242.613(b)(6).

estimated implementation timeline for any such potential improvements, if applicable.<sup>207</sup> Thus, the Participants must, among other things, undertake an analysis of the consolidated audit trail's technological and computer system performance.

The CAT NMS Plan states that the CCO would oversee the assessment required by Rule 613(b)(6), and would allow the Participants to review and comment on the assessment before it is submitted to the Commission.<sup>208</sup> The CCO would be an employee of the Plan Processor and would be compensated by the Plan Processor.<sup>209</sup> The Commission assumes that the overall cost to the Participants to implement and maintain the Central Repository includes both the compensation for the Plan Processor as well as its employees for the implementation and maintenance of the Central Repository.

In addition, Section 6.6 of the Plan changes the frequency of the assessment contemplated by Rule 613(b)(6) from biannual to annual and provides further detail regarding elements of the written assessment to be conducted by the Participants.<sup>210</sup> Section 6.6 of the Plan as filed also requires the Participants to provide an estimate of the costs associated with any potential improvements to the performance of the CAT, including an assessment of the potential impact on competition, efficiency and capital formation. Section 6.6 of the Plan also requires the annual assessment to consider the benefits of potential improvements to the CAT, including to investor protection.<sup>211</sup>

The Commission estimates that on average, each Participant would outsource 2.5 hours of legal time annually to assist in the review of the assessment, for an ongoing

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<sup>207</sup> Id.

<sup>208</sup> See CAT NMS Plan, supra note 4, at Section 6.6.

<sup>209</sup> Id. at Section 6.2(a).

<sup>210</sup> Specifically, Section 6.6 of the Plan states that the Participants' annual written assessment must also include: (1) an evaluation of the information security program of the CAT to ensure that the program is consistent with the highest industry standards for protection of data; (2) an evaluation of potential technological upgrades based upon a review of technological developments over the preceding year, drawing on necessary technological expertise, whether internal or external; (3) an assessment of efforts to reduce the time to restore and recover CAT Data at a back-up site; (4) an assessment of how the Plan Processor and SROs are monitoring Error Rates and addresses the application of Error Rates based on product, data element or other criteria; (5) a copy of the evaluation required by Section 6.8(c) of the Plan as to whether industry standards have evolved such that: (i) the clock synchronization standard in Section 6.8(a) should be shortened; or (ii) the required timestamp in Section 6.8(b) should be in finer increments; and (6) an assessment of whether any data elements should be added, deleted or changed. See CAT NMS Plan Order, supra note 6, at Section IV.H.

<sup>211</sup> Id.

annual external cost of approximately \$1,225.<sup>212</sup> Therefore, the Commission estimates that the ongoing annual external cost for outsourced legal counsel would be \$1,225 per Participant per year, for an estimated aggregate annual external cost of \$30,625.<sup>213</sup>

The Commission estimates that the Participants would incur an aggregate, annualized external cost of approximately \$30,625 to review the written assessment [(\$1,225 in annual, ongoing external costs) x (25 Participants)]. This has increased due to the increased number of Plan Participants (25 Participants instead of 24 Participants) and to reflect the increased costs per hour for an attorney due to inflation.

e. Independent Audit of Expenses Incurred Prior to Effective Date

Section 6.6(a)(i) of the CAT NMS Plan requires the Participants to provide to the Commission an independent one-time audit of fees, costs and expenses incurred by the Participants on behalf of the Company, prior to the Effective Date, in connection with the creation and implementation of the CAT, at least one month prior to submitting any rule filing to establish initial fees to the Commission. Participants made the audited financial statements for CAT NMS LLC and CAT LLC for the period prior to the Effective Date available on August 5, 2021.<sup>214</sup> Because this collection is now complete, there are no further costs associated with it.

f. Assessment of Industry Member Bulk Access to Reported Data

Section 6.6(a)(iv) of the CAT NMS Plan requires the Participants to provide a written report discussing the feasibility, benefits, and risks of allowing an Industry Member to bulk download the Raw Data it submitted to the Central Repository, within 24 months of effectiveness of the Plan.

The Commission estimates that on average, each Participant would outsource five hours of legal time to assist in the preparation and review of the assessment, for an initial, one-time external cost of approximately \$2,450.<sup>215</sup> Therefore, the Commission estimates that each Participant would incur an initial one-time external cost of \$2,450 for outsourced legal counsel per Participant (or approximately \$816.67 a year per Participant when annualized over three years), for an estimated aggregate initial external cost of

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<sup>212</sup> \$1,225 = (\$490 per hour rate for outside legal services) x (2.5 hours).

<sup>213</sup> \$30,625 = 25 Participants x (\$490 per hour rate for outside legal services) x (2.5 hours).

<sup>214</sup> See <https://www.catnmsplan.com/audited-financial-statements>.

<sup>215</sup> \$2,450 = (\$490 per hour rate for outside legal services) x (5 hours).

\$61,250 for all Participants (or approximately \$20,417 per year for all Participants when annualized over three years).<sup>216</sup>

The Commission estimates that the Participants would incur an aggregate, annualized external cost of approximately \$20,417 to submit the written report [(\$2,450 in initial external costs amortized over three years) x (25 Participants) = \$20,416.67 rounded up to \$20,416.67]. This estimated cost has increased due to the increased number of Participants (25 Participants instead of 24 Participants) and the increased costs of legal counsel due to inflation.

g. Assessment of Errors in Customer Information Fields

Section 6.6(a)(v) of the CAT NMS Plan requires the Participants to submit a written assessment of errors in the customer information submitted to the Central Repository and whether to prioritize the correction of certain data fields over others, within 36 months of effectiveness of the Plan.

