FINANCIAL INFORMATION FORUM

11 Hanover Square
New York, New York 10005

212-422-8568

October 28, 2019

Vanessa Countryman
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

RE: File No. S7-13-19

Dear Ms. Countryman,

The Financial Information Forum ("FIF")[1] thanks the Securities and Exchange Commission ("SEC" or "Commission") for the opportunity to submit comments on the Commission's Proposed Amendments to the National Market System Plan ("CAT NMS Plan" or "Plan") governing the Consolidated Audit Trail ("Proposed Amendments"). The Proposed Amendments to the Plan are intended to impose a heightened degree of transparency and accountability on the CAT Plan Participants ("Participants") to better ensure the delivery of a functional Consolidated Audit Trail ("CAT") in a reasonable time frame. The Proposed Amendments, *inter alia*, require each Participant to file with the Commission and publish: 1) a complete Implementation Plan for the CAT; 2) Quarterly Progress Reports; and 3) Participant Financial Accountability Milestones.[2]

FIF fully supports SEC Rule 613[3] requiring the creation, implementation, and maintenance of a CAT. We view CAT as an opportunity to improve and modernize the ability of the Participants and the Commission to oversee the securities markets.[4] Better oversight will lead to greater confidence in the markets. This increased transparency will benefit all stakeholders, including CAT Reporter Broker-Dealers ("industry members"), individual investors, and the public. Once implemented, Rule 613 will also allow regulators to source transactional and customer information from a more centralized location, providing an opportunity for faster and more efficient surveillance of the markets. A fully functioning CAT should also facilitate the retirement of legacy and outdated regulatory reporting mechanisms (*i.e.* OATS, EBS) in favor of a more centralized surveillance tool.

While FIF believes that the Participants, Plan Processor, and the industry have worked diligently to drive CAT to completion, the novelty, complexity, and breadth of CAT have necessarily resulted in the delay of

[1] FIF (www.fif.com) was formed in 1996 to provide a centralized source of information on the implementation issues that impact the securities industry across the order lifecycle. Our participants include trading and back office service bureaus, broker-dealers, market data vendors and exchanges. Through topic-oriented working groups, FIF participants focus on critical issues and productive solutions to technology developments, regulatory initiatives, and other industry changes.

[2] *See* SEC Release No. 34-86901 at 1, 14.

[3] https://www.sec.gov/rules/final/2012/34-67457.pdf.

[4] See Letter from Ms. Mary Lou Von Kaenel, Managing Director, FIF to Mr. Brent Fields, Secretary, SEC *RE: SEC Release No. 34-77724; File No. 4-698; Consolidated Audit Trail National Market System Plan.* (Dated July 16, 2016).

the original: 1) Participant; and 2) Large industry member implementation dates.[5] FIF agrees with the Commission that additional Participant Accountability Milestones should facilitate the completion of the implementation phase(s) of CAT in an efficient, expeditious and risk-averse manner, thereby reducing the risk of further delay. It is in the spirit of supporting the regulators' efforts in driving CAT to completion that FIF offers our comments and recommendations herein. We believe our perspective will provide the Commission greater insight into the industry's CAT implementation efforts (including remaining risks), as well as to aid the Commission in the ultimate design of Proposed Amendments to the CAT NMS Plan.

Executive Summary

Since the inception of Rule 613, FIF has been deeply integrated in the formation of the CAT NMS Plan, the development of the CAT Industry Member Technical Specifications ("IM Tech Specs"), and have supported the Participants' and the Plan Processors' understanding of critical implementation issues that have and will continue to proliferate. In our support of CAT implementation efforts, FIF has been afforded a unique view into the implementation challenges borne by the Participants, the Plan Processor(s), and the industry.[6] It is with that background we offer our comments and recommendations on the Commission's Proposed Amendments to the CAT NMS Plan. Key recommendations are outlined below with further detail in the following sections:

- **Adjust Key Milestone Dates**: Adjust Phase 2a and Phase 2b milestones as per FIF's previous recommendations to de-risk the first phase of CAT roll-out (especially the Options-related interim milestones). The suggested dates fit into the key milestone dates proposed in the Amendments[7] and will allow the Participants, Plan Processor, and industry member firms a better opportunity to 1) fully implement Phase 2a requirements; 2) leverage the experience gained from Phase 2a implementation to more efficiently implement Phase 2b; and 3) significantly reduce the stress on systems and human resources during the critical CAT implementation period.
- **Phase 2c Go-Live**: Delay Phase 2c go-live slightly to enable more than the current 3 months between the launch of the Phase 2c test environment and Phase 2c go-live. Phase 2c will introduce novel reporting requirements, including the reporting of post-trade allocations. Insufficient testing could lead to greater incidence of reporting and business process failures with the associated sales, trading, and reporting systems and workflows, all of which must be significantly enhanced to meet the complex requirements of Phase 2c. FIF has consistently recommended 6 months of testing to enable vendors and industry members to adequately integrate and test major CAT releases. FIF emphasizes that 3 months of testing is not adequate for industry members to ensure that Phase 2c CAT data is of sufficient quality.

[5] https://www.sec.gov/news/public-statement/tm-status-consolidated-audit-trail (Pursuant to the original CAT implementation timeframe, Participants were expected to begin reporting to CAT on November, 15, 2017; large industry members were expected to begin reporting on November 15, 2019; and small industry members were expected to begin reporting on November 15, 2019).

