

**Testimony of**  
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**Before the Committee on Banking, Housing, and Urban Affairs**  
**United States Senate**  
**October 22, 2019**

Chairman Crapo, Ranking Member Brown, and Members of the Committee:

On behalf of FINRA CAT, LLC, a subsidiary of the Financial Industry Regulatory Authority, or FINRA, I would like to thank you for the opportunity to testify today. I serve as the President and Chief Operating Officer of FINRA CAT, LLC, and I welcome the Committee's invitation to discuss specific details of FINRA CAT's work as the Plan Processor of the Consolidated Audit Trail, or CAT, since FINRA CAT stepped into the role six months ago.

The CAT is designed to be a centralized source of information on activity in the equities and listed options markets. The Securities and Exchange Commission (SEC) adopted Rule 613 in the wake of the 2010 flash crash to require the CAT to be created. The SEC explained at the time that the purpose of the CAT is to create a comprehensive consolidated audit trail that allows regulators to efficiently and accurately track all activity in these securities throughout the U.S. markets to facilitate comprehensive market reconstructions, more robust market surveillance, and better analytics to support policy making.<sup>1</sup> Given the size and complexity of the financial markets, the CAT must collect, process, and store a vast amount of data to achieve this goal. This is a highly complex project that requires deep technological expertise, sophisticated and proactively evolving security, close regulatory coordination with the SEC and the consortium of self-regulatory organizations (SROs) responsible for managing the CAT

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<sup>1</sup> See Securities Exchange Act Release No. 67457 (July 18, 2012), 77 FR 45722 (August 1, 2012) (SEC adopting release for Rule 613 to require the national securities exchanges and FINRA to file a national market system (NMS) plan for the creation, implementation, and maintenance of the CAT).

(SRO consortium),<sup>2</sup> and full-time engagement with broker-dealers that ultimately must report data to the CAT.

The CAT NMS Plan was filed with the SEC by the SRO consortium to meet the SEC's Rule 613 requirements, and the Plan was approved by the SEC on November 15, 2016.<sup>3</sup> FINRA CAT began serving as the CAT Plan Processor in April of this year after being selected by the SRO consortium to build and operate the CAT system. Since our selection, FINRA CAT has been performing these functions on a contract basis for the SRO consortium, in accordance with the consortium's CAT NMS Plan.

FINRA CAT appreciates that there is interest in the CAT from multiple perspectives. The CAT is an important tool that must be built properly so that the market regulators—including the SEC, FINRA, and the national securities exchanges—can use it as intended to efficiently and accurately track all activity in the U.S. securities markets. In addition, given the importance of sensitive information to the success of the CAT in achieving its goals, its security is of paramount concern to the regulators, to industry members who will report data to the CAT, to investors, and to the public.

FINRA CAT is fully committed to serving these interests. The leadership and staff of FINRA CAT have significant experience in developing audit trail technology and utilizing it for regulatory purposes. In addition, FINRA CAT has access to the full resources of FINRA and its long, successful work in this area, expertise that has been valuable in the months since FINRA has been tasked with the development of the CAT. With this support, FINRA CAT's work to build the CAT is on schedule. FINRA CAT also is committed to receiving input from all stakeholders so that it may serve its role most effectively. Close engagement with the SROs, SEC, industry stakeholders, the public, and Congress is critical to FINRA CAT's efforts and the efforts of the SRO consortium.

### **Transition to FINRA CAT**

After FINRA was selected by the SRO consortium to succeed the former Plan Processor, FINRA CAT, a subsidiary of FINRA, was created to focus solely on performing the functions of the Plan Processor.<sup>4</sup>

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<sup>2</sup> The twenty-four participants currently in the consortium are: BOX Exchange LLC; Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe C2 Exchange, Inc. and Cboe Exchange, Inc.; FINRA; Investors Exchange LLC; Long-Term Stock Exchange, Inc.; 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; and New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc. and NYSE National, Inc.

