



Via Electronic Delivery

July 18, 2016

Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street NE.
Washington, DC 20549-1090

Re: File Number 4-698: Joint Industry Plan; Notice of Filing of the National Market System Plan Governing the Consolidated Audit Trail

Dear Mr. Fields:

Thomson Reuters appreciates the opportunity to comment on the joint industry plan governing the Consolidated Audit Trail (the “CAT NMS Plan”). Thomson Reuters¹ through our Financial & Risk business unit provides buy-side, sell-side and corporate customers with information, analytics, workflow, transaction and technology solutions and services that enable effective price discovery and support efficiency, liquidity and compliance. In particular, our wealth management offerings² include a complete suite of products that enable retail and institutional brokers to manage the daily tasks of their front, middle and back office operations. We support our clients in meeting current audit trail requirements and intend to provide similar services with respect to CAT. As such, we are directly impacted by the CAT NMS Plan.

We support the move to the Consolidated Audit Trail and recognize the limitations of current audit trail systems. As a member of the CAT Development Advisory Group, Thomson Reuters has been active in providing feedback to the SROs on aspects of the CAT NMS Plan as well as the exemptive relief. The release of the CAT NMS Plan represents an important milestone. We believe at this critical juncture the Commission should address the significant implementation issues that will materially impact the costs and complexity of CAT processing.

The following sections outline our recommendations for improving the implementation of the CAT NMS Plan.

¹Thomson Reuters is the world’s leading source of news and information for professional markets. Our customers rely on us to deliver the intelligence, technology and expertise they need to find trusted answers. The business has operated in more than 100 countries for more than 100 years. Thomson Reuters shares are listed on the Toronto and New York Stock Exchanges. For more information, visit www.thomsonreuters.com.

²For more information on Thomson Reuters Wealth Management offerings, see [here](#).



Link Retirement of Existing Systems³ to Launch of CAT

Based on Commission estimates in the CAT NMS Plan, duplicative reporting to both CAT and existing systems is expected for a period of 2 to 2.5 years with the timeline beginning once Small Members begin reporting to CAT. It is worth noting that for firms that do not meet the definition of small member, the duplicative reporting period would be an extra year, 3 – 3.5 years in total. As the Commission acknowledges, duplicative reporting is likely to represent a “significant cost to the industry,” estimated at \$1.7 billion⁴ per year based on current reporting costs.

In order to reduce the costs associated with duplicative reporting, we recommend replacing the duplicative reporting period with a trial period mirroring production such that the actual launch of CAT functionality is linked to the retirement of existing systems and the end of the trial period. Robust testing followed by the launch of new code into production is an acknowledged industry best practice for introducing new functionality to systems. This approach has a number of benefits:

- Reduces cost – we anticipate our costs would double if required to operate in a parallel production environment for an indefinite period. Maintaining CAT and OATS for a limited trial period of no more than three months reduces storage requirements, staff to support compliance inquiries and customer service support.
- Eliminates compliance/legal confusion – maintaining a single audit trail of record at any given time will ensure certainty for compliance and legal purposes.
- Aligns incentives across Participants and the industry – making the launch of CAT contingent on the retirement of existing systems ensures that both Participants and the industry are focused on reducing error rates and moving CAT towards completion.

While mirroring production during a trial period represents a cost to the industry, we believe limiting the duration of the Trial Period to no longer than 6 months would cap implementation costs and allow for better resource utilization.

As discussed later in this document, robust testing that mirrors production will be necessary to ensure that the CAT processor is capable of meeting the reporting and linkage requirements outlined in the Plan. Testing during a trial period that mirrors production would allow error rates to stabilize and provide an incentive for Participants to complete the required rule-making and other steps outlined in the CAT NMS Plan in a

³ Existing systems to be retired include at a minimum, OATS, Large Trader, and EBS requests related to securities covered by CAT

⁴ Based on Commission estimates outlined in CAT NMS Plan at 81 FR 30729; “The Commission preliminarily believes, however, that the current data reporting costs of \$1.7 billion per year constitutes an estimate of the cost per year to industry of duplicative reporting requirements, as it represents the cost of duplicative reporting to industry if there are no efficiencies.



timely manner. Specifically, rule-making should begin once final technical specifications are published. At that time the functionality of CAT will be understood and rule-making effective dates could be tied to CAT launch. Additionally, the SROs and SEC should supply the Processor with technical requirements during the specification creation process to ensure that technical specifications allow for the retirement of existing systems.