[6] Appendix B provides additional detail with respect to the historical background of CAT development following the approval of the CAT NMS Plan, as well as describes, in detail, the current status of CAT implementation and remaining challenges/risks.

[7] *See supra* note, 2 at 35-39 (Pursuant to the Proposed Amendments, Initial Industry Member Core Equity Reporting must "go-live" no later than December 31, 2019).

- **Industry Input / Accountability Measures**: Solicit industry input on the performance of FINRA CAT and Participants as it relates to the status and progress of enabling the efficient and effective implementation of industry member reporting through their delivery of key foundational deliverables (tech specs, FAQs, error correction tools, fully functioning test environments, etc.)
- **Modified Financial Accountability Milestones**: Implement financial accountability milestones that evaluate success based upon the successful completion of a milestone's functionality rather than focus its assessment solely upon the date in which it is completed. FIF believes that applying conditions to the collection of fees the Participants have and will absorb to support CAT development, implementation, and maintenance efforts may result in: 1) reduced dialogue between industry member CAT Reporters and the Participants; 2) lower quality CAT IM Tech Specs; 3) reduced emphasis on the development and publication of vital industry member guidance (*i.e.* FAQs, CAT Reporting Scenarios, CAT Operations guidance, Industry Webinars); 4) a less effective issue resolution process; and 5) the implementation of Phase 2a prior to the full development of the CAT system.

FIF views the Proposed Amendments as a critical opportunity for the Commission to facilitate the efficient, complete, and successful implementation of CAT. Commission oversight of the CAT, including additional and formalized Participant Accountability Milestones should, if well-designed, better drive CAT to successful completion. Participant and industry member collaboration has been a *key element in the recent progress made with respect to CAT development* and will be critical moving forward. Developing flexible accountability measures will promote continued collaboration between all CAT stakeholders, which will ultimately lead to higher quality implementation of CAT.

Assessment and Potential Impact of the Commission's Proposed Amendments to the CAT NMS Plan

On September 9, 2019, the Commission published Proposed Amendments to the CAT NMS Plan, intended to impose public transparency requirements and financial accountability standards on the Participants tasked with administering the implementation of the CAT.[8] The proposal notes that as a result of delays and the failure to meet specified milestone dates and the potential for further delays, additional oversight of the Participants' management of the implementation of CAT is required.[9]

FIF's assessment of and recommendations to the Commission's Proposed Amendments focus on the need to inject provisions into the Plan that will allow for flexibility in the assessment of the Participants' management of the ongoing CAT implementation effort. Given the remaining complexities and risks the industry has identified with respect to CAT implementation, the Commission should recognize strict adherence to the Participants' delivery of specified target milestone on or before particular dates (and sanctions imposed as a result of not meeting those dates) are likely to result in lower quality deliverables and an incomplete CAT Repository.

In FIF's view, additional transparency will better inform all stakeholders of the status of CAT implementation objectives and milestones, will reduce uncertainty, and will provide industry members with further assurances that full CAT implementation will occur on specified milestone dates. FIF recommendations to the Proposed Amendments incorporating an Implementation Plan and Quarterly

[8] *Supra* note, 2 at 1, 16.
[9] *Id.* at 12, 14.

Progress Reports will focus upon our view that Commission assessment of Participant progress should be based on the Participants' successful completion of the key milestones outlined in the Proposed Amendment with fee recoverability tied to the successful completion of enumerated milestones, rather than strictly to the date on which they are completed. The key milestones in the Proposed Amendment are good measures that the Participants' are making progress toward delivering a completed CAT; FIF believes that tying fee recoverability to the successful completion of milestones rather than dates will allow for continued Participant and industry member collaboration which FIF expects to result in higher quality deliverables.

FIF Recommendation – Expansion of Quarterly Progress Report Provisions

FIF recommends that the Commission further expand the utility of Quarterly Progress Reports to include provisions within the Plan that incorporates a mechanism that will enable Participants flexibility in meeting specified implementation milestone dates (*i.e.* contingency plan). The completion of current and upcoming CAT implementation milestones are all contingent on several challenging and aggressive deliverables, many of which will impact the development, testing, and roll-out of complex technology (*i.e.* CAT Test and Production environment, surveillance tools, error correction tool, industry member CAT reporting systems, trading system realignment, etc..). It stands to reason that during the ongoing roll-out of CAT, factors outside of the Participants' and/or Plan Processor's control may require the regulators to revisit the reasonableness and viability of implementation milestones to preserve the ultimate delivery of a useable CAT in a reasonable timeframe.

Therefore, FIF recommends that the Commission include provisions to the Proposed Amendments that allow, after the holistic assessment of all factors impacting the Participants' ability to meet a particular milestone date, flexibility to extend milestone dates without holding Participants directly accountable (financially or otherwise). This will allow the Commission and Participants to focus on the goal of successfully delivering a functional CAT, rather than focusing on a milestone target dates, which may raise the risk of lower-quality deliverables.

