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August 16, 2021

Via Electronic Mail (rule-comments@sec.gov)

Ms. Vanessa Countryman, Secretary
U.S. Securities and Exchange Commission
100 F Street NE., Washington, DC 20549

Re: Order Instituting Proceedings to Determine Whether to Approve or Disapprove an Amendment to the National Market System Plan Governing the Consolidated Audit Trail[1] File No. 4-698 (Release #: 34-92451)

Dear Ms. Countryman:

On behalf of Data Boiler Technologies, I am pleased to provide the U.S. Securities and Exchange Commission (SEC) with our further comments on this release concerning a proposed amendment to the CAT NMS Plan to implement a revised funding model for the Consolidated Audit Trail (CAT). We applaud the Commission for the reminder that, under the Commission's Rules of Practice, the "burden to demonstrate that a NMS plan filing is consistent with the Exchange Act and the rules and regulations issued thereunder is on the plan participants that filed the NMS plan filing". The participants, or more specifically the CAT operating committee, have repeatedly failed to demonstrate CAT's benefits would outweigh its costs. Even after the $90 million train wreck,[2] the participants (i.e. FINRA, CAT LLC, and the Exchange Groups) continue to blindly charge forward on the same outdated design of CAT[3] rather than addressing the flaws. The resulting effects are:

- A presumably mouse catching "CAT" (catching the rogues and prevent future flash crashes) turned into an "outsized elephant" (money pit wastages: unnecessary data-in-motion[4] traffic, gigantic vault becoming prime target for internal/ external breach and foreign adversaries, T+5 idle time, etc.)
- Regulatory reporting became a cottage of industry benefiting big law, consulting firms and data/ cloud vendors. Quote and trade data that were originally private assets of broker-dealers become digits and bits in the CAT data vault for plan participants to exploit without pay or summon. Both private rights and public interest[5] are being impaired.
- We estimate more than a thousand industry members in aggregate have already incurred over 4 times (or $800+ million a year) in both internal efforts and external resources support trying to prepare and comply with the CAT reporting requirements than the near $200 million spent by the plan participants and CAT processors.

CAT operating committee did not account for these social costs when compiling the CAT budget. Industry members have already paid more than their fair share for CAT. The bigger problem is CAT in aggregate has incurred both the plan participants and industry members around $1 billion with no realized benefit.

PLEASE have mercy on both the CAT participants and industry members. The flaws of this outdated design of CAT are widely known (e.g. the 50± millisecond timestamp tolerance, the missing of futures and swap data, cybersecurity threats, civic concerns for massive government surveillance, etc.), but few dare to say because of worry about retaliation. We beg all conscience authorities to revisit the CAT design before it is a deep regret to waste over $2.4 billion[6] (the initial building price) on this flawed "elephant".

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[1] https://www.sec.gov/rules/sro/nms/2021/34-92451.pdf
[2] https://www.sec.gov/comments/4-698/4698-8790127-237768.pdf
[3] https://www.linkedin.com/pulse/cat-outdated-design-since-2012-kelvin-to/
[4] https://www.databoiler.com/index_htm_files/DataBoilerInMotion.pdf
[5] https://iea.org.uk/wp-content/uploads/2016/07/THE%20MYTH%20OF%20SOCIAL%20COST.pdf
[6] https://www.wsj.com/articles/sec-to-vote-on-consolidated-audit-trail-to-detect-market-manipulation-1479240411

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Response to specific questions

A. Data Boiler's comment on the Proposed Funding Model:

The CAT's "funding model was designed to impose fees 'reasonably' related …" We think the arguments by the CAT operating committee are "unreasonable" and/or lack sufficient merit to demonstrate the proposed amendments as being fair and equitable. Please see our response to specific questions for details. What CAT participants could recover the costs of creating and funding CAT must align with "obligations" and demonstrated benefits to NMS in order to earn such "rights". The CAT participants' attempt to "recoup" 75% or ~$145 million of what they can possibly capitalize as "private assets" is unjust and cannot be considered as fulfillment of its obligation. The CAT operating committee's self-claim of the costs being "critical" to the creation, implementation and maintenance of the Plan is neither a demonstration of CAT benefits outweighed its cost, nor a demonstration that a NMS plan filing is consistent with the Exchange Act and the rules and regulations.