Address Small Firm Needs through Alternate Definition

Another factor that impacts implementation timing and the retirement of existing systems is the current Rule 613 requirement for a phased implementation which has Large Members reporting after 2 years and Small Members reporting after 3 years. Small Broker Dealers are defined in § 240.0–10(c)⁵ which uses total capital as the basis for the definition. In the adopting release, the Commission’s stated intention was to “allow small broker-dealers extra time to explore the most cost-effective and most efficient method to comply with the Rule.” However in the CAT NMS Plan, the Participants acknowledge that it is firms currently exempt or excluded from OATS that are likely to incur higher costs of compliance given that they have not previously reported to OATS.⁶ If the phased implementation were such that only those firms that are exempt or excluded from OATS are given an additional year, this would allow for the retirement of existing systems a full year earlier, representing a cost savings of \$1.7 billion to the industry. To achieve this recommendation, the definition of Small Member would be based on FINRA Rule 7470 and 7410(o).

We note that the phased implementation of Large and Small broker dealers was not in the Proposing Release of Rule 613 nor was an economic analysis performed in the Adopting Release to assess the cost of this provision. Using the data from the CAT NMS Plan Proposal, this provision results in an increased cost of \$1.7 billion to the industry. We do not believe benefits to small broker dealers have been established to justify this cost. On the contrary, the CAT NMS Plan cost analysis suggests that given the size of most of the firms in question, they are likely to have an existing relationship with a clearing firm or service bureau.

We are also concerned about the impact to competition of this provision. Clearing firms may have to support both large and small broker dealers during CAT implementation

⁵ When used with reference to a broker or dealer, mean a broker or dealer that: (1) Had total capital (net worth plus subordinated liabilities) of less than \$500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared pursuant to § 240.17a-5(d) or, if not required to file such statements, a broker or dealer that had total capital (net worth plus subordinated liabilities) of less than \$500,000 on the last business day of the preceding fiscal year (or in the time that it has been in business, if shorter); and (2) Is not affiliated with any person (other than a natural person) that is not a small business or small organization as defined in this section;

⁶ CAT NMS Plan at Appendix C-90 “The Participants were particularly sensitive during the development of the CAT NMS Plan to the potential burdens it could place on small broker-dealers. These broker-dealers may incur minimal costs under existing audit trail requirements because they are OATS-exempt or excluded broker-dealers or limited purpose broker-dealers.”



incurring more CAT implementation costs than broker dealers that do not have introducing broker dealers.

The Commission has acknowledged that OATS represents the most comprehensive audit trail today. The implementation of the CAT NMS Plan should reflect this reality. Any phasing of CAT should be tied to the elimination of OATS to ensure that costs to the industry are minimized. We also see the benefits for the SEC and Participants in aligning phasing based on OATS reporting given that only FINRA has direct access to OATS while all regulators will have direct access to CAT.

Address Uncertainty with Plan Processor Selection

Not knowing who the CAT Processor is introduces a significant amount of uncertainty that could easily be eliminated by accelerating the selection of the processor prior to CAT NMS Plan approval. We believe the Commission discounts the importance of the choice of Plan Processor as it relates to implementation costs. While the bids to build the Processor may be within a sufficiently narrow range so as to negate those costs, the choice of Processor may have a significant impact on broker-dealer implementation costs. Given that FINRA is a bidder and that FINRA operates OATS, we believe the path to retirement of OATS will be materially different if FINRA is the Plan Processor. Additionally, bidders may have cost-effective implementation approaches that are not currently factored into the CAT NMS Plan (e.g., migrate OATS to CAT as the first implementation milestone).

It is our understanding that the SROs have engaged the bidders in detailed discussions and are already down to a short-list of three bidders. We believe the involvement of the CAT Processor in the CAT NMS Plan would eliminate a significant amount of uncertainty and allow the industry to better assess the merits of the CAT NMS Plan. Additionally, there is a significant amount of work required by the CAT Processor outside of specification creation including establishing policies and procedures as it relates to the maintenance and operation of the CAT. The sooner these activities are initiated, the more likely it will be that the Plan Processor will be able to provide specifications to the industry in a timely manner.