Plan Amendment to Require Participants to Publish CAT Implementation Plan

The Commission further proposes that the CAT NMS Plan be amended to require Participants to file with the Commission and publish on a publicly available website (*i.e.* each Participants' website or collectively on the CAT NMS Plan website) the Participants' Implementation Plan that sets forth how and when the Participants will achieve full CAT implementation.[10] The proposed Implementation Plan, if approved in its current form, will further require the Participants to provide the public with detail regarding: 1) the Participants timeline for achieving objective milestones that are set forth in Section C.10 of Appendix C of the CAT NMS Plan to more holistically provide the Commission, industry members, and other interested parties additional transparency into the progress of CAT implementation; and 2) CAT implementation milestones associated with the proposed financial accountability provisions.[11]
FIF agrees in principle with the Commission's assertion that the proposed Implementation Plan is appropriate to facilitate public transparency of the development and implementation milestones required to be achieved by the Participants and industry members tasked with CAT implementation.[12] Specifically, additional detail that describes how the Participants (and Plan Processor) intend to facilitate

[10] *Id.* at 15, 25.
[11] *See Id.* at 17.
[12] *See Id.* at 18.

the completion of Implementation Milestones by specified target dates will provide the Commission and industry members with additional detail on the status of implementation-related milestones. Therefore, FIF agrees with the Commission that the filing of an Implementation Plan with the Commission may inject additional accountability and transparency into the Participants CAT milestone delivery targets.

However, FIF suggests that the Commission and the Participants take this opportunity to further assess the significant risks that underlie the current Participant CAT Implementation Timeline.[13] The aggressive implementation schedule the Participants and industry members are currently working toward places the industry and Participants at heightened risk. FIF strongly believes that the aggressive timeframe that underlies the current implementation schedule may not only result in further delays in CAT implementation but could result in more significant systemic implications that may undermine the viability and utility of the CAT to achieve the goals of SEC Rule 613.

FIF Recommendations – Adjust Phase 2a and Phase 2b Milestones

FIF recommends adjusting the Phase 2a and Phase 2b interim[14] milestones as per FIF's previous recommendations to de-risk them (especially the Options-related interim milestones).[15] The suggested dates fit into the key milestone dates proposed in the Proposed Amendments[16] and will allow the Participants, Plan Processor, and industry member firms a better opportunity to 1) fully implement Phase 2a requirements; 2) leverage the experience gained from Phase 2a implementation to more efficiently implement Phase 2b; and 3) significantly reduce the stress on systems and human resources during the critical CAT implementation period.

As noted in our April 2, 2019 letter to the CAT Leadership Committee, FIF continues to believe that the aggressive industry member CAT implementation timeline[17] combined with the significant implementation challenges expected with any large-scale data collection and regulatory reporting project continue to place several critical CAT deliverables at risk.[18] Specifically, FIF is concerned that the reduced timeframe between the "simple equities" (Phase 2a) and simple/electronic options (Phase 2b) "go-live" dates introduces unnecessary risks that may impair the Participants' and the industry's ability to successfully deliver the full Phase 2a and Phase 2b functionality by December 2020. FIF believes that should the Participants implement FIF's recommended roll-out schedule, the likelihood of delivering full CAT Phase 2a and Phase 2b functionality by December 2020 will increase significantly.

FIF believes that 3 months of separation between the "go-live" dates of equities and options can be achieved, and still allow for the separation of the subsequent linkage and validation go-lives during 2020, under the following proposed timeline[19]:

- April 2020 – equities file submission and data validations goes live;

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[13] *Supra* note, 16.
[14] See the SRO Master Plan for current CAT implementation milestone dates.
[15] *See* letter from Mr. Christopher Bok, Director, FIF to the CAT Leadership Committee, *Re: CAT Implementation Risks* (dated April 2, 2019).
[16] *Supra* note, 2.
[17] Appendix C provides a pictorial depiction of the current Phase 2a and Phase 2b CAT implementation schedule as incorporated in the current SRO Master Plan.
[18] *See supra* note, 15.
[19] See Appendix B for a pictorial depiction of FIF's proposed Phase 2a/Phase 2b CAT implementation schedule.

- June 2020 – equities intrafirm linkage validations goes live;
- July 2020 – options file submission and data validations goes live;
- September 2020 – options intrafirm linkage validations goes live;
- October 2020 – equities interfirm and exchange/TRF linkage validations goes live;
- November 2020 – options interfirm linkage validations goes live;
- December 2020 – options exchange linkage validations goes live;
- February 2021 – options linkage validation conformance period ends.

FIF strongly emphasizes that the proposed schedule changes and the introduction of an options conformance period will be essential to allow the industry a reasonable opportunity to 1) fully implement Phase 2a requirements; 2) leverage the experience gained from Phase 2a implementation to more effectively implement Phase 2b; and 3) significantly reduce the stress on systems and human resources during the critical CAT implementation period.

FIF Recommendations - Delay Phase 2c Go-Live

FIF further recommends delaying the Phase 2c go-live slightly to enable more than the current 3 months between the launch of the Phase 2c test environment and Phase 2c go-live. Phase 2c will introduce several novel reporting requirements which will require significant enhancements to the associated sales, trading, and reporting systems and workflows to meet the complex requirements of Phase 2c (*e.g.,* representative order linkages, reporting electronic quotes, reporting of post-trade subaccount allocations). FIF has consistently recommended 6 months of testing to enable vendors and industry members to adequately integrate and test major CAT releases; 3 months will not provide sufficient time to identify and remediate potential issues. Insufficient testing could lead to a greater incidence of reporting and business process failures with the associated sales, trading, and reporting systems and workflows that must be significantly enhanced to meet the Phase 2c requirements. Reg SCI[20] acknowledges the importance of robust testing, and FIF would urge the Commission and Participants to expand the Phase 2c testing period to limit the potential risk.