The Commission estimates that on average, each Participant would outsource 1.25 hours of legal time to assist in the review of the assessment, for an initial, one-time external cost of approximately \$612.50.<sup>217</sup> Therefore, the Commission estimates that each Participant would incur \$612.50 of initial, one-time external costs for outsourced legal counsel per Participant (approximately \$204.17 a year per Participant when annualized over three years), for an estimated aggregate initial, one-time external cost of approximately \$15,312.50 a year for all Participants (or approximately \$5,104 per year when annualized over three years).<sup>218</sup>

The Commission estimates that the Participants would incur an aggregate, annual external cost of approximately \$5,104 to submit the written assessment of errors in the customer information provide to the Commission [(\$612.50 in initial external costs

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<sup>216</sup>  $\$61,250 = (25 \text{ Participants}) \times (\$490 \text{ per hour rate for outside legal services}) \times (5 \text{ hours})$ .  $\$61,250 \div 3 = \$20,416.67$  rounded up to \$20,417.

<sup>217</sup> The Commission calculated the total estimated external cost based on the revised burden hour estimate for the written assessment of the operation of the CAT. See CAT NMS Plan Order, supra note 6, at 84925. The Commission assumes that the preparation and submission of the error assessment would cost approximately half as much as the revised written assessment. The revised written assessment estimate provides that each Participant would outsource 2.5 hours of legal time to assist in the review of the assessment, for an external cost of approximately \$1,000 pre-inflation. The Commission estimates that each Participant would outsource approximately 1.25 hours of legal time, for an initial, one-time external cost of \$612.50 (1.25 hours x \$490 per hour rate for outside legal services) to assist in drafting the error assessment.

<sup>218</sup>  $\$15,312.50 = (25 \text{ Participants}) \times (\$490 \text{ per hour rate for outside legal services}) \times (1.25 \text{ hours})$ .

amortized over three years) x (25 Participants)]. This estimated cost has increased due to the increased number of Participants (25 Participants instead of 24 Participants) and due to inflation.

h. Report on Impact of Tiered Fees on Market Liquidity

Section 6.6(a)(vi) of the CAT NMS Plan requires the Participants to submit a written report to study the impact of tiered-fees on market liquidity, including an analysis of the impact of the tiered-fee structure on Industry Members provision of liquidity, within 36 months of effectiveness of the Plan.

The Commission estimates that on average, each Participant would outsource 0.5 hours of legal time to assist in drafting the report, for an initial, one-time external cost of approximately \$245.<sup>219</sup> Therefore, the Commission estimates that each Participant would incur \$245 of initial, one-time external costs for outsourced legal counsel per Participant, for an estimated aggregate initial, one-time external cost of \$6,125.<sup>220</sup>

When this one-time cost is annualized over three years, the Participants would incur an average aggregate external cost of approximately \$2,042 per year to provide to the Commission the written report to study the impact of tiered-fees on market liquidity (\$245 in initial external costs amortized over three years [or \$81.67] x 25 Participants = \$2,041.75 rounded up to \$2,042). This estimated cost has increased due to the increased number of Participants (25 Participants instead of 24 Participants) and inflation.

i. Financial Statements

Section 9.2 of the CAT NMS Plan requires that the CAT LLC financials be (i) in compliance with GAAP, (ii) be audited by an independent public accounting firm, and (iii) be made publicly available. The Commission estimates that each Participant would

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<sup>219</sup> \$245 = (\$490 per hour rate for outside legal services) x (0.5 hours).

<sup>220</sup> \$6,125 = (25 Participants) x (\$490 per hour rate for outside legal services) x (0.5 hours).

incur an annual external cost of \$2,600<sup>221</sup> associated with this requirement, for an aggregate annual, ongoing external cost of \$65,000 to the Participants.<sup>222</sup>

The Commission estimates that the Participants would incur an aggregate, external cost of approximately \$65,000 to have the CAT LLC financials be (i) in compliance with GAAP, (ii) be audited by an independent public accounting firm, and (iii) be made publicly available [(\$2,600 in annual, ongoing external costs) x (25 Participants)]. The cost per individual Participant has decreased because the number of Participants has increased (from 24 to 25 Participants) while the estimated aggregate external cost has remained the same (\$65,000).

j. Background Checks

Section 6.1(g) of the CAT NMS Plan requires each Participant to conduct background checks of its employees and contractors that will use the CAT System. The Commission estimates that this requirement will impact approximately 1,771 users.<sup>223</sup> The Commission estimates that each Participant would need to have background checks of approximately 71 users.<sup>224</sup> Because the Participants have been using the CAT System

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<sup>221</sup> In the CAT NMS Plan Order, the Commission estimated that the aggregate cost of this requirement for the Participants is \$65,000. To estimate this number, the Commission drew from a Commission adopting release and an industry report. Specifically, the Commission’s Crowdfunding Adopting Release estimated that the audit costs for affected issuers would be \$2,500 to \$30,000. See Securities Act Release No. 9974 (October 30, 2015), 80 FR 71499 (November 16, 2015). The Commission believes this estimate could be reasonable if the Company’s financials are of the same level of complexity as the larger issuers affected by the Crowdfunding rule, which is realistic because the Company is not publicly traded, is organized as a “business league”, and has a limited and predictable revenue stream. As an alternative estimate, the Commission estimated an audit cost of approximately \$65,000 using an industry estimate of \$479 in audit costs per \$1 million in revenue, using the assumption that Company revenue will just offset expected costs of \$139 million. See Audit Analytics report “Audit Fees and Non-Audit Fees: A Twelve -Year Trend,” October 9, 2014, available at <http://www.auditanalytics.com/blog/audit-fees-and-non-audit-fees-a-twelve-year-trend/>.  $\$479 \times \$139 = \$64,665 \sim \$65,000$ . The Commission incorporates the higher estimate from the two methodologies (\$65,000) into its cost estimates. See CAT NMS Plan Order, supra note 6, at 84856, n.2503.  $(\$65,000 \text{ annual, external cost}) / (25 \text{ Participants}) = \$2,600 \text{ per Participant}$ .