Ensure that CAT Technical Specifications Are Comprehensive

It is imperative that the CAT Technical specifications are comprehensive, reflecting industry feedback and resulting in a CAT Processor that can retire existing systems as CAT functionality is launched. The current CAT NMS Plan Milestones as described in Appendix C, Section C need to be adjusted in order to accomplish this objective. We recommend the following:

- Require Participants to provide detailed requirements regarding retirement of existing systems to CAT Processor once processor is chosen (2 months after plan approval or sooner). This will ensure that the specification developed for CAT Reporters includes all functionality required to retire existing systems. Given that OTC equities are in OATS today, we support the inclusion of OTC equity securities in CAT.



- Introduce a moratorium on modifications to existing systems at the start of CAT specification creation to ensure that technical specifications are sufficiently robust and to avoid enhancing systems that will be retired with the launch of CAT.
- Include detailed scenarios in CAT Technical Specification. All scenarios currently covered in the OATS Technical specification should be included in the CAT Technical specification with additional scenarios on new processes that will relate to the customer definition process and options order reporting. All scenarios required to meet the CAT NMS Plan Appendix D, Reporting & Linkage Requirements should be considered including step-outs, cancel-rebills, bunched orders and manual order processing.
- Ensure that multiple service providers can provide CAT reports throughout the order lifecycle. CAT functionality should ensure that linkage is established based on the data available to the service provider at any given point in the process.
- Specification review process for both the customer information specification as well as the submission of order data to begin two months after Processor Selection, lasting nine months. We believe this extensive period is conservative based on historical data. The expansion of OATS to all NMS equities took a four month period from initial industry review to final specification. The changes to EBS to support Large Trader and other indicators took 10 months from initial to final specification.

Drive Implementation Timing Based on Release of Final Technical Specifications

A review of the technical specifications is required in order to accurately estimate the effort involved in implementing CAT functionality. In keeping with the SEC's Equity Market Structure Advisory Committee's Rule Change Implementation timing recommendation, the timing of CAT implementation should be based on a review of the technical specifications. While the CAT NMS Plan provides some details on how CAT functionality will be implemented, specific details will only be addressed in the technical specifications.

In order to achieve certainty over implementation timing, we offer the following recommendations:

- **Accelerate the selection of the Plan Processor:** As discussed above, the Selection Plan could be amended to initiate the selection of the Plan processor such that prior to the approval of the CAT NMS Plan, a processor was chosen. This would allow the creation of technical specifications earlier in the process.
- **Include a Specifications Date as part of the CAT NMS Plan:** This would be the date by which final technical specifications are released and implementation time is assessed. By the specifications date, the industry would work with the Plan processor to review specifications and determine realistic implementation times.



- **Amend CAT NMS Plan with Implementation Time After Final Specifications are released:** Identifying new implementation times will not be possible until the technical specifications are reviewed. The CAT NMS Plan should establish a milestone for amending the CAT NMS Plan based on a review of technical specifications to include objective milestones to achieve the launch of CAT.

The CAT project has taken longer than expected and we have not even started implementation. It should be noted that while specifications will drive the implementation time for the industry, the Plan Processor has many other responsibilities⁷ that may impact their ability to deliver specifications on time. We believe achievable dates based on actual data from technical specifications should drive implementation time. We hope that the Commission will take a data-driven approach to implementation timing leveraging prior experience with OATS, EBS and Large Trader to fashion an implementation plan that is achievable, risk adverse and efficient - avoiding last minute delays that introduce unnecessary risk and cost to the industry.

Allow Adequate Time for Robust Testing

Robust testing will be critical for ensuring the quality of CAT processing. Currently the CAT NMS Plan allows for 3 months of testing for the customer definition process and the order data process. Based on historical data associated with projects of less complexity, we do not believe 3 months is adequate. For example, the migration of FINRA's ORF system included six months of testing. Additionally, continuous reporting of customer data and options orders are entirely new processes that will be part of CAT. We anticipate more testing will be required to validate these processes. As such, we recommend 12 months for testing with clear criteria established before moving into production.