A1. **Data Boiler's** views on the proposed inclusion of Alternative Trading Systems (ATSs) as Industry Members for purposes of allocating CAT costs are as follow:

We think Dark pools introduce higher implicit risks due to their lack of transparency and vulnerability to potential conflicts of interest[7] than Lit venues. Therefore, dark pools should bear higher CAT cost than SROs. Internalizers / market makers may post higher risks and be more vulnerable to potential conflicts of interest[8] than Dark Pools.

We rebuke the CAT operating committee's proposal to treat ATSs as Industry Members in CAT funding model because both the original "execution venue" concept and the proposed "message traffic" concept are flawed. This is NOT about some ATSs pay a fee based on market share and some ATSs to pay a fee based on message traffic. If CAT NMS Plan is meant to prevent future flash crashes, curb suspicious trading behavior and unusual market events, then why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden?

We oppose requiring all Industry Members to pay a CAT fee and rebuke the CAT operating committee's self-claim of "all market participants would benefit from the enhanced regulatory oversight provided by the CAT". The CAT operating committee merely points to the high-level purpose of CAT and then tries to claim it as "reason" to alter the playing field in the market. This is not acceptable. It is like the authoritarian communist superimposed the 'Chinese national security law' on Hong Kong to suppress people by moving the goalposts wherever they want as long as it is labeled "Chinese national security". A "tax" to participate in the US market is a barrier, a detriment to competition. Section 31 fee should be discouraged and avoided wherever possible. Rulemaking to seek sole benefit for the government agency or the affiliated SROs should be prohibited because it is contrasted with serving the public interest.

The CAT funding model should be driven mainly by fines and settlements. We believe the Commission's current operating cost is also supported substantively by fines and settlements. So, fines and settlements should be considered acceptable revenue streams to cover CAT LLC costs satisfying the Article XI §11.2 funding principles.

We counter suggest the SEC should scrutinize industry members who are owners/ affiliates with ATS, or sponsors to an Exchange to avoid potential exploitation of their economy of scope or alleged trading cartel in price setting or allocation of disproportional incentives. Again, more CAT costs should be allocated to those requiring the

[7] https://www.ft.com/content/98e9b691-291f-3ef6-a917-cf27587b4ff5
[8] https://www.thetradenews.com/baml-slapped-second-time-42-million-fine-masking-orders/

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regulators' extra efforts in deciphering their complex activities as compared to firms with a simpler business model. Suspicious Activity Report (SAR) would be a good basis for easier administration in determining CAT fees for industry members.

A2. **Data Boiler's** views on the exclusion of reported OTC Equity Securities share volume from the calculation of market share for national securities associations:

We rebuke the Operating Committee's proposal to exclude OTC Equity Securities share volume from the Equity/ Listed Option Group split calculation of market share for national securities exchanges. We despise any form of "craft-out" for favoritism to FINRA because it is a slippery slope given that others may raise similar arguments for thinly traded securities, ESG stocks, etc. More importantly, FINRA replaced a private vendor Thesys as the CAT processor and should not get preferential treatment based on its non-profit or SRO status. FINRA should avoid any potential misperception of exploiting its self-regulatory status mixed-in with their private business. Nevertheless, OTC has high implicit risks due to its lack of transparency and vulnerability in potential conflicts of interest[9] than Equity and Listed Option asset classes. Hence, FINRA should indeed be responsible for a higher portion of CAT cost, not less.

A3. **Data Boiler's** views on the proposed elimination of tiered fees in favor of CAT fees that may vary based on message traffic or market share, as applicable:

We oppose the proposed Market Share approach to replace/ eliminate tiered fixed fees. We criticize the CAT operating committee's self-claim of their Market Share approach would "equitably allocate CAT fees among Participants". Each participant may receive, or not receive any benefit from CAT. Why would large Exchange Groups with robust surveillance systems and linked to market data feeds at nanosecond precision need a "50± millisecond tolerance" CAT system? If the CAT fee is related to "better identification of potentially manipulative trading activity, increased efficiency of cross-market and principal order surveillance", then private surveillance businesses affiliated with Exchange Groups stand to receive benefits from CAT, hence they should pay the most if not all such CAT costs. The SEC and other SROs shall have choice to use peers' surveillance system or build their own or buy from other private vendors.