<sup>222</sup> Id.

<sup>223</sup> Previously, the Commission estimated that approximately 1,700 users would be impacted, based on conversations with Participants, when there were only 24 Participants in the CAT NMS Plan. The Commission is revising this estimate to account for 1 additional Participant.

<sup>224</sup>  $70.84 \text{ users per Participant} = (1,771 \text{ users}) / (25 \text{ Participants})$ .

for more than one year now, the Commission assumes that the initial costs for fingerprinting have already been covered. The Commission therefore estimates \$0 for the remaining initial external cost.

The Commission estimates that the ongoing external cost to be incurred by each Participant would be approximately \$619.98,<sup>225</sup> for an aggregate annual external cost of approximately \$15,500.<sup>226</sup>

The Commission thus estimates that the Participants would incur an aggregate, average annual external cost of approximately \$15,499.50 to conduct background checks of its employees and contractors that will use the CAT System [(\$0 in initial external costs amortized over three years) + (\$619.98 in annual, ongoing external costs) x (25 Participants) = \$15,499.50]. This estimated cost has increased due to the increased number of estimated users (1,775 instead of 1,700) to account for the increased number of Participants (25 Participants instead of 24 Participants) for the ongoing external cost. The aggregate annual external cost has decreased due to the completion of the initial background checks.

B. Costs to Broker-Dealer Members

a. Data Collection and Reporting

Rule 613(c)(1) requires the CAT NMS Plan to provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a broker-dealer member of a Participant, and further documenting the life of the order through the process of routing, modification, cancellation and execution (in whole or in part) of the order. Rule 613(c) requires the CAT NMS Plan to impose requirements on broker-dealer members to record and report CAT information to the Central Repository in accordance with specified timelines.

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<sup>225</sup> See supra note 153. Based on the Commission's estimate that 16.90 users will need to be subject to background checks annually, the Commission estimates that 45% of the 16.90 users would submit hard copy fingerprints and 55% of the 16.90 users would submit electronic fingerprints to conduct their background checks. 45% of 16.90 = 7.61 users that would submit hard copy fingerprints. 55% of 16.90 = 9.30 users that would submit electronic fingerprints. (7.61 hard copy fingerprinting users) x (\$44.50 per hard copy fingerprint) = \$338.65 for hard copy fingerprinting users per Participant. (9.30 electronic fingerprinting users) x (\$30.25 per electronic fingerprint) = \$281.33 for electronic fingerprint users per Participant. \$338.65 + \$281.33 = \$619.98 per Participant in ongoing external costs for fingerprinting.

<sup>226</sup> (\$619.98 per Participant in annual, ongoing external costs) x (25 Participants) = \$15,499.50 rounded up to \$15,500 to conduct a fingerprint-based background check of the users.



The Commission’s estimates delineate broker-dealer firms by whether they insource or outsource, or are likely to insource or outsource, CAT Data reporting obligations. The Commission believes that firms that previously reported high numbers of OATS ROEs<sup>227</sup> strategically would decide to either self-report their CAT Data or outsource their CAT Data reporting functions, while the firms with the lowest levels of activity would be unlikely to have the infrastructure and specialized employees necessary to insource CAT Data reporting and would almost certainly outsource their CAT Data reporting functions. The Commission recognizes that more active firms that will likely be CAT Reporters and insource regulatory data reporting functions may not have had OATS reporting obligations because they either are not FINRA members, or because they do not trade in NMS equity securities.<sup>228</sup>

As noted above, the Commission estimates that as of the time that OATS was retired, there were 126 OATS-reporting Insourcers and 45 non-OATS reporting Insourcers.<sup>229</sup> The Commission’s estimation categorizes the remaining 1,179 broker-dealers that the Plan anticipates would have CAT Data reporting obligations as Outsourcers.<sup>230</sup>

(1) Insourcers

A. Large Non-OATS Reporting Broker-Dealers

The Commission relies on the Plan’s large broker-dealer cost estimates in estimating costs for large broker-dealers that can practicably decide between insourcing or outsourcing their regulatory data reporting functions.<sup>231</sup> The Commission estimates that there are 14 large broker-dealers that were not OATS reporters currently in the business of electronic liquidity provision (“ELP Firms”) that would be classified as Insourcer firms.<sup>232</sup>

Additionally, the Commission estimates that there are 31 broker-dealers that may transact in options but not in equities that can be classified as Insource firms (“OMM Firms”).<sup>233</sup> These firms may have customer orders and other activity off-exchange that would cause them to incur a CAT reporting obligation.

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<sup>227</sup> See supra note 155.

<sup>228</sup> The Commission also recognizes as discussed above that some broker-dealer firms may strategically choose to outsource despite the Plan’s working assumption that these broker-dealers would insource their regulatory data reporting functions.

<sup>229</sup> See supra note 157.

<sup>230</sup> See supra note 158.

<sup>231</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section A.6(c).

<sup>232</sup> See supra note 160.

<sup>233</sup> See supra note 161.

The Commission assumes the 31 OMM Firms and 14 ELP Firms would be typical of the Plan's large, non-OATS reporting firms; for these firms, the Commission relies on the cost estimates provided under Approach 1<sup>234</sup> for large, non-OATS reporting firms in the CAT NMS Plan.

Because CAT reporting obligations have been in place for some time now, the Commission assumes that the initial one-time implementation costs have already been incurred.