<sup>3</sup> See <https://www.sec.gov/rules/sro/nms/2016/34-79318.pdf>

<sup>4</sup> While FINRA is a member of the consortium, FINRA recused itself and did not take part in the selection decision.

Importantly, FINRA CAT is a regulated entity. FINRA CAT is part of FINRA’s parent SRO umbrella and accordingly an “SCI Entity.”<sup>5</sup> This means that while FINRA CAT serves as a contractor for the SRO plan participants and is not a CAT NMS Plan participant itself, FINRA CAT nevertheless is subject directly to the SEC’s jurisdiction, including Regulation Systems Compliance and Integrity (Reg SCI). FINRA CAT’s status as an SCI Entity ensures direct accountability—both to the SRO plan participants and to the SEC—for important issues like system security, integrity, capacity, and business continuity.

While FINRA CAT is part of FINRA’s parent SRO umbrella and supported by FINRA resources, FINRA CAT is a distinct corporate subsidiary with controls in place to create sufficient separation from FINRA operations where needed and appropriate. We have built out a dedicated FINRA CAT operations staff led by me and a Chief Technology Officer. We also hired, with the approval of the SRO consortium, a Chief Information Security Officer (CISO) and a Chief Compliance Officer (CCO). These officers are responsible, respectively, for FINRA CAT’s information technology security and governance and regulatory compliance programs. These two positions also owe fiduciary duties to the SRO consortium, as specified in the CAT NMS Plan.<sup>6</sup>

Since becoming the Plan Processor in April, FINRA CAT has worked closely with the SRO consortium and SEC staff to expeditiously put in place a solution for the first scheduled phase of the CAT—specifically, the collection and processing of order and trade data from the equities and options exchanges and FINRA.<sup>7</sup> For equities, FINRA CAT has been able to leverage existing data feeds the exchanges currently provide to FINRA, and in June, FINRA CAT deployed a significant technology release to ingest and validate newly reported options data from the options exchanges. FINRA CAT has used scalable technology to process, on average, over 100 billion market records a day during this period with no material operational issues or delays.

This current quarter, FINRA CAT will be finishing the development of analytical tools that allow the SEC and SRO plan participants, as regulatory users of the CAT, to analyze and run complex queries on the CAT data. In addition, these tools will include functionality that allows regulatory users to see visual displays of the consolidated equity market order book for any given period of time. An example of this is the delivery of multifactor authentication, an important security enhancement, months ahead of its originally planned implementation date of May 2020.

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<sup>5</sup> See <https://www.sec.gov/rules/sro/finra/2019/34-85764.pdf>

<sup>6</sup> See Section 4.6(a) of the CAT NMS Plan, available at [https://catnmsplan.com/wp-content/uploads/2019/09/CAT-2.0-Consolidated-Audit-Trail-LLC%20Plan-Executed\\_\(175745081\)\\_1.pdf](https://catnmsplan.com/wp-content/uploads/2019/09/CAT-2.0-Consolidated-Audit-Trail-LLC%20Plan-Executed_(175745081)_1.pdf)

<sup>7</sup> For purposes of CAT reporting, FINRA data includes information about activity in the over-the-counter markets reported to FINRA’s Trade Reporting Facilities, Alternative Display Facility, and Over-the-Counter Reporting Facility. More information can be found on [www.finra.org](http://www.finra.org).

## Upcoming Milestones – Industry Member Reporting to CAT

At the same time that FINRA CAT has been working to implement the first phase of CAT data reporting from plan participants, we also have been dedicating substantial resources to preparing for the next stage—industry member reporting, which is scheduled to be phased in from April 2020 to July 2022.<sup>8</sup>

Looking ahead, large and small firms that currently report similar audit trail data to FINRA’s existing Order Audit Trail System (OATS) will begin reporting equities data in April 2020, followed by large firm reporting of options data in May 2020. Small firms that do not currently report to OATS are scheduled to begin reporting in December 2021. Initially, industry member data will be limited to information concerning order and trade events. After a number of interim phases that will require the reporting of increasingly complex order and trade information, the final phase of industry member reporting—as currently contemplated by the SEC-approved CAT NMS Plan—calls for certain customer and account information reporting beginning in July 2022. Prior to each new reporting phase, there will be mandatory test periods to promote compliance for the broker-dealers reporting data to the CAT. FINRA CAT continually looks for opportunities to accelerate the timeline where possible.