"If" one would play the devil's advocate of using CAT data for non-regulatory purpose (i.e. function creep)[10], CAT will not save Exchanges from subscribing to other peer Exchange feeds given the T+5 access for CAT, but what if these non-public data and personal identifiable information (PII) offer valuable insights to help Exchanges target to attract order flow? Would countless buy and sell-side broker-dealers and market makers be cut-out from the industry value chain?

If the CAT fee is related to "facilitating risk-based examinations" and/or "improving abilities for evaluating tips, complaints and referrals of potential misconduct made to regulators, monitoring and evaluating changes to market structure", then the SEC and SROs may go back to the Congress for funding or pay for it using collected fines, penalties, and intragovernmental fees, but not "user fees".

If the CAT fee is related to supporting the SEC to "rapidly reconstruct market events/ trading activity" beyond using the public available data, then the Commission may subscribe to the SROs' proprietary feeds for any non-

[9] https://libertystreeteconomics.newyorkfed.org/2020/01/how-does-information-affect-liquidity-in-over-the-counter-markets.html
[10] https://www.schneier.com/blog/archives/2010/02/security_and_fu.html

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public data, or seek expressed consent to voluntarily share, or use of its permissible authority to summon the relevant private information.

To preserve the equitable, non-biased, fair, and non-discriminatory principles and fend off any public concerns or potential negative impression of CAT being a "private party" among elite CAT participants with fee cap, maximum, and adjustments, we again suggest adding a new CAT funding principle 11.2(g) about CAT costs allocation should be in proportion with specific public benefits received, i.e. not private benefits of CAT participants.

A4. **Data Boiler's** views on the proposed elimination from Section 11.2(c) of the CAT NMS Plan of the requirement that the fees charged to CAT Reporters with the most CAT-related activity be generally comparable:

Section 11.2(c) of the CAT NMS Plan requires the Operating Committee to establish a fee structure in which the fees charged to CAT Reporters with the most CAT-related activity are generally comparable. We rebuke the CAT operating committee's attempt to undermine the comparability provision by stating it "was used to determine fee tiers". We think this is an essential funding principal to preserve rather than eliminate. We believe "most CAT-related activity" should align to the private and public benefits received by CAT participants and industry members respectively, hence justifying related cost to be imposed (please see our response to B10 at later section). Therefore, we have recommended that those who have the most suspicious trade activities, those who "operate at the edge" with implicit conflicts, securities law violations, and poor run markets (such as outages affecting the public interest) should pay more. Suspicious activities report (SAR) ought to be one of the "comparable" standards, not the CAT operating committee's proposed market-share or message traffic measurement. Again, why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden?

A5. **Data Boiler's** views on the proposed Minimum Industry Member CAT Fee and the requirement that all Industry Members pay such fee, even if they have not yet started reporting to the CAT, and any views on whether the Proposed Funding Model has provided sufficient information on the operation of the fee and on whether the Proposed Funding Model has sufficiently explained the operation of the Minimum Industry Member CAT Fee Re-Allocation:

The proposed $125 per quarter ($500/ annum) minimum to Industry Members hits 225 industry members in the bottom population (18.2% of 1237). There will be 792 industry members (64%) paying 1 penny to 86 cents above the minimum per quarter under the proposal. If counting from industry members #37 to the #1237 (97.1%), they generate 3.33% of message traffic, but will be required to pay for 4.26% of aggregated industry member fees under the proposal. It is a huge wastage in CAT billing and other administrative functions to collect these "de Minimis" fees or minimums from small industry members; it proves that the proposed funding model is inconsistent with funding principle §11.2(d). Besides, why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden? A "tax" to participate in the US market is a barrier, hence "Section 31 Fee" should be discouraged and avoided wherever possible. We strongly rebuke the CAT operating committee's self-claim of compliance with the CAT funding principles.

A6. **Data Boiler's** views on the proposed Maximum Industry Member CAT Fee; any views on whether the Proposed Amendment contains sufficient justification for the 8% cap chosen for the fee; and any views on whether a maximum fee is consistent with the funding principles expressed in the CAT NMS Plan that states that the Operating Committee shall seek, among other things, "to create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs

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of the Company," "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon the Company resources and operations," and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

Why should smaller firms subsidize the top 36 elites who generate 96.67% of message traffic but will pay 95.74% of aggregated industry member fees after the discounts? Some of the top elites already receive 32 mil super-tier rebates and other favorite treatments to compensate for their market making efforts and order flow contributions in the price discovery process. The CAT operating committee's proposal with discount, maximum cap, minimum, and other adjustments would further exacerbate the inequalities in the market[11].

