

Testimony of Tyler Gellasch, Executive Director of the Healthy Markets Association
Hearing on *Implementation and Cybersecurity Protocols on the Consolidated Audit Trail*
Before the House Financial Services Committee, Subcommittee on Capital Markets,
Securities and Investment

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Chairman Huizenga, Ranking Member Maloney, and other members of the Subcommittee, thank you for holding this hearing, and for offering me the opportunity to appear before you today.

The Consolidated Audit Trail (“Audit Trail”) will be a critical tool for regulators to understand exactly how our capital markets work. But after more than seven and a half years of planning and building, we are still years away from it realizing its potential.

Unquestionably, the design, building, and utilization of the Audit Trail are complex and costly. There are also risks, including both security risks and the risk that this will be just a massive waste of resources. In recent days, many opponents to the creation of the Audit Trail have chosen to focus on some of these risks, without regard to how those risks are being managed and without regard to the benefits of having an Audit Trail.

I would like to share with you five key thoughts today.

- First, the Audit Trail is incredibly important, and long overdue.
- Second, the Audit Trail is not unique in the security and implementation challenges it poses, and the self regulatory organizations and plan processor have spent years ensuring that they meet industry standards and best practices in dealing with those challenges.
- Third, the tortured history of the Audit Trail demonstrates how outsourcing a key government responsibility to a group of for-profit entities easily frustrates important public policy objectives.
- Fourth, the Audit Trail should be implemented and enhanced, including through the addition of futures market data and legal entity identifiers, as well as with refined precision without delay.
- Fifth, the NMS Plan model being used to develop and implement the CAT is deeply flawed, and should be dramatically revised or eliminated.

In the pages that follow, I’ll walk through what the Audit Trail is and why it is needed. I’ll explore why it doesn’t already exist. Finally, I will offer my suggestions as to what Congress and the SEC should do now.

About Healthy Markets

The Healthy Markets Association is an investor-focused, not-for-profit coalition working to educate market participants and promote data-driven reforms to market structure challenges.¹ Our members, who range from a few billion to hundreds of billions of dollars in assets under management, have come together behind one basic principle: Informed investors and policymakers are essential for healthy capital markets.

Since our launch in September 2015, we have become a leading voice for investors in the market structure debates.² For more information about Healthy Markets, please see our website at healthymarkets.org.

What is the Consolidated Audit Trail and Why Do We Need It?

In many respects, the Audit Trail will be, when finally implemented, a fraction of what most lay-people would probably think the government already has--a view of what's going on in the markets.

What most lay people don't know, but is widely understood within the financial services industry, is that the oversight of our capital markets is largely disjointed. Historically, as exchanges and different trading venues formed and evolved, they each took responsibility for overseeing trading on their markets. As a result, a disparate framework of audit trail systems has emerged--each of which is focused on the priorities of the responsible regulator.

At the same time, many market participants have built systems to seamlessly view and trade across different venues and different asset classes overseen by different regulators.

¹ Prior to joining Healthy Markets as its first Executive Director, I served as Senior Counsel in the United States Senate, as well as Counsel to SEC Commissioner Kara M. Stein. Prior to my government service, I practiced law in the field of securities regulation at leading law firms in New York City and Washington, DC. While in the US Senate, I worked as the lead staffer for several Senate hearings and reports related to the US capital markets, including a post-Flash Crash hearing on the stability and integrity of the markets.

² For example, Healthy Markets has:

- Drafted dozens of unique reports and analyses regarding market structure and regulatory developments, including our industry-leading monthly publication, "Market Structure Insights";
- Created two industry-leading "due diligence" questionnaires to assist investors and brokers in evaluating order routing practices and ATS risks; and
- Offered significant input on numerous topics to Congress, the Securities and Exchange Commission, the SEC's Equity Market Structure Advisory Committee, and the Treasury Department through dozens of meetings and comment letters.

For example, consider the options available to modern trading firms that think the US stock market looks like a good investment. They may view E-mini futures contracts or options on those contracts, which can be traded on CME. Or they may trade the SPDR S&P 500 ETF (SPY), or the Standard & Poor's 500 Index (SPX). Or they may trade options or swaps on those. Or they may trade any number of individual securities, options, swaps, or futures that may include one or more related or underlying instruments. Further, the financial instruments themselves may be traded on numerous venues. And the legal entities doing the trading may be regulated by several different US regulators, each with its own jurisdiction, priorities, and requirements.

The good news is that market participants have figured this out-- not just in the US, but around the world. If news in Brussels suggests that a major US company is going to have to pay more in taxes than had been disclosed, then market participants will immediately trade and adjust their prices in all of these related financial products. These firms use extremely smart people and some of the most impressive (and fastest) communications technology in the world. They see the capital markets as a complete picture.

Unfortunately, regulators don't have this view. And they certainly don't have consistent rules to address how trading in these various markets interacts. Instead, the regulators have a patchwork of audit trail systems cobbled together from historical accident and necessity. One of the key current systems is FINRA's Order Audit Trail System (OATS).

That system was originally born out of scandal. In 1996, the SEC brought an action against NASD³ for "serious deficiencies" in its oversight of trading on Nasdaq, including for failure to take adequate steps in response to collusion and price fixing on its market, failure to enforce the firm quote rule, failure to enforce the trade reporting rule, and failure to enforce NASD membership rules.⁴ As one of its remedial measures, the NASD began the development of an "enhanced audit trail."⁵

In 1998, the SEC issued an order approving NASD Regulation's proposal to create the enhanced audit trail, which by then had become known as OATS.⁶ OATS is currently operated by NASD's successor, the Financial Industry Regulatory Authority (FINRA). Notably, OATS shares many significant characteristics with the current Audit Trail, but is lacking in breadth and depth of clarity. For example, the underlying beneficial owner is typically not reported. Thus, if a market participant trades using different brokers or accounts, the regulators are hard pressed to identify if the trading activity is related.

³ The National Association of Securities Dealers, Inc. was a self-regulatory organization tasked with overseeing the Nasdaq markets, and is the predecessor to the Financial Industry Regulatory Authority (FINRA).

⁴ *In the Matter of National Association of Securities Dealers, Inc.*, Exchange Act Rel. No. 34-37538 (Aug. 8, 1996), available at <https://www.sec.gov/litigation/admin/3437538.txt>.

⁵ *Report Pursuant to Section 21(a) of the Securities Exchange Act of 1934, Regarding the NASD and the NASDAQ Market*, Sec. and Exch. Comm'n, available at <https://www.sec.gov/litigation/investreport/nd21a-report.txt>.

⁶ *Various Orders Relating to the Creation of an Order Audit Trail System*, Sec. and Exch. Comm'n, (Mar. 6, 1998), available at <https://www.sec.gov/rules/sro/nd97560.htm>.