FIF Recommendations – Industry Input / Accountability Measures and Modified Financial Penalties

FIF recommends soliciting industry input on the performance of FINRA CAT and Participants as it relates to the status and progress of enabling the efficient and effective implementation of industry member reporting through their delivery of key foundational deliverables (tech specs, FAQs, error correction tools, fully functioning test environments, etc.). As will be described, *infra*, FIF recommends that the Commission focus its assessment of whether the Participants are meeting specified milestones based upon a holistic approach. The holistic assessment of the Participants management of CAT implementation should be based upon: 1) the successful completion of milestones; 2) detail contained in Participant Quarterly Progress Reports; and 3) industry member feedback, as opposed to strict adherence to enumerated milestone target dates.

[20] https://www.govinfo.gov/content/pkg/FR-2014-12-05/pdf/2014-27767.pdf

Proposed Amendments to Incorporate Financial Accountability Milestones

FIF *cautiously agrees* with the Commission's proposal that amendments to the Plan incorporating Financial Accountability Milestones[21] will result in a more expeditious and efficient CAT implementation phase.[22] FIF believes that the key milestones outlined in the Proposed Amendment are good measures that the Participants are making progress toward delivering a completed CAT. However, FIF believes strict adherence to specified milestone dates to evaluate progress for restricting the collection of fees the Participants have absorbed to support CAT development efforts[23] may result in: 1) reduced dialogue between industry member CAT Reporters and the Participants; 2) lower quality CAT IM Tech Specs; 3) reduced emphasis on the development and publication of vital industry member guidance (*i.e.* FAQs, CAT Reporting Scenarios, CAT Operations guidance, Industry Webinars); 4) a less effective issue resolution process; and 5) the implementation of Phase 2a prior to the full development of the CAT system. To alleviate these concerns, FIF recommends evaluating progress using a holistic approach considering the successful completion of a milestone's functionality rather than focus its assessment of success based upon the date in which it is completed.

FIF believes that these enumerated concerns represent a *subset* of the potential negative outcomes should the Commission approve the proposed Plan Amendment's provision(s) that seeks to limit or eliminate the Participants' opportunity (as provided in the NMS Plan) to collect fees from CAT Reporters to offset the significant costs absorbed. Therefore, should the Commission approve and adopt the proposed Plan Amendment to incorporate Financial Accountability Milestones, the Commission and Participants should take measures to *ensure* that the high degree of collaboration between the industry, Participants, and the Plan Processor remains in place.

Notably, FIF strongly emphasizes that it is our continued position that if the Participants and Plan Processor are to sufficiently meet all outstanding deliverables, the industry subject matter experts must be directly involved in all CAT reporting requirements that directly impact broker-dealers. Without direct industry involvement, FIF warns that the final CAT deliverable will not only likely be delayed but may be wholly ineffective in satisfying the original intent of Rule 613. FIF believes that the financial penalty structure outlined in the Proposed Amendments has the clear potential to limit and short circuit

[21] *Id.* at 52-53. The Commission proposes that should the Participants fail to meet specified target dates, Participants recovery of Post-Amendment Industry Member Fees will reduced according to the following schedule, applied to Initial Industry Member Equity Reporting – 1) 25% if the participants miss a deadline by less than 60 days; 2) 50% if the participants miss a deadline by 60 days or more but less than 120 days; 3) 75% if the Participants miss a deadline by 120 days or more, but less than 180 days; and 4) 100% if the Participants miss a deadline by 180 days or more. If the participants do not meet specified dates for the full achievement of 1) core equity reporting requirements; 2) full availability and regulatory utilization of transactional database functionality, or full implementation of CAT NMS Plan requirements, collection of fees will be reduced 1) 25% of deadlines are missed by more than 90 days; 2) 50% if deadlines are missed by 90 days or more but less than 180 days; 3) 75% if deadlines are missed by 180 or more but less than 270 days; and 4) 100% if deadlines are missed by 270 days or more.

[22] *See Id.* 32-34.

[23] To date, the Participants have absorbed *significant* costs in the effort to build the CAT Data Repository and associated surveillance tools in a manner that conforms to SEC Rule 613 and the CAT NMS Plan. FIF believes fees already incurred by the Participants on behalf of CAT NMS Plan LLC include but are not limited to: 1) program office management; 2) legal fees; 3) consulting fees; 4) fees associated with the hiring, onboarding, and staffing of the Plan Processor; and 5) technology costs.

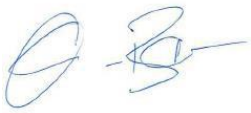
the required cooperative analysis, feedback, and iterative update process that would result in the reduced quality of deliverables and place at risk CAT's key regulatory goals.