The CAT operating committee's example using the CAT Data from the fourth quarter of 2020 to suggest the 8% cap for the top three Industry Members is merely a number crunching for their attempt to save these 3 elite firms several million a year. The CAT operating committee did not supply any justification here, and how is that a level playfield? The CAT operating committee's proposal to impose the maximum industry member CAT fee is a slick attempt to legitimize their "transfer of benefits" to the elites while harming smaller players in the market.

Again, why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden? The SEC investigations team may focus their exams and limited resources on "high risk" trade irregularities, and may rely on automated surveillance for a quick-scan of everything. More CAT cost should be allocated to those requiring regulators extra efforts in deciphering their complex activities as compared to firms with a simpler business model. Suspicious Activity Report (SAR) would be a good basis for easier administration in determining CAT fees for industry members.

A7. **Data Boiler's** views on why Industry Member CAT fees should be capped; views on how such a cap would benefit or harm efficiency, competition, and capital formation; and any views on whether there are other benefits or costs of adopting such an approach:

Industry Member CAT fees should NOT be capped unless the cap meant for all industry members in aggregate will pay, we believe, no more than five million dollars in total to end this misguided CAT project. The CAT's outdated design[3] as a 'gigantic vault' is useless[12] for the industry, it is time to overhaul CAT to ensure its fit-for-purpose or consider abandoning it. Anyway, the CAT operating committee failed to provide proper justification for the cap here. Some of the top elites receive a 32 mil super-tier rebate and other favorable treatment for their market making efforts and order flow contributions in the price discovery process. The CAT operating committee's proposal with discount, maximum cap, minimum, and other adjustments would further exacerbate the inequalities in the market.[11] Allowing the elites to double down and legitimize their "transfer of benefits" would harm competition and capital formation because any explicit or implicit "kick back" will skew the playfield and hurt other players and new entrants. Please also see our response to A6.

[11] https://www.linkedin.com/pulse/animal-farm-market-data-negotiate-more-equal-kelvin-to/

[12] Unlike valuable assets that serve some storage values keeping in a vault, idle data stored in a vault serve zero value while wasting economic resources to keep and safeguard it. To reiterate our comments since 2016, CAT lacks an analytical framework embedded in its design. Per our May 3, 2021 comment point i a) – d) on page 6, we examined each of the 'what if' scenario for CAT fee may or may not related to supporting which particular purpose(s), our finding shown the Operating Committee and Participants lack merit in their arguments. CAT Operating Committee and Participants failed to demonstrate bifurcated cost allocation is equitable.

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A8. **Data Boiler's** views on the proposed Minimum Participant Fee and the Maximum Equities Participant Fee, including views on the calculation of the proposed fees and any views on whether the proposed fees raise any competitive issues among the Participants; and any views on whether the proposed fees are consistent with the funding principles expressed in the CAT NMS Plan, which state that the Operating Committee shall seek, among other things, "to create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs of the Company;" "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon the Company resources and operations;" and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

The CAT operating committee's proposal to amend Section 11.3(a) and Paragraph (b)(2) of Appendix B should not be considered. We rebuke their self-claim about "the imposition of the Maximum Equities Participant Fee serves as a method to institute a cap on fees in order to fairly allocate costs to FINRA given that a market share approach potentially may result in FINRA having a significant allocation …" The existing allocation formula would "result in FINRA having a significant allocation" is NOT a reason to justify anything, but merely a number crunching exercise that serve no meaning. As the participants have acknowledged that "FINRA is expected to be one of the largest regulatory users of the CAT", then it further reinforces that FINRA is likely obtaining the most "rights" in using CAT, hence FINRA should bear the most "obligations" of CAT costs. So, where is the logic for the proposed 'maximum participant cap' or 'special privilege to FINRA' when the participants' arguments are contradicting themselves?

Instead, our counter argument points to the fact that the CAT LLC/ FINRA/ CAT Operating Committee is likely to capitalize on past development work by Thesys as "private assets". The rights to stake a claim over these private assets must be accompanied with corresponding "obligations". Hence, FINRA absorbs the biggest portion of CAT costs seem justifiable. Besides, if the CAT fee is related to "better identification of potentially manipulative trading activity, increased efficiency of cross-market and principal order surveillance", then private surveillance businesses affiliated with Exchange Groups stand to receive benefits from CAT, hence they should pay the most if not all such CAT costs. The SEC and other SROs shall have choice to use peers' surveillance system or build their own or buy from other private vendors.