This creates significant shortcomings, and the lack of consolidation creates even more. In many respects, the existing audit trails fail to contain complete, accurate, accessible, and timely enough information to be truly effective regulatory tools.⁷ As the SEC has explained:

Some of these shortcomings are a result of the disparate nature of the systems, which make it impractical, for example, to follow orders through their entire lifecycle as they may be routed, aggregated, re-routed, and disaggregated across multiple markets. The lack of key information in the audit trails that would be useful for regulatory oversight, such as the identity of the customers who originate orders, or even the fact that two sets of orders may have been originated by the same customer, is another shortcoming.⁸

When I joined the US Senate staff in 2009, improving the known deficiencies in tracking orders was one of my priorities. It made no sense to me that private market participants--some of whom were my former clients--had a much more comprehensive view of the markets than the regulators tasked with overseeing them. The SEC staff was interested in working on it, but they also were struggling with a lot of other things at the time, such as digging out from the financial crisis and helping with what would become the Dodd-Frank Act. Not to mention, funding was tight.

That said, the SEC knew that all of the regulators had very large blind spots--most notably, they weren't able to see who was actually trading in any coherent way. In fact, just a few weeks before the Flash Crash, the SEC proposed a large trader reporting system, which was designed to help the SEC identify and obtain "certain baseline trading information about traders that conduct a substantial amount of trading activity."⁹ When the SEC finalized its large trader reporting system in 2011, the first paragraph of its introduction began with:

The Commission's ability to analyze market movements and investigate the causes of market events in an expeditious manner, as well as efficiently conduct investigations of regulated entities and bring and prosecute enforcement matters, is influenced greatly by its ability to promptly and efficiently identify significant market

⁷ *Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-67457 (Jul 18, 2012), 77 Fed. Reg. 45722 (Aug. 1, 2012), (CAT Final Rule), available at <https://www.gpo.gov/fdsys/pkg/FR-2012-08-01/pdf/2012-17918.pdf>.

⁸ CAT Final Rule.

⁹ *Large Trader Reporting System*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-61908, 75 Fed. Reg. 21456 (Apr. 23, 2010), available at <https://www.sec.gov/rules/proposed/2010/34-61908fr.pdf>. This system, which was implemented by Rule 13h-1 and Form 13H, requires large traders to get a unique identifier, which they are required to share with their broker-dealers, so that their trading activities across venues can be more readily identified and tracked. *Large Trader Reporting*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-64976 (Jul. 27, 2011), 76 Fed. Reg. 46960 (Aug. 3, 2011), (Large Trader Reporting Final Rule), available at <https://www.sec.gov/rules/final/2011/34-64976fr.pdf>.

participants across equities and options markets and collect uniform data on their trading activity.¹⁰

The large trader reporting requirement was intended to supplement the existing audit trails, which provide regulators with the identity of the broker-dealers involved. However, if the SEC wants to dig deeper into trading-related activity, then they have to rely on FINRA to engage in a formal request to the broker-dealer to identify the underlying customers, known as the “blue sheet” process.¹¹ For their parts, the underlying broker-dealers are required to “know your customer,” including by collecting key personal identifying information, such as Social Security numbers and Tax Identification numbers.¹² Of course, traders that are not broker-dealers have posed a unique challenge.

This “blue sheet” process is extremely valuable, if regulators already know of the trades, individuals or firms they want to examine. But it is also cumbersome, and often ineffective. Most importantly, it requires the regulator to know what it wants to investigate before starting it. This is a very significant weakness to market surveillance.

FINRA currently oversees the vast majority of market surveillance for the equities and options markets. It has extremely sophisticated “patterns” that screen for potentially abusive trading activity for the vast majority of equities and options exchanges in the US. FINRA’s surveillance covers 11 of the 12 active equities exchanges (meaning its cross market program covers over 99.5% of U.S. equity market activity) and it provides regulatory services for all 15 U.S.-based options exchanges (with cross-market surveillance for 10 markets covering approximately 65% of options contract volume).

However, despite this broad coverage, when trading activity is spread across different brokers and venues, it is nearly impossible to detect in any automated way, unless the trading activities exhibit obvious similarities (e.g., they are always with the same counterparties). Thus, despite the best efforts of FINRA and the best systems currently available, without an automated way to link trading activity to the underlying beneficial owners, there is very little chance to identify and stop sophisticated abuses without the assistance of a whistleblower.

For example, assume that one trader opens accounts with seven different broker-dealers and then engages in market manipulations on multiple market venues in equities and options. The regulators would see these as likely unrelated activities (from different broker-dealers), and so no investigation would ensue. Even worse, even if the activities somehow triggered the blue sheet

¹⁰ Large Trader Reporting Final Rule, at 46960.

¹¹ For more information on the Blue Sheet process, see FINRA’s Frequently Asked Questions, *available at* <http://www.finra.org/industry/blue-sheets>.

¹² In 2011, FINRA proposed tying the rollout of the Consolidated Audit Trail to the Large Trader Reporting Rule requirements, which would give it the key beneficial owner information for the traders who pose the vast majority of volume in the securities markets. See Letter from Richard Ketchum, FINRA to Carlo di Florio and Robert Cook, Sec. and Exch. Comm’n, Apr. 6, 2011, *available at* <https://www.sec.gov/comments/s7-11-10/s71110-91.pdf> (attaching FINRA Blueprint for a Consolidated Audit Trail (CAT)).

process, it's not entirely clear all of the activities would be captured or linked back to the same underlying trader.¹³ In reality, this activity is likely only identified if there is a whistleblower. In fact, we only need to look to the Flash Crash to see how this all works (or doesn't).

The Flash Crash of May 6, 2010 was a seminal event for the markets and for our regulators. It demonstrated just how vulnerable--and resilient--our markets can be to dramatic, unexpected shocks.

May 6, 2010 started off like an ordinary day. The European sovereign debt crisis, led by Greece, was weighing on the markets, but there wasn't anything significant to distinguish it from the day before. There was no major news.

Nevertheless, beginning shortly after 2:30 pm EDT, in a matter of just minutes, the market whipsawed over 1000 points. As market participants and regulators watched in panic, the markets dropped nearly 9%, causing over \$1 trillion in market capitalization to disappear. Then almost as quickly as it was gone, the markets largely recovered just prior to the markets close.