Achieving these reporting milestones requires significant effort from all parties. FINRA CAT is involved in full-time industry engagement through a variety of channels. FINRA CAT has worked with the consortium and CAT stakeholders to publish lengthy guidance on a variety of industry reporting scenarios, a schema for industry member reporting, and final technical specifications for the initial industry reporting phases.<sup>9</sup> FINRA CAT and the SRO participants provide frequent presentations to the industry, which are archived on the SRO consortium’s dedicated CAT NMS Plan website.<sup>10</sup> FINRA CAT also maintains a fully staffed Help Desk to maintain an open line of communication.

Active broker-dealer participation and feedback is a critical part of this engagement, as the success of CAT requires effective broker-dealer implementation of the CAT reporting requirements. There are a number of industry representatives involved in the governance of the CAT NMS Plan through their participation on an advisory committee established by the CAT NMS Plan.<sup>11</sup> A group of industry representatives join a weekly working group discussion that FINRA CAT co-chairs with the consortium to identify and resolve interpretive questions. With the help of this weekly discussion forum, FINRA

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<sup>8</sup> See <https://catnmsplan.com/timelines/>

<sup>9</sup> See <https://catnmsplan.com/technical-specifications/index.html>

<sup>10</sup> See <https://catnmsplan.com/news-page/index.html>

<sup>11</sup> See Section 4.13 of the CAT NMS Plan, available at [https://catnmsplan.com/wp-content/uploads/2019/09/CAT-2.0-Consolidated-Audit-Trail-LLC%20Plan-Executed\\_\(175745081\)\\_\(1\).pdf](https://catnmsplan.com/wp-content/uploads/2019/09/CAT-2.0-Consolidated-Audit-Trail-LLC%20Plan-Executed_(175745081)_(1).pdf)

CAT and the SRO consortium have published answers to numerous frequently asked questions and continue to answer new questions regularly.<sup>12</sup>

Active SEC involvement is critical as well. Each week, FINRA CAT hosts a call with SEC staff and the SRO plan participants to provide an update on project development and progress. FINRA CAT appreciates the time, investment, and insight provided by the SEC staff on all aspects of the CAT, and FINRA CAT has been happy to report so far that its work is on schedule.

FINRA CAT recognizes that challenges are sure to arise throughout the industry phase-in. Prior to becoming the Chief Operating Officer of FINRA CAT, I worked for 25 years with FINRA's market regulation program, including on the successful multi-phase implementation of FINRA's OATS reporting requirements. Today, FINRA combines OATS data with other regulatory data to process on average more than 78 billion records a day. As I and my FINRA CAT colleagues draw on our extensive prior experience with audit trail implementation, we welcome dialogue with the industry and all CAT stakeholders, particularly as we encounter new challenges unique to CAT reporting and prepare CAT to support regulators' efforts to retire existing systems like OATS.

### **Security and Customer Identifying Information**

Under the current CAT NMS plan approved by the SEC in 2016,<sup>13</sup> industry members will be required to report certain customer identifying information, including account numbers and some personally identifying information, or PII. While we recognize the ongoing policy discussions related to the necessity of specific elements of PII to the success of the CAT, those requirements are ultimately matters the SRO consortium and the SEC must determine. However, I can assure the Committee that the security of PII, and of all CAT data more broadly, is of the utmost priority to FINRA CAT, and I can address the data security program that FINRA CAT has put in place to meet the CAT NMS Plan's requirements.