Therefore, to promote a more holistic assessment of whether the Participants are meeting their obligations as described in the Proposed Amendments and Plan, FIF suggests that to facilitate greater transparency into the progress of CAT development, the Commission engage in more frequent meetings with industry members who are significantly involved in all facets of CAT development to supplement the information obtained from Quarterly Progress Reports and engagement with the Operating Committee and Plan Processor to better gauge whether the Participants are meeting the obligations delegated to them by the Commission following the adoption of Rule 613. FIF believes that greater insight into the challenges faced by the industry will provide the Commission with a clearer view of the remaining challenges that may place the complete implementation of CAT at risk. FIF offers to assist in this process provide any perspective we can offer to better inform the Commission as to the status of CAT Implementation.

Conclusion

FIF wishes to thank the Commission for the opportunity to provide comments on the Proposed Amendments to the CAT NMS Plan. FIF has long supported the CAT project, and are now more than ever committed to providing our assistance to the Commission, the Participants, the Plan Processor, and the industry to help facilitate the successful and timely completion of full implementation. FIF is afforded a unique perspective into the development of CAT given our ground-level involvement with the Participants, industry members, and the Plan Processor and is therefore fully aware of the complexities and challenges that underlie the implementation of CAT. It is with that perspective that we emphasize that due to the recent collaboration and hard work of all stakeholders, CAT has never been more viable. Any amendments to the CAT NMS Plan should seek to further enhance the current momentum in an effort to drive CAT to successful completion.

Regards,



Christopher Bok, Esq.
Director, FIF

CC: The Honorable Jay Clayton, Chairman, SEC
The Honorable Robert J. Jackson, Jr, Commissioner, SEC
The Honorable Hester M. Peirce, Commission, SEC
The Honorable Elad L. Roisman, Commissioner, SEC
The Honorable Allison Herren Lee, Commissioner, SEC
Mr. Brett Redfearn, Director, Division of Trading and Markets, SEC
Mr. David S. Shillman, Associate Director, Division of Trading and Markets, SEC
Mr. David Hsu, Assistant Director, Division of Trading and Markets, SEC
Mr. Mark Donohue, Senior Policy Advisory, Division of Trading and Markets, SEC
Ms Manisha Kimmel, Senior Policy Advisory, Regulatory Reporting to Chairman Jay Clayton, SEC
Ms. Shelly Bohlin, Chief Operating Officer, FINRA CAT, LLC

Mr. Michael Simon, CAT NMS Plan Operating Committee Chair, on behalf the CAT NMS Plan Operating Committee
Ms. Judy McDonald, CAT NMS Plan Advisory Committee Chair, on behalf of the CAT NMS Plan Advisory Committee

Appendix A

Recent CAT Development – Industry Member Perspective

Historical Background from Plan Adoption

On November 15, 2016, the CAT NMS Plan was approved by the Commission. The Plan, *inter alia*, provided industry members ("industry members" or "CAT Reporters") with critical detail regarding: 1) the requirements applicable to Industry Members reporting CAT data; 2) governance considerations around the formation of CAT NMS, LLC; and 3) requirements for the plan processor responsible for building, operating and maintaining the Central Repository.[24] On January 18, 2017, the Plan Participants filed with the SEC a notice that the Participants selected Thesys Technologies, LLC as Plan Processor. As Plan Processor, Thesys Technologies, LLC (later Thesys CAT, LLC) ("Thesys CAT") was tasked with the development and implementation of policies, procedures, and control structures related to the CAT System consistent with SEC Rule 613(e)(4).[25] In addition, Thesys CAT was required to draft and publish Participant and Industry Member Technical Specifications consistent with appendices C and D of the Plan.[26]

The CAT NMS Plan specified that Large Industry Member reporting of order data was required to begin on November 15, 2018, 24 months after the Plan's effective date. The Plan also specified that the Plan Processor was required to publish Technical Specifications for Industry Member submission of order/transactional data no later than 1 year (November 15, 2017) before Industry Members were required to begin reporting transactional data to the Central Repository.[27] During the initial development of the CAT IM Tech Spec, Industry Members were afforded little transparency into the Plan Processor's: 1) design of the IM Tech Spec; 2) CAT's anticipated data model; and 3) the model of the CAT order event lifecycle. The negative implications of the lack of industry involvement and transparency into the development of industry member specifications became event on September 7, 2017, when Thesys CAT published an initial draft of the IM Tech Spec ("initial spec"). Following the publication of the initial spec, the industry was informed that it would be allocated 18 days to review, analyze, and provide

[24] *Supra* note, 2. at 7.
[25] CAT NMS Plan at 37.
[26] *Id.* at 60. (Pursuant to the Plan, the specifications were required to include: "(i) the layout of files and records submitted to the Central Repository; (ii) the process for the release of new data format specification changes; (iii) the process for industry testing for any changes to data format specifications; (iv) the procedures for obtaining feedback about and submitting corrections to information submitted to the Central Repository; (v) each data element, including permitted values, in any type of report submitted to the Central Repository; (vi) any error messages generated by the Plan Processor in the course of validating the data; (vii) the process for file submissions (and re-submissions for corrected files); (viii) the storage and access requirements for all files submitted; (ix) metadata requirements for all files submitted to the CAT System; (x) any required secure network connectivity; (xi) data security standards, which shall, at a minimum: (A) satisfy all applicable regulations regarding database security, including provisions of Regulation Systems Compliance and Integrity under the Exchange Act ("Reg SCI"); (B) to the extent not otherwise provided for under this Agreement (including Appendix C hereto), set forth such provisions as may be necessary or appropriate to comply with SEC Rule 613(e)(4); and (C) comply with industry best practices; and (xii) any other items reasonably deemed appropriate by the Plan Processor and approved by the Operating Committee").
[27] *Id.* at Appendix C, C.10.b (Submission of Order and MM Quote Data to Central Repository (SEC Rule 613(a)(1)(x)).

feedback on the initial spec's content.[28] During FIF's review of the initial spec, industry members uncovered significant flaws with the spec's design and content that, if not corrected, would have put at risk the viability of the CAT.