Almost as bizarrely, the declines appeared to be very uneven. Some Exchange Traded Funds and individual companies' stocks suffered the brunt of the decline, while others were almost completely unchanged. S&P 500 stocks were pummeled. For example, the stock price for Accenture dropped from \$41 per share at 2:30pm EDT to one cent at 2:47:53pm.¹⁴ A timeline of the events is below in Figure 1.¹⁵

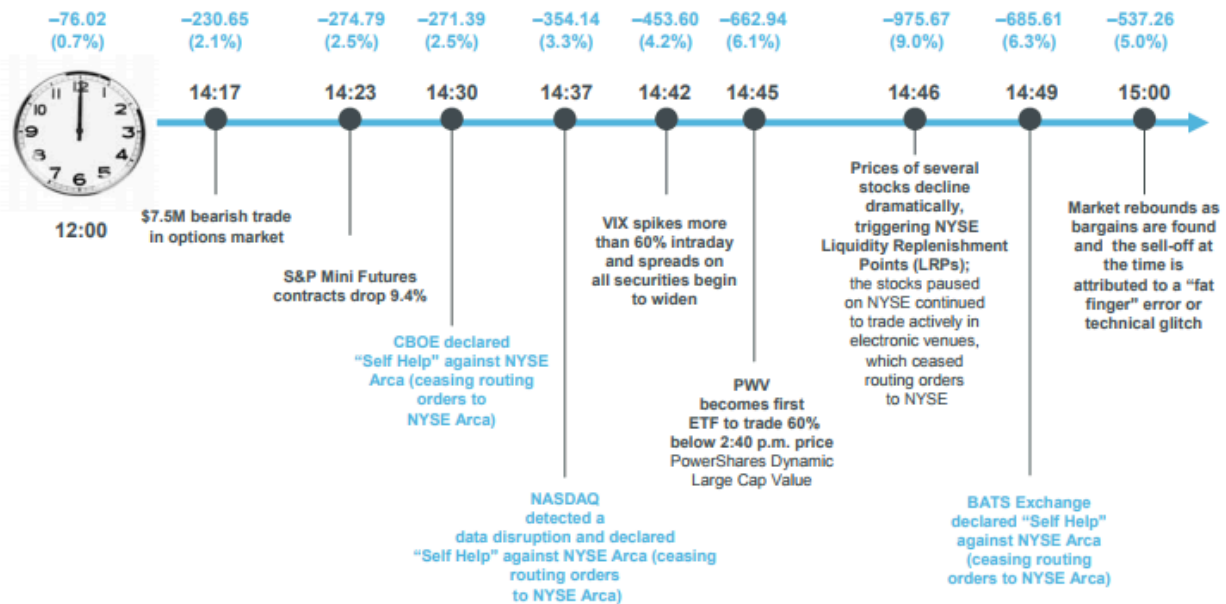
¹³ The large trader reporting system is intended to automate some of this process for very large volume traders. However, this still has significant gaps. Large Trader Reporting Final Rule.

¹⁴ Many trades were busted as a result of erroneous pricing including trades in Accenture that were originally executed at fractions of any reasonable pricing. See Matt Phillips, *Accenture's Flash Crash: What's an Intermarket Sweep Order*, Wall Street Journal, (May 7, 2010), available at <https://blogs.wsj.com/marketbeat/2010/05/07/accentures-flash-crash-whats-an-intermarket-sweep-order>

¹⁵Source: Blackrock ViewPoint, Understanding the "Flash Crash", November 2010 available at <https://www.blackrock.com/corporate/en-ch/literature/whitepaper/understanding-the-flash-crash-nov-2010.pdf>

FIGURE 1

Figure 1: May 6 timeline and sequence of events
DJIA change since opening



Sources: Nomura, U.S. Market Microstructure—May 2010; Wall Street Journal; BlackRock.

While the markets have experienced precipitous declines during a single day, the May 6, 2010 market event was unique and terrifying.

The Flash Crash touched the very fabric of U.S. market structure, and exacted a huge toll on investor psychology and confidence.¹⁶ But perhaps most troubling was the fact that there was no ability to point to a root cause for the complete evaporation of liquidity and the government regulators were at a loss to explain to the investing public the nature of the vicious market decline.¹⁷ The government took months to figure out what generally happened, and even the Preliminary and Final SEC and CFTC Joint Staff Reports on the subject left a lot of information out.¹⁸ For example, the initial reports put significant emphasis on a lone trader misusing a trading algorithm

¹⁶ For several months after the event, investors withdrew billions each month from their mutual fund holdings. And while some of it could be attributed to the rise in ETFs, not all of the withdrawals were reallocated. This is funding that was "lost" from the US public equity markets. Some of the other impacts on investors were detailed by TD Ameritrade in its report to the CFTC-SEC Committee. See e.g., Statement of Christopher Nagy, TD Ameritrade, before the Joint CFTC-SEC Committee on Emerging Regulatory Issues, (Aug. 11, 2010), available at <https://www.sec.gov/comments/265-26/265-26-32.pdf>. Notably, Nagy has since founded and served as a member of the Board of Directors for the Healthy Markets Association.

¹⁷ See *Preliminary findings Regarding the Market Events of May 6, 2010*, Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, (May 18, 2010), available at <https://www.sec.gov/sec-cftc-prelimreport.pdf> (*Preliminary Joint Staff Flash Crash Report*).

¹⁸ *Preliminary Joint Staff Flash Crash Report*; see also *Findings Regarding the Market Events of May 6, 2010*, Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, (Sept. 30, 2010), available at <https://www.sec.gov/news/studies/2010/marketevents-report.pdf> (*Joint Staff Flash Crash Report*).

in the futures markets, combined with the actions of high frequency traders.¹⁹ Essentially, trading in a broad-based futures product spilled over to the corresponding broad-based equities product, which then spilled over into individual components. And the futures and options products--which were linked by high-speed traders--were all impacted. This was a useful explanation, but parts of it still didn't make sense to many markets experts.

It wasn't until five years later that we also learned of the role of a single individual trader working from his parents' home in the outskirts of London.²⁰ Further, that case was not a result of the regulators' ability to detect the wrongdoing, but rather was a result of analysis provided by an outside whistleblower who had analyzed data.²¹

The Commission staff had known that they needed a new way to identify large traders²² and a new Consolidated Audit Trail before May 6, 2010, but their own lack of knowledge in the aftermath really brought that point home. As the Commission has explained:

the regulatory data infrastructure on which the SROs and the Commission currently must rely generally is outdated and inadequate to effectively oversee a complex, dispersed, and highly automated national market system. In performing their oversight responsibilities, regulators today must attempt to cobble together disparate data from a variety of existing information systems lacking in completeness, accuracy, accessibility, and/or timeliness—a model that neither supports the efficient aggregation of data from multiple trading venues nor yields the type of complete and accurate market activity data needed for robust market oversight.²³

I agree.

¹⁹ *Joint Staff Flash Crash Report*.

²⁰ See, Antoine Gara, *British Trader Navinder Sarao Arrested Over 2010 Flash Crash*, Forbes, Apr. 21, 2015, available at <https://www.forbes.com/sites/antoinegara/2015/04/21/british-trader-navinder-sarao-arrested-over-2010-flash-crash/#6c1ecb6d2e35>.