The Commission believes that the Rule would impose ongoing annual burdens associated with, among other things, personnel time to monitor each large non-OATS reporting broker-dealer's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average ongoing external costs that a large non-OATS reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: \$80,000 in external hardware and software costs, and \$1,300 in external third party/outsourcing costs.<sup>235</sup> Based on this information, the Commission estimates that it would cost, on average, approximately \$80,000 per year per large non-OATS reporting broker-dealer to maintain systems connectivity to the Central Repository and purchase any necessary hardware, software, and other materials, and an additional \$1,300 in third party/outsourcing costs.<sup>236</sup>

Additionally, the Commission estimates that the ongoing cost to an ELP Firm and an OMM Firm to maintain the modified allocation timestamp requirement would be \$29,166.67 per year.<sup>237</sup>

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<sup>234</sup> See supra note 162.

<sup>235</sup> See CAT NMS Plan, supra note 4, at Appendix C, Section B.7(b)(iii)(C)(2)(b). The CAT NMS Plan did not break down these third-party costs into categories.

<sup>236</sup> Id.

<sup>237</sup> See Letter to Brent J. Fields, Secretary, Commission, from Mary Lou Von Kaenel, Managing Director, Financial Information Forum, dated July 18, 2016, at 88, Table 6 ("FIF Letter"). The commenter based its implementation and ongoing estimates on a survey it conducted of broker-dealers to estimate the costs associated with the allocation report timestamp requirement. The commenter noted that the estimates do not account for all Insourcers (the cost estimates cover the 126 large OATS-reporting broker-dealer Insourcers, but not the 14 ELPs or 31 Options Market Makers), nor do they cover Outsourcing broker-dealers. The Commission believes those categories may not have been included in the estimates due to a lack of participation by such broker-dealers in the survey. The Commission is assuming, for its Paperwork Reduction Act cost estimates, that the portion of the estimates attributed by the commenter to service bureaus will be

The Commission estimates that the total average ongoing external cost per ELP Firm would be \$110,466.67<sup>238</sup> per year to maintain the systems necessary to collect and transmit information to the Central Repository, for an estimated aggregate ongoing external cost for the ELP Firms of approximately \$1,546,533. per year.<sup>239</sup>

The Commission also believes there is an ongoing external cost for the requirement that an OMM Firm submit a Quote Sent Time to an exchange. The Commission estimates that this requirement will impose an additional ongoing hardware and software cost per OMM Firm of \$383,225.81 per year.<sup>240</sup>

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passed-through to their Outsourcing broker-dealer clients that rely on service bureaus to perform their regulatory data reporting. The Commission is thus applying the portion of the commenter's cost estimates attributed to the 126 Insourcers to all 171 Insourcers, as well as the portion of the cost estimates attributed to the 13 service bureaus across the 1,329 broker-dealers that are categorized as Outsourcing broker-dealers. The commenter stated that this requirement would cost the industry \$5,035,833 in ongoing costs. The commenter attributed \$4,987,500 of the ongoing cost estimate to 126 Insourcers. For purposes of this Paperwork Reduction Act analysis, the Commission is applying the portion of the cost estimates attributed to the 126 Insourcers to all 171 Insourcers.  $\$4,987,500/171$  Insourcers = \$29,166.67 in ongoing costs to maintain the modified allocation timestamp requirement per Insourcer. The Commission believes that this cost would be an external hardware and software cost related to maintenance of the modified allocation timestamp.

<sup>238</sup> (\$80,000 in external hardware and software costs) + (\$29,166.67 to maintain the modified allocation timestamp requirement) + (\$1,300 ongoing external third party/outsourcing costs) = \$110,466.67 in ongoing external costs per ELP.

<sup>239</sup> (\$110,466.67 in ongoing external costs per ELP) x (14 ELPs) = \$1,546,533.38 rounded down to \$1,556,533 in aggregate ongoing external costs.

<sup>240</sup> The Commission estimates that the ongoing cost of the Quote Sent Time requirement is approximately \$11,880,000. The Commission notes that the Quote Sent Time cost estimate was not included in the cost estimates of the CAT NMS Plan Notice, because the Commission concluded that this requirement did not represent a significant source of costs. However, the Commission received a comment stating that the estimated 5-year cost to Options Market Makers for adding a timestamp to the quote times was between the range of \$39.9 million and \$76.8 million, and the commenter further stated that this is "not a trivial cost for providing one data element to the consolidated audit trail." See FIF Letter at 65. In response to the comment, the Commission agrees that the costs of quote sent time are significant and adds this cost to its estimates for Options Market data collection and reporting. See also CAT NMS Plan Order, *supra* note 6, at Section V.F.3.a(6). The Commission is using the maximum 5-year cost estimate to Options Market Makers provided by the commenter (\$76.8 million) and has

Based on this information, the Commission estimates that the total ongoing external cost per OMM Firm would be \$493,692.48 per year.<sup>241</sup> to maintain the systems necessary to collect and transmit information to the Central Repository, for an estimated aggregate ongoing external cost to OMM Firms of approximately \$15,304,467 per year.<sup>242</sup>

#### B. Large OATS-Reporting Broker-Dealers

The Commission estimates that 126 broker-dealers, which reported more than 350,000 OATS ROEs between June 15 and July 10, 2015, would strategically decide to either self-report CAT Data or outsource their CAT data reporting functions.<sup>243</sup> To conduct its Paperwork Burden Analysis for the 126 broker-dealers, the Commission relied on the estimates used by the CAT NMS Plan of expected costs that a large OATS-reporting broker-dealer would incur as a result of the implementation of the consolidated audit trail under Approach 1.<sup>244</sup> Because the OATS system was retired and CAT reporting obligations are in place, the Commission assumes that the initial one-time implementation costs have already been incurred.