Creation of the CAT Industry Member Technical Specification Working Group

In late 2017, the Plan Participants recognized the need to better leverage industry member expertise in the development of the CAT IM Tech Specs. To that end, the Plan Participants formed the CAT Industry Member Technical Specification Working Group ("IMTS WG") in January of 2018. The IMTS WG was structured to include representatives from: 1) the Commission; 2) the Participants; 3) CAT Advisory Committee; 4) the Plan Processor; 5) industry representation through FIF, SIFMA[29], and STA[30] (collectively "IMTS WG Participants").

The IMTS WG provided the Participants/Plan Processor with a forum to collaboratively identify, analyze, and solve the most significant issues that placed the complete and timely implementation of CAT at greatest risk. Through October 28, 2019, IMTS WG participants have collectively spent thousands of hours in over 200 separate meetings to identify, analyze, and resolve issues and questions critical to the successful development of the CAT. These critical and complex topics include but are not limited to: 1) Firm Designated ID ("FDID"); 2) equities/options representative order reporting; 3) error correction; 4) options reporting scope/data modeling; 5) manual quotes/events; and 6) CAT matching criteria.[31] Through the IMTS WG, the industry was also afforded an opportunity to provide the Participants/Plan Processor with critical iterative feedback on the content, layout, and model of the IM Tech Spec. FIF continues to believe that the collaboration between the industry, the Participants and the Plan Processor resulted in a vastly improved IM Tech Spec, guidance (FAQs), use cases (CAT Reporting Scenarios[32]), and CAT reporting expectations that have eased the implementation challenges inherent in a project as large, multi-faceted, and intricate as the CAT.

Current Status of CAT – Industry Member Perspective

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[28] *See* letter from Mr. William H. Hebert, Managing Director, FIF to Mr. Michael Simon, CAT NMS Plan Chair, Mr. Ed Watson, Chief Operating Officer, Thesys CAT, LLC, and Mr. Shane Swanson, Chief Compliance Officer, Thesys CAT, LLC (dated September 21, 2017).

[29] SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry's nearly 1 million employees, we advocate for legislation, regulation and business policy, affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA).

[30] STA is a trade organization founded in 1934 for individual professionals in the securities industry. STA is comprised of 24 affiliate organizations in North America with individual members who are engaged in the buying, selling and trading of securities. STA is committed to promoting goodwill and fostering high standards of integrity in accord with the Association's founding principle, Dictum Meum Pactum – "My Word is My Bond." For more information, visit https://securitytraders.org/.

[31] Appendix B contains a list of topics and additional workstreams addressed through the IMTS WG.

[32] https://catnmsplan.com/wp-content/uploads/2019/09/Industry-Member-Tech-Specs-Reporting-Scenarios-v2.3-CLEAN.pdf

CAT Plan Processor Transition Period

On February 1, 2019, the CAT NMS Plan, LLC confirmed in a notice[33] distributed to industry members that it elected to transition the CAT project to a new Plan Processor. While FIF noted in a letter[34] to the CAT Leadership Committee that the transition to a new Plan Processor represented a "fresh" opportunity to drive CAT implementation to successful completion, FIF further emphasized that the transition plan should continue to allow the industry, Participants, and new Plan Processor to "build upon the collaborative spirit fostered through countless industry discussions that continue to manifest itself in positive changes to CAT."[35]

On February 26, 2019, the CAT Operating Committee voted to select FINRA as the successor Plan Processor.[36] In the intervening months following the selection of FINRA as new Plan Processor ("FINRA CAT"), the industry has noted a significant uptick in the progress of CAT development, including: 1) the increased quality of the CAT IM Tech Specs; 2) additional published guidance; 3) the ongoing development of a robust error correction tool; 4) the proliferation of FINRA CAT-hosted industry outreach/Q&A sessions; and 5) a more expeditious issue resolution process. FIF further notes that following the transition to FINRA CAT as Plan Processor, FINRA CAT nor the Participants have missed an industry member deliverable, and in several instances, have met SLAs ahead of schedule. Finally, during and following the transition to FINRA CAT as Plan Processor, FIF has observed increased opportunities for industry involvement in the development of CAT requirements, the quality of guidance offered to CAT Reporters, and the availability of Plan Processor Staff to answer critical industry member questions. FIF strongly emphasizes that it is our belief that the Participants and FINRA CAT have worked diligently and in tandem to provide the industry with the tools and resources required to ultimately deliver transactional and customer account data to the CAT Database in a complete and accurate manner.