²¹ The trader pleaded guilty to market manipulation in November 2016, more than six years after the Flash Crash itself. See Aruna Viswanatha, *'Flash Crash' Trader Navinder Sarao Pleads Guilty to Spoofing*, Wall St. Journal, Nov. 9, 2016, available at <https://www.wsj.com/articles/flash-crash-trader-navinder-sarao-pleads-guilty-to-spoofing-1478733934>.

²² Large Trader Reporting Final Rule, at 46960 ("Though the large trader rule was proposed before the market events of May 6, 2010, that incident has emphasized the importance of enhancing the Commission's ability to quickly and accurately analyze and investigate major market events, and has highlighted the need for an efficient and effective mechanism for gathering data on the most active market participants.").

²³ CAT Final Rule, at 45723.

Why Don't We Have It Yet?

If the Commission has known it needs a better Audit Trail since 2009, then why doesn't it already exist? After all, when the SEC decided that it wanted more market information after the Flash Crash for study, it sent out a request for proposals, selected a bidder, and had the entire system built within a few years. So what's taken the Consolidated Audit Trail so long?

Essentially, the SEC ceded the vast majority of the responsibility for the development, design, implementation, and maintenance for the Audit Trail to the for-profit exchanges and FINRA. The SEC created a CAT NMS Plan, and then empowered the exchanges and FINRA (the Plan Participants) to do the real work to flesh out the details. At each stage, the SEC asked the Plan Participants to come up with a plan, which the SEC would then deny or approve. And then they would move to the next stage.

There were also significant uncertainties, costs, and conflicts of interest for the very Plan Participants tasked with driving the project forward. Add these together, and it's relatively easy to see how this process was doomed to be slow, conflicted, and inefficient from the beginning.

Slowing Down the CAT: Timeline of Significant Events

The Flash Crash happened on the afternoon of May 6, 2010. Less than three weeks later, on May 26, 2010, the Commission proposed Rule 613 to Regulation NMS.²⁴ That proposal outlined the creation of a Consolidated Audit Trail, with

details of the data elements to be collected, to the timing of data transmissions, to specific standards for data formatting. Among its various requirements, the proposed Rule mandated that the NMS plan developed by the SROs must in turn require each SRO and its members to capture and report specified trade, quote, and order activity in all NMS securities to the central repository in real time, across all markets, from order inception through routing, cancellation, modification, and execution. The proposed Rule also mandated that the NMS plan require the creation of unique order identifiers to facilitate the ability of regulators to view cross-market activity, as well as unique customer identifiers to enhance the ability of regulators to reliably and efficiently identify the beneficial owner of the account originating an order or the person exercising

²⁴ *Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-62174 (May 26, 2010), 75 Fed. Reg. 32556 (June 8, 2010), available at <https://www.sec.gov/rules/proposed/2010/34-62174fr.pdf> ('Initial CAT Proposing Release').

investment discretion for the account originating the order, if different from the beneficial owner.²⁵

The estimated cost for the creation and implementation of the CAT was \$4 billion.²⁶ Two years and many hearings later,²⁷ on July 11, 2012, the Commission adopted Rule 613.²⁸ Rule 613 requires the exchanges and FINRA to plan, implement, and maintain a consolidated audit trail.²⁹ Put specifically:

Rule 613 requires the submission of an NMS plan to create, implement, and maintain the first comprehensive audit trail for the U.S. securities markets, which will allow for the prompt and accurate recording of material information about all orders in NMS securities, including the identity of customers, as these orders are generated and then routed throughout the U.S. markets until execution, cancellation, or modification. This information will be consolidated and made readily available to regulators in a uniform electronic format.³⁰

Importantly, that final rule did little more than establish the process to create the Audit Trail.³¹ After the rule was adopted in 2012, the exchanges and FINRA were required to submit the CAT Plan to the SEC by April 28, 2013.³²

That didn't happen.

Instead, in February 2013, the exchanges and FINRA declared that they should release a request for proposals (RFP) before attempting to engage in the required economic analysis, including the consideration of alternatives.³³ That month, they requested an exemption from the

²⁵ See CAT Final Rule, at 45723 (explaining the parameters of the Initial CAT Proposing Release).

²⁶ Initial CAT Proposing Release.

²⁷ See, e.g., *Examining the Efficiency, Stability, and Integrity of the U.S. Capital Markets*, Joint Hearing of the US Senate Committee on Banking, Housing, and Urban Development, Subcommittee on Securities, Insurance and Investment and the Committee on Homeland Security and Governmental Affairs, Permanent Subcommittee on Investigations, 111th Cong. (Dec. 8, 2010) (“Reed-Levin Hearing”).

²⁸ CAT Final Rule.

²⁹ CAT Final Rule.

³⁰ CAT Final Rule, at 45726.

³¹ For example, the Commission changed several elements of the plan (including dropping “real-time” reporting), but then entirely punted on the expected reductions in costs. CAT Final Rule, at 45725-26 (stating that “In light of these changes, the Commission believes that the economic consequences of the consolidated audit trail now will become apparent only over the course of the multi-step process for developing and approving an NMS plan that will govern the creation, implementation, and maintenance of a consolidated audit trail.”).

³² CAT Final Rule.

³³ Letter from Robert Colby, FINRA, to Elizabeth Murphy, Securities and Exchange Comm’n, Feb. 7, 2013, available at <https://www.sec.gov/rules/exorders/2013/34-69060-letter.pdf>.

requirement to file the plan until December 6, 2013,³⁴ and released a request for proposal soliciting bids to be the CAT Plan processor.³⁵ The SEC granted the exemption in early March.³⁶

The day after the SEC granted that exemption, the exchanges and FINRA hosted a conference for potential bidders outlining the proposal process and requirements.³⁷ At that conference, the SROs told potential bidders that they would (1) preliminarily select the bidder by July 2013, (2) submit a CAT Plan by December 2013, and (3) select the final bidder “within two months” of the SEC approving the CAT Plan.³⁸

Once again, that didn’t happen.

Instead, in November 2013, the exchanges and FINRA asked for another temporary exemption from their obligation to submit a CAT Plan.³⁹ This time, they noted that they had created the entirely new “Selection Plan” process that had not yet been approved by the SEC, and that:

if the Selection Plan is approved, it will take approximately seven months from the time bids are received to submit the CAT NMS Plan. If the Selection Plan is not approved, bidders will need time to finalize their bids, and the SROs will need additional time to develop an alternative process for reviewing and evaluating bids, formulating the CAT NMS Plan, and selecting the plan processor.⁴⁰

On December 6, 2013, the SEC granted the requested exemption, kicking back the plan deadline to September 30, 2014.⁴¹ During the course of the consecutive exemptions, of course,

³⁴ Letter from Robert Colby, FINRA, to Elizabeth Murphy, Securities and Exchange Comm’n, Feb. 7, 2013, available at <https://www.sec.gov/rules/exorders/2013/34-69060-letter.pdf>.