Once a large former OATS-reporting broker-dealer has established the appropriate systems and processes required for collection and transmission of the required information to the Central Repository, such broker-dealers would be subject to ongoing external costs associated with, among other things, personnel time to monitor each broker-dealer's reporting of the required data and the maintenance of the systems to

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divided it into \$17,400,000 in aggregate implementation external costs, and \$11,880,000 in aggregate ongoing external costs. (\$11,880,000 in ongoing costs) / (31 Options Market Maker) = \$383,225.81 in ongoing external costs to maintain the Quote Sent Time requirement per Options Market Maker. This figure has changed slightly since the prior submission due to the correction of a minor computational error.

<sup>241</sup> (\$80,000 in external hardware and software costs) + (\$1,300 in external third party/outsourcing costs) + (\$29,166.67 in ongoing costs to maintain the modified allocation timestamp requirement) + (\$383,225.81 in ongoing external costs to maintain the Quote Sent Time requirement) = \$493,692.48 in ongoing external costs per Options Market Maker.

<sup>242</sup> (\$493,692.48 in ongoing external costs per Options Market Maker) x (31 options firms) = \$15,304,466.88 rounded up to \$15,304,467 in aggregate ongoing external costs.

<sup>243</sup> See supra note 166.

<sup>244</sup> See supra note 162.

report the required data; and implementing changes to trading systems which might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average ongoing external cost figures that a large OATS-reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: \$380,000 in ongoing external hardware and software costs, and \$120,000 in ongoing external third party/outsourcing costs.<sup>245</sup> Based on this information the Commission believes that it would cost, on average, approximately \$380,000 per year per large OATS-reporting broker-dealer to maintain systems connectivity to the Central Repository and purchase any necessary hardware, software, and other materials, and an additional \$120,000 in external ongoing third party/outsourcing costs.<sup>246</sup> Therefore, the Commission estimates that the average ongoing annual external cost per large OATS-reporting broker-dealer would be approximately \$500,000<sup>247</sup> to maintain the systems necessary to collect and transmit information to the Central Repository.

Additionally, the Commission estimates that the ongoing cost to a large OATS-reporting broker-dealer to maintain the modified allocation timestamp requirement would be \$29,166.67.<sup>248</sup>

Based on this information, the Commission believes that the average ongoing annual external cost per large OATS-reporting broker-dealer would be approximately \$529,166.67<sup>249</sup> to maintain the systems necessary to collect and transmit information to the Central Repository, for an estimated aggregate ongoing external cost of approximately \$66,675,000.<sup>250</sup>

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<sup>245</sup> See CAT NMS Plan, *supra* note 4, at Appendix C, Section B.7(b)(iii)(C)(2)(b). The CAT NMS Plan did not categorize these third party costs. The Commission believes that these costs may be attributed to the use of service bureaus, technology consulting, and legal services.

<sup>246</sup> See *id.*

<sup>247</sup> (\$380,000 in ongoing external hardware and software costs + \$120,000 in ongoing external third party/outsourcing costs) = \$500,000 in ongoing external costs per large OATS-reporting broker-dealer.

<sup>248</sup> See *supra* note 240.  $\$4,987,500 / 171 \text{ Insourcers} = \$29,166.67$  in ongoing costs to maintain the modified allocation timestamp requirement per Insourcer.

<sup>249</sup> (\$380,000 in ongoing external hardware and software costs) + (\$29,166.67 to maintain the modified allocation timestamp requirement) + (\$120,000 in ongoing external third party/outsourcing costs) = \$529,166.67 in ongoing external costs per large OATS-reporting broker-dealer.

<sup>250</sup> (\$380,000 in ongoing external hardware and software costs) + (\$29,166.67 to maintain the modified allocation timestamp requirement) + (\$120,000 in ongoing external third party/outsourcing costs) x (126 large OATS-reporting broker-dealers) = \$66,675,000.42 rounded down to \$66,675,000 in aggregate ongoing external costs.

(2) Outsourcing Firms

A. Small OATS-Reporting Broker-Dealers

The Commission estimates that there are 806 broker-dealers that reported fewer than 350,000 OATS ROEs monthly prior to OATS retirement. The Commission believes that these broker-dealers generally outsourced their regulatory reporting obligations because during the period June 15 – July 10, 2015, approximately 88.9% of their 350,000 OATS ROEs were reported through service bureaus, with 730 of these broker-dealers reporting more than 99% of their OATS ROEs through one or more service bureaus.<sup>251</sup> The Commission estimates that these firms spent, prior to OATS retirement an aggregate of \$100.2 million on annual outsourcing costs.<sup>252</sup> The Commission estimates these 806 broker-dealers spend \$100.2 million in the aggregate to outsource their regulatory data reporting to service bureaus to report in accordance with Rule 613,<sup>253</sup> or \$124,317.62 per broker-dealer.<sup>254</sup> Because OATS was retired in September 2021, the Commission assumes that all initial one-time external costs have already been incurred.

The Commission estimates that it would cost small OATS-reporting broker-dealers, on average, approximately \$124,317.62 in ongoing external outsourcing costs<sup>255</sup> to ensure ongoing compliance with Rule 613. Additionally, the Commission estimates that the ongoing cost to a small OATS-reporting broker-dealer to maintain the modified allocation timestamp requirement would be \$81.51.<sup>256</sup>

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<sup>251</sup> See supra note 166.

<sup>252</sup> The average broker-dealer in this category reported 15,185 OATS ROEs from June 15-July 10, 2015; the median reported 1,251 OATS ROEs. Of these broker-dealers, 39 reported more than 100,000 OATS ROEs during the sample period.

<sup>253</sup> See CAT NMS Plan Order, supra note 6, at Section V.F.1.c.(2)(B).