Current Industry Member CAT Implementation Schedule

The transition to a new CAT Plan Processor resulted in a revised CAT Industry Member implementation schedule. The revised timeline presented to industry stakeholders on February 20, 2019[37] was designed to provide FINRA CAT a reasonable opportunity to, *inter alia*: 1) finalize the CAT IM Tech Specs; 2) build the CAT database and surveillance tools required for the regulators to perform market surveillance utilizing CAT data; and 3) develop a robust CAT Web Portal/Error Correction tool. Rather than full Phase 2a (simple equities) testing commencing in August 2019, the Participants proposed that the testing and production environments of CAT data validations be phased-in, beginning with testing of File Submission & Data Integrity on December 16, 2019.[38] Following the initial five-month testing period, Phase 2a Production Environment for File Submission and Data Integrity will "go-live" on April 20, 2020, with Phase 2b (simple/electronic options) Production Environment "going-live" on May 2020. Following the initial "go-live" dates for Phase 2a and Phase 2b, test/production environments for intra-firm linkage

[33] https://www.nyse.com/publicdocs/nyse/markets/nyse/CAT_Update.pdf
[34] *Supra* note, 15.
[35] *Id.*
[36] *Supra* note, 2 at 12; *see also* Letter from Michael J. Simon, Chair, CAT NMS, LLC Operating Committee, to Brent J. Fields, Secretary, Commission (dated April 9, 2019).
[37] https://www.catnmsplan.com/wp-content/uploads/2019/02/CAT_Industry_Webcast_02.20.2019_vF.pdf
[38] https://catnmsplan.com/timelines/

validations, interfirm linkage validations, and Exchange/TRF linkage validations will be rolled-out in 1-to-3-month increments, concluding with Exchange linkage validations for options in December of 2020.[39]

During the Phase 2a and Phase 2b CAT roll-out period, industry members will simultaneously be required to begin implementation of Phase 2c (enhanced equities)/Phase 2d (paired, manual and multi-leg options). Pursuant to the current CAT reporting timeline, the Final Phase 2c IM Tech Spec is expected to be published on January 31, 2020, followed by the publication of the Final Phase 2d IM Tech Spec in June 2020.[40] The aforementioned Phase 2c and Phase 2d implementation schedule only allocates industry members a year for full development, simultaneous with the roll-out of Phase 2a/Phase 2b. After a year, the start of the of the Phase 2c and Phase 2d industry testing period will begin January 2021 and June 2021, respectively. During this period, the industry will support Phase 2c and Phase 2d IM Tech Spec development and begin the implementation process. That process will include 1) business analysis of the final Phase 2c and Phase 2d IM Tech Specs; 2) systems development and redesign, coding, and internal testing leading up to the implementation of CAT Phase 2c and Phase 2d. Adjusting the interim milestones would result in higher quality deliverables by allowing a better opportunity to fully implement Phase 2a and Phase 2b requirements, leverage the experience gained from Phase 2a implementation to more efficiently implement later phases, and significantly reduce the stress on systems and human resources during the critical CAT implementation period.

Remaining Risks to CAT Implementation

Rule 613 represents one of the most complex and ambitious rule implementation efforts in the history of the financial services industry and may also introduce the most risk. Complete and accurate reporting of industry member transactional data requires the centralization of complex order lifecycle data (much of which has not been previously reported) from all firms pertaining to all customers across all exchanges, each of which developed organically in its own idiosyncratic manner. Therefore, it is *critical* that the Participants/Plan Processor tasked with building and maintaining the CAT Repository and the industry members that must report to CAT are afforded sufficient time, fulsome guidance, and working reporting models (*i.e.* IM Tech Spec)(collectively "foundational elements"). Should the industry not be afforded requisite foundational elements during this critical CAT development stage, FIF strongly believes that CAT will be at risk of further delay and worse, may manifest in an unusable CAT Database. As described in greater detail, *supra*, the Participants, Plan Processor, and industry members should work in harmony over the next year (and beyond) to ensure the quality completion of several complex and ambitious deliverables. The table below represents a subset of CAT stakeholder deliverables over the next 18 months:

Deliverable	**Responsible Party**	**Target Date**
Start of Industry Test (file submission/data integrity)	Plan Processor/Industry Members	December 18, 2019
Completion of Phase 2c Spec	Plan Processor/Participants/Industry Members	January 31, 2020
Phase 2c systems development	Industry Members	January 31, 2020 – January 2021

[39] *Id.*
[40] *Id.*

Roll-out of the CAT Portal/Error Correction Tool	Plan Processor	February 2020
Phase 2a go-live (file submission/data integrity validations)	Plan Processor/Industry Members	April 20, 2020
Phase 2b go-live (file submission/data integrity validations)	Plan Processor/Industry Members	May 18, 2020
Completion of Phase 2d Spec	Plan Processor/Participants/Industry Members	June 2020
Phase 2d systems development	Industry Members	June 2020-June 2021

It should not be understated that each of the abovementioned deliverables all require significant time and effort by all stakeholders to analyze understood Rule/Plan requirements, develop workable reporting models, solve significant challenges, and incorporate sufficient guidance to allow for reasonable roll-out.