³⁵ Consolidated Audit Trail National Market System Plan, Request for Proposal, Feb. 26, 2013 (revised Mar. 4, 2014).

³⁶ *Order Granting a Temporary Exemption Pursuant to Section 36(a)(1) of the Securities Exchange Act of 1934 from the Filing Deadline Specified in Rule 613(a)(1) of the Exchange Act*, Sec. and Exch. Comm’n, Exchange Act Rel. No. 34-69060, (Mar. 7, 2013), 78 Fed. Reg. 15771 (Mar. 12, 2013), available at <https://www.sec.gov/rules/exorders/2013/34-69060.pdf>.

³⁷ See Presentation for SEC Rule 613: Consolidated Audit Trail (CAT), SRO Industry Event - Bidders Conference, Plan Participants, Mar. 8, 2013, available at <http://www.catnmsplan.com/Source/process/p220975.pdf>.

³⁸ *Id.*, at 4.

³⁹ Letter from Robert Colby, FINRA, to Elizabeth Murphy, Securities and Exchange Comm’n, Nov. 7, 2013, available at <https://www.sec.gov/rules/exorders/2013/34-71018-letter.pdf>.

⁴⁰ *Id.*

⁴¹ *Order Granting a Temporary Exemption Pursuant to Section 36(a)(1) of the Securities Exchange Act of 1934 from the Filing Deadline Specified in Rule 613(a)(1) of the Exchange Act*, Sec. and Exch. Comm’n, Exchange Act Rel. No. 34-71018, (Dec. 6, 2013), 78 Fed. Reg. 75669 (Dec. 13, 2013), available at <https://www.sec.gov/rules/exorders/2013/34-71018.pdf>.

the exchanges and FINRA submitted a plan to the SEC as to how they would select the Audit Trail processor,⁴² and had it approved.⁴³

With the selection process approved, after an extensive year-long vetting and specification process involving more than 30 firms,⁴⁴ on March 21, 2014, ten bids were received. On July 1, 2014, that list was narrowed down to six bidders, including both FINRA and Thesys Technologies.⁴⁵

Nearly a year and half after it was initially due, on September 30, 2014, the exchanges and FINRA submitted their first “CAT Plan.”⁴⁶

More delays and exemptions would follow.

Throughout 2015, as the exchanges and FINRA got down to the details of the Audit Trail, they sent several exemption requests to the SEC to loosen various technical requirements set forth in the plan.⁴⁷ Then, nearly a year and a half after submitting their first CAT Plan, they submitted their amended CAT Plan on February 27, 2016. A few weeks later, the SEC granted the SROs’ substantive exemptive requests. Then, several weeks after that, on April 27, 2016, the SEC sent the amended CAT Plan out for comment.⁴⁸

⁴² Notice of Filing of Proposed National Market System Plan Governing the Process of Selecting a Plan Processor and Developing a Plan for the Consolidated Audit Trail, Exchange Act Rel. No. 34-70892 (Nov. 15, 2017), available at <https://www.sec.gov/rules/sro/nms/2013/34-70892.pdf>.

⁴³ Order Approving Proposed National Market System Plan Governing the Process of Selecting a Plan Processor and Developing a Plan for the Consolidated Audit Trail, Sec. and Exch. Comm’n, Exchange Act Rel. No. 34-71596 (Feb. 21, 2014), 79 Fed. Reg. 11152 (Feb. 27, 2014) (“Selection Plan Approval Order”), available at <https://www.gpo.gov/fdsys/pkg/FR-2014-02-27/pdf/2014-04240.pdf>.

⁴⁴ The Participants received 31 Intent to Bid forms, during a preliminary review process. Over the course of the year before formal bids were returned, most of the firms withdrew their intents to bid. See, List of Intents to Bid Forms, available at <http://www.catnmsplan.com/Source/process/p217583.pdf> (last viewed Nov. 20, 2017).

⁴⁵ See Scott Patterson and Bradley Hope, *Bidders for SEC’s CAT System Narrowed to Six from 10*, Wall St. Journal, July 1, 2014, available at <https://www.wsj.com/articles/bidders-for-secs-consolidated-audit-trail-system-narrowed-to-six-from-10-1404247796>. The selection of the winning bidder was actually delayed for another two and a half years.

⁴⁶ Letter from Participants to Brent J. Fields, Sec. and Exch. Comm’n, Sept. 30, 2014, available at <https://www.sec.gov/divisions/marketreg/cat-nms-plan-letter.pdf>. At that time, the exchanges and FINRA noted that “Since July 2012, [they] have held approximately 509 meetings related to the CAT.” *Id.*

⁴⁷ See, Letter from Participants to Brent J. Fields, Sec. and Exch. Comm’n, Jan. 30, 2015, available at <https://www.sec.gov/rules/exorders/2016/finra-incoming-letter-013015.pdf>; Letter from Participants to Brent J. Fields, Sec. and Exch. Comm’n, Apr. 3, 2015, available at <http://www.catnmsplan.com/wp-content/uploads/2017/03/exemptivesupplement1-allocationsreports.pdf>; Letter from Participants to Brent J. Fields, Sec. and Exch. Comm’n, Sept. 2, 2015, available at <http://www.catnmsplan.com/wp-content/uploads/2017/03/exemptivesupplement2-accounteffectivevdate.pdf>.

⁴⁸ Notice of Filing of the National Market System Plan Governing the Consolidated Audit Trail, Sec. and Exch. Comm’n, Exchange Act Rel. No. 34-77734, (Apr. 27, 2016), 81 Fed. Reg. 30614 (May 17, 2017), available at <https://www.sec.gov/rules/sro/nms/2016/34-77724.pdf>.

With the amended CAT Plan in hand, then it was the SEC's turn to ask for a delay.

The Commission then had 120 days after publication in the Federal Register to act on the CAT Plan. Upon publishing it for comment, the SEC received 22 comment letters (a relatively small number). Nevertheless, the Commission decided that it needed more time to digest the 22 comment letters, and gave itself an extension until November 10, 2016 to act.⁴⁹ On November 15, 2016, the SEC finally approved the amended CAT Plan.⁵⁰ Of course, by then, the CAT was several years behind schedule.