<sup>254</sup> \$124,317.62 = \$100,200,000/806 broker-dealers. This amount is the average estimated annual outsourcing cost to firms that currently report fewer than 350,000 OATS ROEs per month. Id.

<sup>255</sup> See supra note 257.

<sup>256</sup> See supra note 240. The commenter attributed \$108,333 of the ongoing cost estimate to 13 service bureaus. For purposes of this Paperwork Reduction Act analysis, the Commission is assuming that the portion of the estimates attributed by the commenter to service bureaus will be passed-through to their Outsourcing broker-dealer clients that rely on service bureaus to perform their regulatory data reporting. The Commission is thus applying the portion of the commenter's cost estimates attributed to the 13 service bureaus across the 1,329 broker-dealers that are categorized as Outsourcing broker-dealers. \$108,333 / 1,329 Outsourcing broker-dealers = \$81.51 in ongoing costs to maintain the modified allocation timestamp requirement per Outsourcing broker-dealer.

Therefore, the Commission estimates that the average ongoing external cost per small OATS-reporting broker-dealer would be approximately \$124,399.13 per year,<sup>257</sup> for an estimated aggregate ongoing external cost of approximately \$100,265,699 per year for all such broker-dealers.<sup>258</sup>

#### B. Small Non-OATS-Reporting Broker-Dealers

In addition to firms that previously reported to OATS, the Commission estimates there are 373 broker-dealers that were exempt from OATS reporting rules due to firm size, or excluded because all of their order flow was routed to a single OATS reporter, such as a clearing firm, that would incur CAT reporting obligations.<sup>259</sup> A further 24 broker-dealers have Participant memberships only with one Participant,<sup>260</sup> the Commission believes this group is comprised mostly of floor brokers and further believes these firms would experience CAT implementation and ongoing reporting costs similar in magnitude to small equity broker-dealers that currently have no OATS reporting responsibilities.<sup>261</sup>

The Commission assumes these broker-dealers would have very low levels of CAT reporting, similar to those of the lowest activity firms that formerly reported to OATS. Because CAT reporting obligations have already gone into effect, the Commission assumes all costs of initial implementation have already been incurred.

The Commission estimates that it would cost, on average, approximately \$124,317.62 in ongoing external outsourcing costs<sup>262</sup> to ensure ongoing compliance with Rule 613. Additionally, the Commission estimates that the ongoing cost to a small non-OATS-reporting broker-dealer to maintain the modified allocation timestamp requirement would be \$81.51.<sup>263</sup> Therefore, the Commission estimates that the average ongoing external cost per small non-OATS-reporting broker-dealer would be

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<sup>257</sup>  $\$124,399.13 = (\$124,317.62 \text{ in ongoing outsourcing costs}) + (\$81.51 \text{ to maintain the allocation timestamp})$

<sup>258</sup>  $\$100,265,699 = (\$124,317.62 \text{ in ongoing outsourcing costs}) + (\$81.51 \text{ to maintain the allocation timestamp}) \times (806 \text{ broker-dealers}) = \$100,265,698.78 \text{ rounded up to } \$100,265,699.$

<sup>259</sup> See supra note 174.

<sup>260</sup> See supra note 175.

<sup>261</sup> Id.

<sup>262</sup> The Commission assumes these firms have very low levels of CAT reporting, similar to those of the lowest activity firms that formerly report to OATS. For these firms, the Commission assumes that under CAT they would incur the average estimated service bureau cost of firms that formerly OATS reported fewer than 350,000 OATS ROEs per month of \$124,373 annually.

<sup>263</sup> See supra note 259.

approximately \$124,399.13,<sup>264</sup> for an estimated aggregate ongoing external cost of approximately \$49,386,455 per year.<sup>265</sup>

C. Completed Information Collections Requirements

As discussed above,<sup>266</sup> the Commission believes that three information collections requirements have been satisfied, specifically (1) a document outlining how the Participants could incorporate into the consolidated audit trail information regarding certain products that are not NMS securities;<sup>267</sup> (2) a one-time assessment of the clock synchronization standards in the Plan before reporting begins for Industry Members, which assessment shall take into account the diversity of CAT Reporters and systems;<sup>268</sup> and (3) a one-time report that discusses the Participants’ assessment of implementing coordinated surveillance.<sup>269</sup> These one-time information collections have been completed by the Participants, so the Commission believes that the annual dollar cost for each of the information collections is \$0.

| Summary of Dollar Costs                      |                        |                                  |                                  |   |   |   |   |  |                               |       |                                  |
|--|------------------------|----------------------------------|----------------------------------|---|---|---|---|--|-------------------------------|-------|----------------------------------|
| Name of Information Collection               | Type of Burden         | [A.] Number of Entities Impacted | [B.] Annual Responses per Entity | [C.] Initial Cost per Entity per Response | [D.] Initial Cost Annualized per Entity per Response [ = C ÷ 3 years] | [E.] Ongoing Cost per Entity per Response | [F.] Annual Cost Per Entity per Response [ = D + E] | [G.] Total Annual Cost Per Entity [ = (D + E) * B] | [H.] Industry Cost [ = G * A] | Total | Small Business Entities Affected |
| Central Repository                           | Recordkeeping          | 25                               | 1                                | \$0                                       | \$0   | \$2,232,000                               | \$2,232,000   | \$2,232,000  | \$55,800,000                  |       | 0                                |
| Data Collection and Reporting (Participants) | Third Party Disclosure | 25                               | 1                                | 0   | 0   | \$ 476,579.58                             | \$ 476,579.58                                       | \$ 476,579.58                                      | \$11,914,490                  |       | 0                                |
| Surveillance                                 | Recordkeeping          | 25                               | 1                                | \$0                                       | \$0   | \$1,105,263.16                            | \$1,105,263.16                                      | \$1,105,263.16                                     | \$27,631,579                  |       | 0                                |

<sup>264</sup> \$124,399.13= (\$124,317.62 in ongoing outsourcing costs) + (\$81.51 to maintain the allocation timestamp)

<sup>265</sup> (\$124,317.62 in ongoing outsourcing costs) + (\$81.51 to maintain the allocation timestamp) x (397 small non-OATS reporting broker-dealers) = \$49,386,454.60 rounded up to \$49,386,455 in aggregate ongoing external costs to ensure ongoing compliance with Rule 613.