As part of a robust testing plan, we would expect to see coordinated testing across industry participants and the vendors that support them. We believe the testing plans that will be used for the move to T+2 would be useful in developing industry testing for CAT.

Given that the CAT Processor will be an SCI system as defined by Reg SCI, we believe testing should meet the highest standards. As part of testing, we should look to achieve error rates consistent with OATS for reports that are currently reported to OATS (e.g., order and execution reports). Additionally, error rates for moving to production should be based on corrected data not initial submissions.

Address CAT Governance Issues

On an ongoing basis, we expect CAT to evolve with a series of enhancements and modification over time. We believe service bureau participation on the CAT Advisory Committee is imperative to ensuring that thoughtful implementation decisions are made. We offer the following recommendations:

⁷ Responsibilities include establishing data security policies and procedures, instituting disaster recovery, and hiring staff including the Chief Compliance Officer, CCO.



- Update Advisory Committee composition to include a service bureau representative. Service bureaus perform audit trail reporting on behalf of their customers. We are uniquely qualified to assess the impact of CAT enhancements on our clients. Given that we support multiple clients, we are able to offer a collective perspective that would otherwise be missing from the Advisory Committee. It should be noted that there is a precedent for vendor participation on NMS Plan Advisory Committees, e.g., the CTA/UTP Advisory Committee.
- Ensure transparency with respect to amendments to the Plan that impact CAT reporters. It may not be obvious to the Operating Committee when a change to the Plan impacts CAT reporters in a material way. We recommend a review of amendments that impact CAT Reporters by the Advisory Committee or released on the CAT Processor website for industry review.

In addition to making decisions on changes to CAT Processor functionality, the Operating Committee will make decisions on funding and other aspects of CAT operations. We believe industry representation on the Advisory Committee is critical in providing input into these matters as well.

Maintain Consistency with Established Clock Synchronization Policies

In order to simplify the implementation of clock synchronization requirements, we recommend adhering to existing FINRA policies as they relate to clock sync. As part of compliance with OATS, FINRA has established requirements for complying with their clock synchronization tolerances.⁸ We recommend ensuring that the CAT NMS Plan is consistent with existing policies and procedures in order to avoid additional expense and confusion.

Additionally, the CAT NMS Proposal states that the Processor must “accept time stamps on order events handled electronically to the finest level of granularity captured by CAT Reporters.”⁹ FINRA has worked with the industry as it relates to what it means to capture time in milliseconds. We seek clarification that time “captured” is based on the time stamp granularity available to the CAT Reporting system.

We recognize that the Commission has expressed interest in more granular time stamps and clock offset than currently in the CAT NMS Plan, we believe that stricter tolerances are already in effect at exchanges and ATs that maintain an order book. We do not believe it is necessary to mandate tolerances since those entities with matching engines already adhere to stricter clock offset tolerances for commercial reasons.

Modify Exemptive Relief Consistent with Intent

We support the intent of the exemptive relief requests and believe they are better alternatives as opposed to Rule 613. We recommend the following

⁸ See <http://www.finra.org/industry/faq-oats-clock-synchronization-faq>

⁹ CAT NMS Plan at Appendix D-8



modifications/clarifications to the exemptive relief to make them consistent with the benefits outlined in the exemptive relief.

- **CAT Reporter ID:** We request clarification that for non-execution reports, the FINRA MPID can be supplied. For new order and route reports, a CAT Reporter may not know the trading venue at which the order will be executed. It is current practice to give the FINRA MPID in those cases.
- **CAT Customer ID/Customer Information Approach:** We request updates to the exemptive relief and/or the CAT NMS Plan to allow Customer Identifying Information and Customer Account Information to be reported as part of the customer definition process. The only customer identifying information on a new order report should be the Firm-Designated ID.

Additionally, we would like to express our support for the other areas of exemptive relief. We believe the allocation report approach and the account effective date approach are critical for firms, like our clients, that use multiple third party systems to process trades including support for “done away” trades. The allocation report approach eliminates the need for major reengineering to our system that would be required to link orders or executions to allocations. The account effective date approach is consistent with how some of our firms have converted onto our system.