The CAT operating committee's stating that "large volume of NMS Stock activity that is subject to trade reporting on FINRA facilities, and potentially may not accurately reflect a fair allocation of costs to FINRA", is again a number crunching exercise that serves no meaning. CAT participants failed to demonstrate how the large volume of activities and FINRA trade reporting facilities may impair on certain rights, or result in possible claim or un-claim of assets, or incurrence of extra liabilities or obligations, etc.

Although we acknowledge that the nature of OTC trading in penny level may inherently be different from the proposed message traffic measurement use in Equity / Listed Option Group Split, similar arguments may apply to thinly traded securities, ESG stocks, etc., which SEC rule should avoid "craft-out". Besides, OTC has high implicit risks due to lack of transparency and vulnerability to potential conflicts of interest[13] than Equity and Listed Option asset class. And for the fact that FINRA would receive explicit benefit from CAT (from perspectives of being the

[13] https://libertystreeteconomics.newyorkfed.org/2020/01/how-does-information-affect-liquidity-in-over-the-counter-markets.html

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CAT processor, may capitalize prior development works by Thesys, and CAT will enhance FINRA's technology[14]), FINRA as a direct recipient of CAT benefits must bear higher portion of CAT costs than other SROs who do not own or affiliate with a surveillance business.

Regarding the Minimum Participant Fee, why is it not by each market run by the participants? Intuitively, more markets that a participant is operating, higher the need for surveillance. Following our logic as mentioned above, those SROs who own or affiliate with a surveillance business stand to gain the most from CAT, hence they should shoulder the obligations to pay for the corresponding CAT costs. We encourage smaller and emerging new exchanges to develop their own surveillance systems, or pay to use the large exchanges or other vendors' surveillance solutions. Yet, smaller and emerging new exchanges should not be subjected to a minimum participant fee over and above their market share because it would hinder healthy competition among all participants and is a barrier of entry.

What constitutes as a "meaningful contribution" to the funding of CAT needs an objective assessment of rights, obligations, private and social costs. Per our response to A1, the CAT operating committee merely points to the high-level purpose of CAT – "creating enhanced oversight of the markets", and yet again, attempts to claim it as "reason" to alter the playing field in market. This is not acceptable. It is like the authoritarian communist superimposed the 'Chinese national security law' on Hong Kong to suppress people by moving the goalposts wherever they want as long as it is labeled "Chinese national security". The civic concerns about Massive Government Surveillance should not be taken lightly. According to M.I.T. professor Gary Marx's statements in this Stanford University's study[15],

> *"…most people in our society would object to this solution, not because they wish to commit any wrongdoings, but because it is invasive and prone to abuse … fails to take into consideration a number of important issues when collecting personally identifiable data or recordings … such practices create an archive of information that is vulnerable to abuse by trusted insiders … In addition, allowing surreptitious surveillance of one form, even limited in scope and for a particular contingency, encourages government to expand such surveillance programs in the future. It is our view that the danger of a 'slippery slope' scenario cannot be dismissed as paranoia …"*

A9. **Data Boiler's** views on whether FINRA's CAT fee should be capped; any views on how such a cap benefits or harms efficiency, competition, and capital formation; and any views on whether there are other benefits or costs of adopting such an approach;

The fact that FINRA would receive explicit benefit from CAT (from perspectives of being the CAT processor, may capitalize prior development works by Thesys, and CAT will enhance FINRA's technology[16]), FINRA as a direct recipient of CAT benefits must bear higher portion of CAT costs than other SROs who do not own or affiliate with a surveillance business. Indeed, FINRA and Amazon Web Services (AWS), FINRA's cloud vendor, should fend off any public concerns about too big to fail (TBTF) by voluntarily providing full disclosure. The SEC should scrutinize that CAT funding won't be mixed-in and/or cross-subsidize existing surveillance and cloud processing business. There is a thin line between synergy and potential conflicts of interest (especially, as FINRA also holds the SRO

[14] https://www.finra.org/about/technology
[15] https://cs.stanford.edu/people/eroberts/cs181/projects/ethics-of-surveillance/ethics.html
[16] https://www.finra.org/about/technology

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power to fine broker-dealers over surveillance system deficiencies[17]). We oppose the proposed FINRA-related cap allocation/ reallocation "Adjustment" and any scheme to provide discounts to FINRA.