On January 18, 2017, after being involved in the specifications development and bidding process for more than three years, Thesys Technologies LLC was selected by the exchanges and FINRA to be the Consolidated Audit Trail Plan Processor.⁵¹ Revised technical specifications were released on July 6, 2017.⁵² The exchanges were set to begin reporting on November 15, 2017.⁵³

Requests to Revisit the Funding Structure and Delay Reporting

The determination of who will pay how much for the Audit Trail is still not yet finalized. The decision of how to fund the Audit Trail was pushed off by the SROs until May 2017, when the exchanges and FINRA filed a plan to adopt industry member fees that would fund it.⁵⁴ The filing was ostensibly made immediately effective, but on June 30, the SEC temporarily suspended it for further review.⁵⁵ Noticeably, the funding plan designed by the exchanges and FINRA appears to place a significant portion of the cost burden on broker dealers, and even the off-exchange, OTC

⁴⁹ *Notice of Designation of Longer Period for Commission Action on the Proposed National Market System Plan Governing the Consolidated Audit Trail by Participants*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-78441 (July 29, 2016), 81 Fed. Reg. 51527 (Aug. 4, 2016), available at <https://www.sec.gov/rules/sro/nms/2016/34-78441.pdf>. The November 10 date was modified to November 15, based upon the date of publication in the Federal Register.

⁵⁰ *Order Approving the National Market System Plan Governing the Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-79318 (Nov. 15, 2016), available at <https://www.sec.gov/rules/sro/nms/2016/34-79318.pdf>.

⁵¹ Letter from Participants to Brent J. Fields, SEC, Jan. 18, 2017, available at <https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf>.

⁵² Thesys CAT, *CAT Reporting Technical Specifications for Participants*, v. 1.3, (July 6, 2017), available at <http://www.catnmsplan.com/wp-content/uploads/2017/03/CAT-Tech-Specs-1.3-for-Publication.pdf>.

⁵³ *Order Approving the National Market System Plan Governing the Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-79318 (Nov. 15, 2016), 81 Fed. Reg. 84696 (Nov. 23, 2016), available at <https://www.sec.gov/rules/sro/nms/2016/34-79318.pdf>.

⁵⁴ Between May 1 and May 26, the exchanges and FINRA filed proposed rule changes to establish fees to pay for the Audit Trail. See *Suspension of and Order Instituting Proceedings to Determine Whether to Approve or Disapprove Proposed Rule Changes to Establish Fees for Industry Members to Fund the Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-81067, June 30, 2017, available at <https://www.sec.gov/rules/sro/batsbyx/2017/34-81067.pdf> (Funding Plan Suspension Order) (referring to each filing).

⁵⁵ Funding Plan Suspension Order.

markets. Not surprisingly, amidst a slew of industry outrage, on November 9, 2017 the SEC extended its time to make the decision until January 14, 2018.⁵⁶

But the funding structure isn't the only key item left up in the air--despite years of preparation. With just a few weeks left to begin reporting, it became clear that the exchanges were not going to meet the deadline of their own plan. They pressed the SEC, now under new Chairman Jay Clayton, for relief. There was a concern--since proven to be well-founded--that the SEC might be less willing to simply acquiesce to another long delay. Thus, the SROs also pressed this Committee and the Senate Banking Committee for relief.

Those efforts were aided by an untimely admission by the SEC in late September that its completely unrelated database for corporate filings, EDGAR, had been hacked a year earlier.⁵⁷

In a hearing on October 4, 2017, Chairman Hensarling pressed SEC Chairman Clayton to "delay [the Audit Trail's] implementation date until the commission can ensure that the appropriate safeguards and internal controls are in place to protect this data."⁵⁸ The next day, Messrs. Warren Davidson and Brad Sherman introduced the Market Data Protection Act of 2017 (H.R. 3973). A week later, on October 11, 2017, this Committee passed that bill out of markup by a vote of 59-1. Amongst other things, the bill would require the SEC, FINRA, and the CAT operator (but not the exchanges) to develop "comprehensive internal risk control mechanisms to safeguard and govern the storage of all market data by such entity, all market data sharing agreements of such entity, and all academic research performed at such entity using market data."⁵⁹

Until that happens, the plan operator (Thesys) would be prohibited from accepting data for the Audit Trail, and the requirements for participants (like the exchanges) to submit data to the Audit Trail "shall not apply."⁶⁰ However, previously-developed internal controls could be deemed as adequate, provided that they meet the requirements of the "Chief Economist" of the SEC.⁶¹

In the days that followed, it became clear that the well-intentioned bill had a few significant unintended consequences, and an effort was started to negotiate improvements. For example, the bill wouldn't appear to apply to exchanges. It also could allow for further, indefinite delays by the exchanges and FINRA, or the SEC. And it fails to explain how the SEC's "Chief Economist" is the qualified expert to evaluate the reasonableness of the proposed cybersecurity for these entities.

⁵⁶ *Notice of Designation of Longer Period for Commission Action on Proceedings to Determine Whether to Approve or Disapprove Proposed Rule Changes to Establish Fees for Industry Members to Fund the Consolidated Audit Trail*, Sec. and Exch. Comm'n, Exchange Act Rel. No. 34-82049, Nov. 9, 2017, available at <https://www.sec.gov/rules/sro/batsbyx/2017/34-82049.pdf>.

⁵⁷ Statement of Chairman Jay Clayton, Sec. and Exch. Comm'n, (Sept. 20, 2017), available at <https://www.sec.gov/news/public-statement/statement-clayton-2017-09-20>.

⁵⁸ *Examining the SEC's Operations, Agenda, and Budget*, Hearing before the House Financial Services Committee, 115th Cong. (2017) (Statement of Chairman Jeb Hensarling).

⁵⁹ Market Data Protection Act of 2017 (H.R. 3973), 115th Cong. (2017) (Market Data Protection Act).

⁶⁰ Market Data Protection Act.

⁶¹ Market Data Protection Act.

Nevertheless, efforts to improve the bill collapsed, and on November 13, 2017, the House passed the bill by voice vote.

I understand this Committee may be looking at a revised version of that bill or another, similarly focused, bill to move forward with over the foreseeable future. I have recently reviewed a draft of some legislation that would improve upon the House-passed bill in a number of ways, including by tailoring the data to be covered to that which is “reported to, stored by, or accessed from the consolidated audit trail”, and would include the exchanges.

There are still several curious elements to the legislation, however, which I think could significantly frustrate the regulatory goals of the CAT and the SEC. For example, the plan processor couldn’t accept data until the Commission certifies that it has the required internal risk control mechanisms. To be blunt, what does the SEC know about data security? Why are they the judge? And why would this have to be done at the Commission level, as opposed to staff? Would it be testing the adequacy of those mechanisms? What are the standards? How would this be different than the already extensive requirements laid out in the technical specification for the Plan Processor in the CAT Plan? Does that mean the SEC would be the guarantor of the adequacy of those mechanisms?

All of these new questions arise, and likely lead to significant secondary and tertiary questions. This creates incredible legal and practical uncertainty, and is also likely to foster new legal challenges, and even more delays.

But perhaps the biggest question arises from the language specific to the personally identifying information (PII). For this information--again which the market participants already have and regulators already have access to--the bill would require an entirely new, and duplicative cost-benefit analysis as well as a report to Congress. That has nothing to do with the adequacy of the security, but rather a re-consideration of one of the primary purposes of the Audit Trail in the first place--to actually know who is doing the trading.