Provide Clarification on Information Security

We expect the CAT Processor to adhere to the highest standards as it relates to information security including the protection of PII data. We support industry recommendations in this space and seek clarification on the following questions:

- What service levels and liability will be associated with data transfers between CAT Reporters and the CAT Processor?
- How will information security be addressed with customer service staff at the Plan Processor that will assist CAT Reporters with troubleshooting?

Provide Bulk Data Access for CAT Reporters

We understand that there are concerns with providing CAT Reporters access to their own data relating to load on the CAT Processor and PII concerns but we believe this issue should be re-examined. Allowing CAT Reporters to access their own data would be beneficial for surveillance and internal compliance programs. If data access is considered as part of the initial design of the Central Repository, we believe the benefits outweigh the cost.

While CAT reporter access to data could take many forms, at a minimum, bulk data extract should be permissible in order to facilitate error correction and address regulatory inquiries. We believe this is especially important to small firms who may benefit from CAT as a source of formatted, centralized compliance data.

CAT Data Elements Comments/Recommendations

We have reviewed the data elements described in the CAT NMS Plan and offer the following comments.



Data Element	Thomson Reuters Comments
Time	<ul style="list-style-type: none"> • Today, allocation time is not consistently defined or captured. • Providing allocation time may prove difficult without guidance that defines allocation time as the time it is processed by the CAT Reporting system. • Alternately, guidance could be given that it is permissible for CAT Reporting systems to pass through allocation time received and if the field is missing allow a default to the CAT reporting system's allocation processing time
SRO MPID	Firms should be allowed to provide FINRA MPID on new order and route reports consistent with OATS today
Execution Reported to a Plan	This data element is requested on execution reports and should be determined by the CAT Processor as opposed to being submitted by the CAT Reporter
Customer Account Information	<ul style="list-style-type: none"> • Customer Account Information should only be required as part of the customer definition process. • In order to clarify that Customer Account Information is not required on New Order reports, an amendment to the CAT NMS Plan and/or expanded exemptive relief may be required
Customer Identifying Information	<ul style="list-style-type: none"> • Customer Identifying Information should only be required as part of the customer definition process. • In order to clarify that Customer Identifying Information is not required on New Order reports, an amendment to the CAT NMS Plan and/or expanded exemptive relief may be required
Firm-Designated ID	<ul style="list-style-type: none"> • The only customer identifying information required on order events including the new order and allocation report should be the Firm-Designated ID
Account Type	<ul style="list-style-type: none"> • Maintain consistency with existing OATS definition
Customer Type	<ul style="list-style-type: none"> • We are unable to find a definition of Customer Type in the CAT NMS Plan or Rule 613. • We recommend using an existing field currently reported to the SROs or the SEC in order to minimize implementation effort. • We request clarification or an amendment to the Plan with a definition of customer type and would appreciate the opportunity to comment on the implementation impact of the field.
Open/Close Indicator	<ul style="list-style-type: none"> • This field should be for options only. • We do not populate this field for equities today nor is it required on equities trading specifications.
CAT Order ID	<ul style="list-style-type: none"> • We request consistency between the CAT Order ID and the FINRA OATS Order ID in terms of field length and type (e.g., alphanumeric)



Role in the account (e.g., primary holder, joint holder, guardian, trustee, person with the power of attorney)	<ul style="list-style-type: none">• This information may not be consistently maintained across firms.• Population and maintenance of this data field may be an issue.• We recommend this field be required on a go-forward basis with new accounts created after the implementation of CAT reporting.
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Conclusion

Thomson Reuters appreciates the opportunity to comment on the CAT NMS Plan. CAT represents the next generation audit trail that should replace existing systems. We respectfully request that the Commission take pragmatic steps to reduce the implementation burden associated with this project. The recommendations outlined above could eliminate 3 years of duplicative processing, saving the industry approximately \$5.1 billion.

We applaud the SEC for assigning a project manager “tasked with shepherding this project along” and encourage the SEC to integrate sound project management principles into the CAT NMS Plan prior to approval. We expect significant development, testing and ongoing costs to implement and maintain CAT. By following best practices associated with implementing large-scale projects, the Commission can reduce both the cost and risk associated with CAT. We look forward to working with the Commission and SROs in implementing CAT and would welcome further discussion.

Regards,

Manisha Kimmel
Chief Regulatory Officer, Wealth Management
Thomson Reuters