<sup>266</sup> See supra Section I.A.

<sup>267</sup> See 17 CFR 242.613(i). See also “One-Time Written Assessments,” Consolidated Audit Trail, LLC at: <https://www.catnmsplan.com/one-time-written-assessments/index.html>.

<sup>268</sup> See CAT NMS Plan Order, supra note 6, at 84940.

<sup>269</sup> Id. at 84940–84941.



|  |                        |   |   |  |  |  |  |   |                                      |              |   |
|--|------------------------|---|---|--|--|--|--|---|--------------------------------------|--------------|---|
| Written Assessment of Operation of CAT   | Reporting              | 25                                      | 1                                       | \$0  | \$0  | \$1,225  | \$1,225  | \$1,225   | \$30,625                             | 0            |   |
| Independent Audit of Expenses Incurred Prior to the Effective Date                               | Disclosure             | 25                                      | 1                                       | \$0  | \$0  | \$0  | \$0  | \$0   | 0                                    | 0            |   |
| Assessment of Industry Member Bulk Access to Reporter Data                                       | Reporting              | 25                                      | 1                                       | \$2,450  | \$816.67   | \$0  | \$816.67.67  | \$816.67.67   | \$20,417                             | 0            |   |
| Assessment of Errors in Customer Information Fields  | Reporting              | 25                                      | 1                                       | \$612.50   | \$204.17   | \$0  | \$204.17   | \$204.17  | \$5,104                              | 0            |   |
| Report on Impact of Tiered Fees on Market Liquidity  | Reporting              | 25                                      | 1                                       | \$245  | \$81.67  | \$0  | \$81.67  | \$81.67   | \$2,042                              | 0            |   |
| <b>Name of Information Collection</b>  | <b>Type of Burden</b>  | <b>[A.] Number of Entities Impacted</b> | <b>[B.] Annual Responses per Entity</b> | <b>[C.] Initial Cost per Entity per Response</b> | <b>[D.] Initial Cost Annualized per Entity per Response [ = C ÷ 3 years]</b> | <b>[E.] Ongoing Cost per Entity per Response</b> | <b>[F.] Annual Cost Per Entity per Response [ = D + E]</b> | <b>[G.] Total Annual Cost Per Entity [ = (D + E) * B]</b> | <b>[H.] Industry Cost [ = G * A]</b> | <b>Total</b> | <b>Small Business Entities Affected</b> |
| Financial Statements   | Disclosure             | 25                                      | 1                                       | 0  | 0  | \$2,600  | \$2,600  | \$2,2,600   | \$65,000                             | 0            |   |
| Background Checks  | Disclosure             | 25                                      | 1                                       | \$0  | \$0  | \$619.98   | \$619.98   | \$619.98  | \$15,500                             | 0            |   |
| Data Collection and Reporting (Large, Non-OATS Reporting Broker-Dealers - ELPs)                  | Third Party Disclosure | 14                                      | 1                                       | \$0  | \$0  | \$110,466.67                                     | \$110,466.67   | \$110,466.67  | \$1,546,533                          | 0            |   |
| Data Collection and Reporting (Large, Non-OATS Reporting Broker-dealers – Options Market Makers) | Third Party Disclosure | 31                                      | 1                                       | \$0  | \$0  | \$493,692.48                                     | \$493,692.48   | \$493,692.48  | \$15,304,467                         | 0            |   |
| Data Collection and Reporting (Large OATS Reporting Broker-Dealers)                              | Third Party Disclosure | 126                                     | 1                                       | \$0  | \$0  | \$529,166.67                                     | \$529,166.67   | \$529,166.67  | \$66,675,000                         | 0            |   |

|   |                        |     |   |     |     |              |              |              |                       |                              |
|---|------------------------|-----|---|-----|-----|--------------|--------------|--------------|-----------------------|------------------------------|
| Data Collection and Reporting (Small OATS Reporting Broker-Dealers)     | Third Party Disclosure | 806 | 1 | \$0 | \$0 | \$124,399.13 | \$124,399.13 | \$124,399.13 | \$100,265,699         | Estimated 345 <sup>270</sup> |
| Data Collection and Reporting (Small Non-OATS Reporting Broker-Dealers) | Third Party Disclosure | 397 | 1 | \$0 | \$0 | \$124,399.13 | \$124,399.13 | \$124,399.13 | \$49,386,455          | Estimated 397 <sup>271</sup> |
| Review of Clock Synchronization Standards                               | Reporting              | 24  | 0 | \$0 | \$0 | \$0          | \$0          | \$0          | \$0                   | 0                            |
| Coordinated Surveillance Report   | Reporting              | 24  | 0 | \$0 | \$0 | \$0          | \$0          | \$0          | \$0                   | 0                            |
| Document on Expansion to Other Securities                               | Reporting              | 24  | 0 | \$0 | \$0 | \$0          | \$0          | \$0          | \$0                   | 0                            |
| <b>TOTAL COST FOR ALL RESPONDENTS</b>                                   |                        |     |   |     |     |              |              |              | <b>\$ 328,662,911</b> |                              |

14. Costs to Federal Government

There will be no additional costs to the Federal Government.