For example, the development of the Phase 2c and Phase 2d IM tech specs will require significant time and resource allocation from the Plan Processor, Participants, and industry members to facilitate the publication of quality specifications that will allow the industry a reasonable opportunity to meet Phase 2c and Phase 2d CAT reporting expectations. FIF, STA, and SIMFA have already begun working with the Plan Processor to start the significant task of analyzing known Phase 2c and Phase 2d requirements. We believe, given the novelty of reporting enhanced equities and complex options (and all of the many iterations) that significant iterative review of both specs will need to take place before the final specs will be of the quality that will allow industry members meet all CAT reporting expectations. FIF anticipates that stakeholders will collectively dedicate thousands of hours to Phase 2c and Phase 2d tech spec development, which may nonetheless be insufficient to fully complete the process given the aggressive roll-out schedule.

These reviews will be required to be performed concurrently with the final development of industry member Phase 2a and Phase 2b reporting models, industry testing, and go-live. With respect to the Plan Processor, FINRA CAT will be required to allocate significant resources to better understanding broker-dealer workflows and business models to facilitate the completion of workable specs, all while developing the industry member test and production environments, building and testing query tools, rolling-out a robust and complex error correction tool, developing the infrastructure for the Phase 2c and Phase 2d CAT Database while simultaneously dedicating additional resources to ensure that the security and integrity of the CAT Repository is protected from security breaches and systems failure.

Appendix B

Consolidated Audit Trail (CAT)

Proposed Revised 2a / 2b Implementation Timeline

- The Large Industry Member implementation schedule should be revised to allow additional separation between the 2a Equities and 2b Options go-live dates in order to minimize the risk of a nearly simultaneous go-live. Testing dates remain unchanged. Several other 2a and 2b go-live dates have been adjusted slightly to keep separation between the Equities and Options subsequent incremental validation and linkage go-lives.
- This plan has significant risk in that the Inter-firm, exchange and TRF linkage go-lives are all compressed into Q4, and there is a go-live in December, when many firms have technology change freezes (which put at risk the ability of firm's to make changes to rectify the root cause of errors, especially for the final Options Exchange linkage go-live). Consider adding a short conformance period for Options linkage errors to Feb, 2021 as a possible mitigant.

Proposed Phase 2a & 2b Schedule

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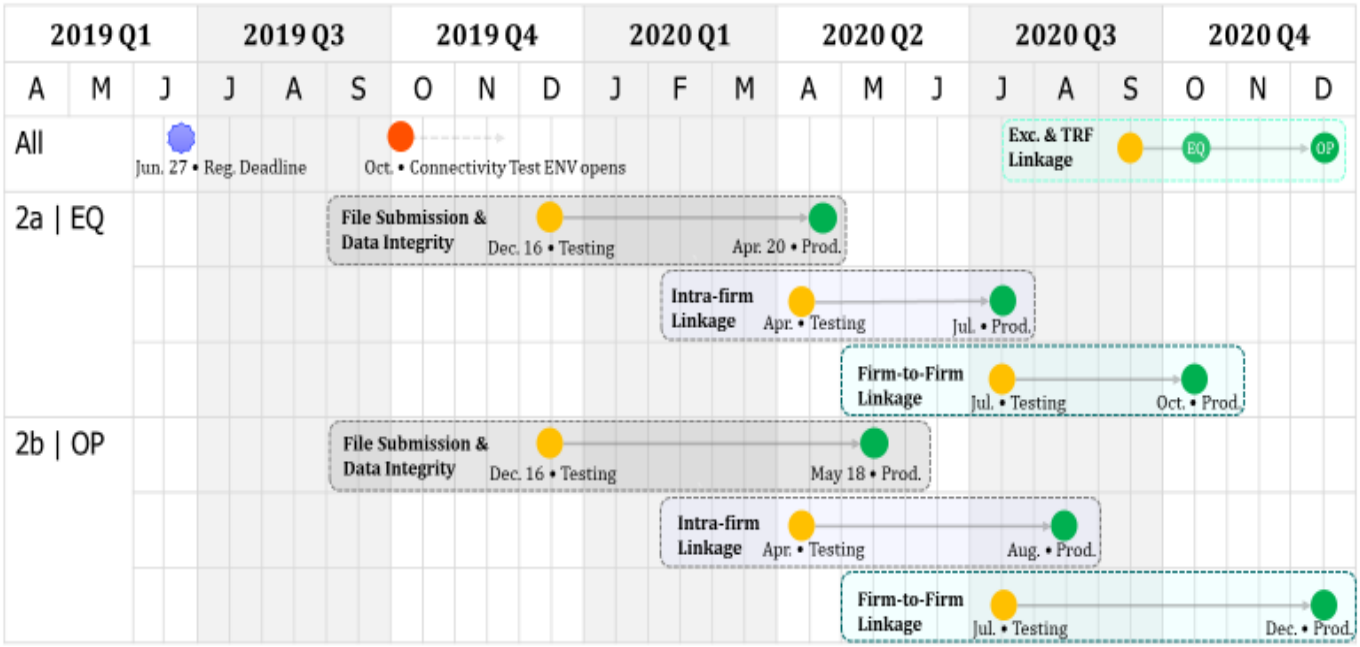
Appendix C

Consolidated Audit Trail | Industry Timeline

*https://catnmsplan.com/wp-content/uploads/2019/04/CAT-Alert-Final-Tech-Spec.pdf