The SEC, FINRA, and past Congressional hearings have demonstrated the basic need for this information. This debate is years past settled. To require this additional analysis and support offers absolutely no value to the regulatory process, but only serves to frustrate it--which I suspect is precisely the objective of some of the proponents.

Current Key Concerns with the Audit Trail--Security and Cost

At the time of the Audit Trail’s proposal, there was remarkably little public pushback on the need to create it, nor was there significant disagreement for the proposal to cover a broad swath of the capital markets.

That said, this lack of public resistance was not reflective of stakeholders’ significant concerns. FINRA, which operates the OATS system, could easily lose its leading position as the provider of

market surveillance services for the industry.⁶² Similarly, the for-profit exchanges have worried about the costs.

Outside of the SROs, some market participants worried that their trading strategies could be discovered, and many worried about the risks of aggregating all of this information in one place. Still others feared that regulators might detect widespread abuses that could further deteriorate market confidence or hurt their revenues. And some market participants worried about costs.

In recent days, there has been a lot of attention paid to the cybersecurity of the Audit Trail. Some have suggested that the SEC should just put everything on an indefinite hold while it reviews the security of the system, Thesys, and those who access the system.

I agree with calls to ensure the security of the system. However, I urge Congress and the SEC to stay cognizant of the facts. And the basic facts are:

- The Audit Trail is similar to existing databases in many respects;
- The Audit Trail has been in development for years pursuant to an SRO-designed and SRO-approved plan;
- The Audit Trail is developed and operated by an SRO-selected vendor; and
- Those seeking the delay have repeatedly asked for and received numerous delays along the way, extending this project for years longer than anticipated.

Some have trotted out spurious arguments to delay or abandon the Audit Trail based on the SEC's recent announcement of a data breach.⁶³ Of course, the data breach should be a reminder to be acutely sensitive to data security. As the SEC Chairman stated when denying the SROs' most-recent delay request, "protection of the information submitted to the CAT is of paramount importance."⁶⁴ That's a sensitivity that should have, and did, exist amongst the SROs, SEC, and potential bidders for the Audit Trail long before the SEC's data breach.⁶⁵

⁶² I worry about the potential regulatory "race to the bottom" if the exchanges and others are given access to the same dataset, but are allowed to take varied regulatory approaches. Importantly, I question whether any for-profit entities are capable of appropriate surveillance and regulatory operations. This may be because of both their narrow views of issues related to their markets, as well as the basic conflicts of interest between their for-profit business interests and their regulatory obligations. A consolidated, non-profit regulator is a significant advantage over such a flawed system. If the Commission is to allow FINRA to be replaced by other surveillance providers, I would recommend the Commission adopt a number of safeguards, including a distinct set of minimum conduct standards and best practices.

⁶³ See Statement of Chairman Jay Clayton, Sec. and Exch. Comm'n, (Sept. 20, 2017), *available at* <https://www.sec.gov/news/public-statement/statement-clayton-2017-09-20>.

⁶⁴ Statement on the Status of the Consolidated Audit Trail, Sec. and Exch. Comm'n, (Nov. 14, 2017), *available at* <https://www.sec.gov/news/public-statement/statement-status-consolidated-audit-trail-chairman-jay-clayton>.

⁶⁵ For example, a July 29, 2014 presentation by FINRA on the Audit Trail describes the importance of protecting sensitive industry data. Presentation by FINRA *et. al*, Consolidated Audit Trail, at 2, (2014), *available at* https://www.finra.org/sites/default/files/FINRA%20CAT%20SIFMA%20Presentation%2020140729%20FINAL%20v1%201_0_0_0.pdf (last viewed Nov. 21, 2017).

As for potential concerns with Thesys itself, the company had no relationship to the SEC's decades-old EDGAR database. Thesys has, however, collected, processed, and distributed market data for market participants for years. It has even been retained by the SEC to operate its Market Information and Data Analytics System (MIDAS), which it has operated for years without any known incidents.

I am surprised by the large outcry from the SROs, who just earlier this year selected Thesys as most qualified to build and operate the Audit Trail.⁶⁶ But it's also curious because the exchanges and FINRA helped detail the Plan Processor Requirements. Those requirements explicitly state that:

The following industry standards—which is not intended to be an exclusive list—must be followed as such standards and requirements may be replaced by successor publications, or modified, amended, or supplemented and as approved by the Operating Committee (in the event of a conflict between standards, the more stringent standard shall apply, subject to the approval of the Operating Committee):

- National Institute of Standards and Technology:
 - 800-23 – Guidelines to Federal Organizations on Security Assurance and Acquisition / Use of Test/Evaluated Products
 - 800-53 – Security and Privacy Controls for Federal Information Systems and Organizations
 - 800-115 – Technical Guide to Information Security Testing and Assessment
 - 800-118 – Guide to Enterprise Password Management
 - 800-133 – Recommendation for Cryptographic Key Generation
 - 800-137 – Information Security Continuous Monitoring for Federal Information Systems and Organizations
 - To the extent not specified above, all other provisions of the NIST Cyber Security Framework
- Federal Financial Institutions Examination Council:
 - Authentication Best Practices
- International Organization for Standardization:
 - ISO/IEC 27001 – Information Security Management⁶⁷

⁶⁶ See Letter from Participants to Brent J. Fields, SEC, Jan. 18, 2017, available at <https://www.sec.gov/divisions/marketreg/rule613-info-notice-of-plan-processor-selection.pdf>.

⁶⁷ CAT NMS Plan Processor Requirements, Appendix D, at 14-15.

The Plan Processor also “must conduct third party risk assessments at regular intervals to verify that security controls implemented are in accordance with NIST SP 800-53. These risk assessments must include assessment scheduling, questionnaire completion and reporting,” and should be reported back to the exchanges and FINRA.⁶⁸

I am not aware of any allegations that Thesys has not met those standards or is otherwise incapable of meeting these expectations. Further, I am not aware of any accusations of how those industry standards that have previously been established (and which can evolve over time) are somehow now inadequate. The exchanges and FINRA have not offered any significant new information since then as to why they now think they need this delay.

In addition, I wish to remind the Committee that the Audit Trail is also remarkably similar to the Order Audit Trail System (OATS), which has long been operated by FINRA. Many lay people don’t know that FINRA currently runs a massive audit trail system that requires inputs from a wide array of market participants, just like the Consolidated Audit Trail. That system, which has been operating for decades, is stored in the cloud on Amazon Web Services.⁶⁹ And it includes very specific, and commercially highly-sensitive trading details.⁷⁰

In a 2014 presentation by FINRA, DTCC, and Amazon Web Services pursuant to their bid for the Audit Trail, FINRA detailed how

- FINRA collects, links and stores over 30 billion market events per day covering over 90% of the equity market
- FINRA maintains over 2PB of historical data
- FINRA provides data access to
 - 5,000 Registered OATS Users
 - 1,600 Registered Users of the FINRA Online Query Tool⁷¹

These are remarkably similar to the expectations for the new Audit Trail.