In terms of FINRA CAT's overall information security program, we are led by a CISO who was approved by the SRO consortium who is also its fiduciary. Our CISO has over 20 years' experience working on information security at FINRA, including as a security architect and security engineer. The CISO is supported by a dedicated team of security analysts who ensure that security controls are effectively implemented, monitor the security of the CAT System and respond to anomalies, evaluate and approve access, enforce compliance with security policies and standards including National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53, and evaluate evolving threats and security control opportunities to ensure that the CAT security posture remains strong. In addition, the FINRA CAT security team is able to leverage the security expertise and advanced technology solutions that FINRA has invested

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<sup>12</sup> See <https://catnmsplan.com/faq/index.html>

<sup>13</sup> See <https://www.sec.gov/rules/sro/nms/2016/34-79318.pdf>

heavily in over the years, including the people, process, and technologies it has developed and deployed to operate a secure cloud environment that is comparable in scale to the fully deployed CAT solution. As the SRO consortium recently discussed in a presentation to the industry, the FINRA CAT security program includes significant layers of architectural-level security controls and program-level security controls.<sup>14</sup> Examples of architectural controls include secure infrastructure for connecting to the CAT system and architectural separation between transaction data and PII. Examples of program controls include a full suite of information security policies, procedures, and standards, as well as regularly scheduled independent third-party system penetration testing, code reviews, and security control validation.

The extensive FINRA CAT security policies address a range of issues required by the CAT NMS Plan, including data storage and handling, insider risk, data connectivity and transfer, incident management, security logging and monitoring, and account management. FINRA CAT's security program is based on work product developed by the FINRA CAT CISO in coordination with a security working group made up of CISOs and security experts from each of the SRO plan participants.

Each CAT System release is subject to the granting of an Authority To Operate (or ATO) by the SRO consortium. To obtain an ATO from the consortium, the CAT CISO presents a package of materials to the security working group that demonstrates the strength of the CAT System's security posture. This package includes the system security plan, internal and third-party security testing reports, and an independent validation and verification report confirming that security controls are aligned with the NIST industry standards followed by the federal government.<sup>15</sup>

FINRA CAT understands concerns that continue to be raised about the inherent risk of handling CAT data, particularly PII. Even with the enhanced architectural and program controls required by the plan for PII—such as containing PII in its own separate system with restricted access—there may be policy questions for the SEC and SRO consortium to discuss about the costs and benefits of collecting and storing sensitive personal data.

FINRA CAT's job is to support the regulators' decision-making on this issue. This includes making any modifications to the system design to account for current discussions between the SEC, the SRO consortium, and the industry. As SEC Chairman Clayton recently noted before the House Financial Services Committee, the SROs are refining the details of a recommendation to eliminate social security numbers, account numbers, and dates of birth from the CAT, filing a request last week with the SEC to formalize the modified approach.<sup>16</sup> FINRA CAT continues to work closely and

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<sup>14</sup> See <https://catnmsplan.com/news-page/cat-industry-webcast-recording-08-28-19/>

<sup>15</sup> See <https://catnmsplan.com/news-page/cat-industry-webcast-recording-08-28-19/>

<sup>16</sup> See Letter from Michael Simon, CAT NMS Plan Operating Committee Chair, to Vanessa Countryman, SEC, Request for Exemptive Relief from Certain Provisions of the CAT NMS Plan related to Social Security Numbers, Dates of Birth and Account Numbers (Oct. 16, 2019), available at <https://www.catnmsplan.com/wp-content/uploads/2019/10/CCID-and-PII-Exemptive-Request-Oct-16-2019.pdf>

productively with the SEC and the SROs to ensure that it has the right technological solution in place for when customer and account information reporting begins in July 2022.

## **Conclusion**

Thank you again for the opportunity to appear today. The CAT is a major regulatory undertaking meant to help the SEC, FINRA, and the exchanges better regulate our securities markets. FINRA CAT recognizes the role it must play as the CAT Plan Processor to make the CAT fully operational and secure. We are on target to complete the build on time and in line with the strict data security protocols established in the SEC-approved CAT NMS Plan. We look forward to our continued collaboration with Congress, the SRO consortium, the SEC, market participants, stakeholders and the public as we work to achieve the project's goals.