15. Changes in Burden

The aggregate time burden decreased by 2,641,278 hours (from 7,572,610 hours to 4,931,332 hours) and the aggregate cost burden decreased by \$134,659,682 (from \$463,322,593 to \$328,662,911).

The changes in burden have occurred because, as discussed above, while the number of Participants subject to the Plan has increased (from 24 Participants to 25 Participants), certain information collection requirements have been completed, and certain initial burdens and costs associated with implementation of certain information collection requirements have been completed, although certain ongoing costs will continue to accrue.

The Commission believes that certain information collection requirements have been satisfied, as described above, including the initial burdens and costs associated with certain information collection requirements.

The Commission notes that the number of Participants has increased from 24 Participants to 25 Participants. The estimated burdens and costs for Participants have also been impacted by a change in calculation relating to the Participants Study. Specifically, some burden and cost calculations relating to Participants have been

<sup>270</sup> See supra note 182.

<sup>271</sup> Id.

adjusted to more accurately represent the information presented by Participants in the CAT NMS Plan in the Participants Study. The Commission is relying on aggregate estimates provided by Participants in the CAT NMS Plan, based on a survey of 19 Participants, but previously assumed that all of these aggregate estimates applied equally to 24 Participants. The Commission is now adjusting certain aggregate estimates provided by Participants to account for the fact that those numbers are based on 19 Participants, where appropriate. For collectively shared burdens and costs the Commission did not adjust the Participants Study numbers in a similar fashion.

In addition, the Commission has further reduced the estimated number of broker-dealers subject to CAT reporting from 1,500 to 1,350, resulting in a reduction in the estimated number of small non-OATS-reporting broker-dealers from 523 to 397. This has resulted in a number of changed estimated burdens and costs, including a substantial decrease in the overall burdens and costs estimated for small non-OATS-reporting broker-dealers in the aggregate, as well as slight changes to the estimated costs for small non-OATS-reporting broker-dealers because of the way the cost of implementing and maintaining the modified timestamp is estimated to be shared between small OATS Reporting Broker-Dealers and small non-OATS-reporting broker-dealers. The chart below identifies the Information Collections whose burdens have changed and summarizes the amount of the changes and the primary reason(s) for the changes.

**Summary of Annual Burden Changes** (rounded to the nearest hour or dollar):

| <b>Name of Information Collection</b>                              | <b>Change in Hours</b> | <b>Change in Cost</b> | <b>Reason for Change</b>  |
|--|------------------------|-----------------------|---|
| Data Collection and Reporting (Participants)                       | 1,629                  | 2,567,122             | Increase in number of respondents from 24 to 25, and increased costs of FTE due to inflation.                     |
| Surveillance   | (16,357)               | (1,294,737)           | Elimination of one-time initial burdens and costs, increase in number of respondents (Participants) from 24 to 25 |
| Written Assessment of Operation of CAT                             | 150                    | \$6,625               | Increase in number of respondents (Participants) from 24 to 25 and increased costs due to inflation.              |
| Independent Audit of Expenses Incurred Prior to the Effective Date | n/a                    | (\$1,667)             | Elimination of burden due to completion of collection.  |
| Assessment of Industry Member Bulk Access to Reporter Data         | 5                      | \$4,417               | Increase in number of respondents (Participants) from 24 to 25 and increased costs due to inflation               |

| Assessment of Errors in Customer Information Fields  | 8                      | \$1104                | Increase in in number of respondents (Participants) from 24 to 25 and increased costs due to inflation.  |
|--|------------------------|-----------------------|--|
| <b>Name of Information Collection</b>  | <b>Change in Hours</b> | <b>Change in Cost</b> | <b>Reason for Change</b>   |
| Report on Impact of Tiered Fees on Market Liquidity  | 6                      | \$442                 | Increase in number of respondents (Participants) from 24 to 25 and increased costs due to inflation.   |
| Assessment of Material Systems Change on Error Rate  | 21                     | n/a                   | Increase in number of participants (24 to 25)  |
| Background Checks  | (138)                  | (\$20,154)            | Elimination of one-time initial burdens and costs, increase in number of respondents (Participants) from 24 to 25.                               |
| Data Collection and Reporting (Large, Non-OATS Reporting Broker-Dealers) - ELPs                  | (67,620)               | (\$3,311,001)         | Elimination of one-time initial burdens and costs.   |
| Data Collection and Reporting (Large, Non-OATS Reporting Broker-Dealers) – Options Market Makers | (149,730)              | (\$13,131,500)        | Elimination of one-time initial burdens and costs.   |
| Data Collection and Reporting (Large OATS Reporting Broker-Dealers)                              | (1,127,952)            | (\$48,300,000)        | Elimination of one-time initial burdens and costs.   |
| Data Collection and Reporting (Small OATS Reporting Broker-Dealers)                              | (483,600)              | (\$33,662,807)        | Elimination of one-time initial burdens and costs.   |
| Data Collection and Reporting (Small Non-OATS Reporting Broker-Dealers)                          | (797,700)              | (\$37,517,526)        | Reduction in number of estimated small-non-OATS Reporting Broker-Dealers, from 523 to 397, and elimination of one-time initial burden and costs. |

|                     |             |                 |  |
|---------------------|-------------|-----------------|--|
| <b>Total Change</b> | (2,641,278) | (\$134,659,682) |  |
|---------------------|-------------|-----------------|--|

16. Information Collection Planned for Statistical Purposes

Not applicable. The information collection is not used for statistical purposes.

17. Approval to Omit the OMB Expiration Date

The Commission is not seeking approval to omit the OMB expiration date.

18. Exceptions to Certification

This collection complies with the requirements in 5 CFR 1320.9.

B. Collections of Information Employing Statistical Methods

This information collection does not involve statistical methods.