⁶⁸ CAT NMS Plan Processor Requirements, Appendix D, at 16.

⁶⁹ See Presentation of Bob Griffiths and Ranga Rajagopal, AWS Summit: Best Practices Using Big Data on AWS, June 14, 2017, available at <https://www.slideshare.net/AmazonWebServices/best-practices-using-big-data-on-aws-aws-public-sector-summit-2017>.

⁷⁰ For trades involved in principal trading or combinations of principal and customers, identification information of the broker-dealer is obviously provided. Additionally, since the implementation of the Large Trader Reporting Rule, key personally identifiable information is readily accessible by FINRA through the electronic blue sheet process for covered persons. *Large Trader Reporting Final Rule*.

⁷¹ Presentation by FINRA *et. al*, Consolidated Audit Trail, at 2, (2014), available at https://www.finra.org/sites/default/files/FINRA%20CAT%20SIFMA%20Presentation%2020140729%20FINAL%20v1%201_0_0_0.pdf (last viewed Nov. 21, 2017).

Building a massive audit trail with sensitive and valuable inputs provided by a large number of entities can be done. While the new Audit Trail will include more underlying beneficial owner information, from a data perspective, this change is a quantitative one, not qualitative.⁷²

In addition to the data security concerns, perhaps nothing raises the specter of conflict more than the filing by the for-profit exchanges and FINRA on how the Audit Trail is to be funded. In their filing, the NMS Plan participants (1) chose to file the proposals for immediate effectiveness under the Exchange Act and (2) failed to solicit industry input or public comment on the proposed fee model.⁷³ In fact, SIFMA noted that all but one participant operates as a for-profit company that directly competes with brokers and the proposed fee schedules allocate nearly all the costs to those brokers.⁷⁴

Lastly, some have expressed concerns that the Audit Trail will be largely duplicative of OATS, while also being different--leading to potentially unnecessary compliance costs and risks. To address those concerns, the SROs have already filed with the SEC their intention to retire the OATS system once the Audit Trail is operational.⁷⁵ That said, I would caution that OATS should not be retired until the Audit Trail has proven to be an effective tool that is at least as valuable for regulatory surveillance as OATS has been.

What Should Regulators and Congress Do Now?

In my view, the best thing this Committee could do would be to (1) press the SEC to ensure that the Audit Trail is fully implemented without further delay and (2) help the SEC work with its sister agency, the CFTC, to improve the Audit Trail so that it more fully achieves its intended purposes. To do that, it will need to include the futures markets, legal entity identifiers, and greater precision.

The SEC's decision to deny the exchanges' and FINRA's requested one-year exemption means that they are out of compliance with the rule they crafted, and for which they have previously been given several exemptions. This failure to comply empowers the SEC to take enforcement action, if it chooses, against the non-compliant firms.

That said, Chairman Clayton has made it clear that he would not want or expect any firms to report to the CAT Plan operator if they believed that the system was in any way insecure. Put another way, without formally granting "no action" relief, the Chairman has taken a remarkably similar approach.

⁷² We note that FINRA already has access to the vast majority of information to be required by the Audit Trail, but not in a readily-accessible, automated format.

⁷³ Letter from SIFMA to Brent J. Fields, SEC, June 6, 2017, available at <https://www.sec.gov/comments/sr-batsbzx-2017-38/batsbzx201738-1788188-153228.pdf> ("SIFMA Letter").

⁷⁴ SIFMA Letter, at 2.

⁷⁵ *Notice of Filing of Proposed Rule Change to Eliminate Requirements That Will Be Duplicative of CAT*, Exchange Act Rel. No. 34-80799, Sec. and Exch. Comm'n, May 26, 2017, available at <https://www.sec.gov/rules/sro/nyse/2017/34-80799.pdf>.

Ultimately, the Chairman's decision to deny the requested exemption provides the SEC with, for the first time in years, significant leverage versus the exchanges and FINRA to compel progress on the Audit Trail's implementation. While they all appear to be acting in good faith to begin the required reporting, Clayton will presumably elect to not pursue them for their violations. However, if the exchanges or FINRA appear to be intentionally slow-walking their compliance or otherwise obstructing the objectives of the Audit Trail, he presumably could direct the Commission staff to conduct an investigation, and if authorized by the Commission, take enforcement action.

I believe this will significantly improve the odds of having an implemented Audit Trail within the next 12 months. By way of contrast, if the Chairman had granted the request, or if the Market Data Protection Act of 2017 were to become law as currently drafted, I believe that the CAT would again face multi-year delays.

As a result, I believe that the best course of action for this Committee would be to either (1) significantly revise the legislation or (2) encourage the SEC handle this appropriately through the administrative process. If the Congress elects to press a legislative solution, I would encourage you to (1) narrow the scope to just information regarding the Audit Trail, (2) insert new time limitations to ensure it does not lead to yet more years-long delays, and (3) insert language to improve the Audit Trail, which should include futures, legal entity identifiers, improved precision, and revised governance.

Longer term, I urge you to reconsider eliminating the deeply conflicted process that has led to this extremely delayed result. Put simply, for-profit exchanges should not be empowered by the government to set the terms and the costs of the regulatory apparatus that oversees the markets--including their competitors.

Conclusion

Almost exactly seven years ago, on December 8, 2010, SEC Chairman Schapiro and CFTC Chairman Gensler testified before a joint Senate hearing that they would work together to get the Audit Trail up and running.⁷⁶ In the years since that hearing, as major market disruptions and conflicts of interest have come into the spotlight, concerns about the integrity and stability of the U.S. capital markets have only grown. Market participants, experts, and policymakers have clamored for the government to modernize the regulatory apparatus for trading.

The Consolidated Audit Trail is a necessary, but not sufficient, step towards ensuring that regulators have the basic tools necessary to oversee our capital markets. If the US capital markets are to remain the best in the world, we need it. There will be more major market disruptions and

⁷⁶ Reed-Levin Hearing. When pressed by Chairman Levin as to how much it would cost and how long it would take before it was up and running, Chairman Schapiro assured him that it would be well before now. Both Commissioner Stein and I, as the lead staffers in that hearing for Chairmen Reed and Levin, respectively, took those assurances to heart. Unfortunately, despite the best of intentions to get the regulators this basic tool that they desperately need, those predictions have proven inaccurate.

more bad behavior in the future. The question is whether regulators will have the tools they need to identify them, figure out what's going on, and stop them before disaster. Frankly, we need version 3.0 of the Audit Trail. But after more than seven years of waiting, we'll take version 1.0.

Thank you for your consideration and for the opportunity to share my thoughts with you on this important topic for our markets.