Please also see our response to A8.

A10. **Data Boiler's** views on why Participants should be charged the Minimum Participant Fee; views on how such a minimum would benefit or harm efficiency, competition, and capital formation; and any views on whether there are other benefits or costs of adopting such an approach:

Intuitively, more markets that a participant is operating, higher the need for surveillance. Following our logic as mentioned in our response to A8, those SROs who own or affiliate with a surveillance business stands to gain the most from CAT, hence they shoulder the obligations to pay for the corresponding CAT costs. We encourage smaller and emerging new exchanges to develop their own surveillance systems, or pay to use the large exchanges or other vendors' surveillance solutions.

Charging a minimum participant fee would exacerbate inequality between large exchange groups and emerging new exchanges. Unless the CAT operating committee can prove that smaller and emerging new exchanges may attribute to a higher portion of market manipulations, flash crashes, or other suspicious activities requiring heightened scrutiny; these smaller and emerging new exchanges should not be subjected to a minimum participant fee over and above their market share. Doing so would hinder healthy competition among all participants and is a barrier of entry.

A11. **Data Boiler's** views on the proposed market maker discounts, any views on the potential impact of the discounts on market participant behavior, including the provision of liquidity; and any views on whether the proposed market maker discounts are consistent with the funding principles expressed in the CAT NMS Plan, which state that the Operating Committee shall seek, among other things, "to create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs of the Company," "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon the Company resources and operations," and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

We oppose the proposed and any Equity/ listed option Market Makers Discounts for CAT and rebuke the CAT operating committee's statement about the "market maker discounts and Maximum Industry Member CAT Fee are designed to address potential disincentives … recognize the value of the market making activity to the market as a whole". The top elite market makers are already receiving a 32 mil super-tier rebate and other favorable treatments to compensate for their market making efforts and order flow contributions in the price discovery process. This is in effect a double down in legitimizing their "transfer of benefits", which harms competition and capital formation. Any explicit or implicit "kick back" will skew the playing field and hurt others and new entrants. Equity / Option Market Makers whom business model derives from paying substantial rebates to others should NOT get a CAT discount. The SEC should scrutinize industry members who are owners/ affiliates with ATS, or sponsors to an Exchange to avoid potential exploitation of their economy of scope or alleged trading cartel in price setting or allocation of disproportional incentives. Again, more CAT cost should be allocated to those

[17] https://financefeeds.com/finra-fines-lime-brokerage-surveillance-system-deficiencies/

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requiring the regulators' extra efforts in deciphering their complex activities as compared to firms with a simpler business model. The CAT operating committee's proposal would further exacerbate the inequalities in the market.

A12. **Data Boiler's** views on how market-making activity should be defined for purposes of the proposed market maker discounts; views on whether there is activity included in the definition of market making that should not be included for purposes of allocation of CAT fees; and any views on whether such a discount should apply to market-making activities in all types of securities without regard to security characteristics:

"How market-making activity should be defined" – that's a great question! In the long years of Dodd-Frank Volcker Rule implementation[18], banks kept pushing back and arguing that it is near impossible to discern[19] between permissible market-making versus prohibited proprietary trading. We disagreed with that and produced a patented solution for Volcker compliance[20]. However, the Volcker Rule has been watered down since 2018 and its toxic loopholes[21] have made it nearly impossible for the regulators to enforce the law.

Given the above background, the elites are again using market-making as a convenient "excuse" to grant themselves more privileges. Some elite market-makers are using payment for order flow (PFOF)[22] to, in effect, "outsource the task of finding orders to fulfill, and compared it to retail arrangements in which a supplier pays for the rack on which its products are displayed". They are not actively quotes two-sided markets with tight spreads in both good and bad times where they supposed. PFOF and other sophisticated order routing practices have indeed complicated the market and stirring much controversy.[23] The SEC should scrutinize market makers who are owners/ affiliates with ATS, or sponsors to an Exchange to avoid potential exploitation of their economy of scale to "transfer benefits" or alleged trading cartel in price setting or allocation of disproportional incentives. Again, more CAT cost should be allocated to those requiring the regulators' extra efforts in deciphering their complex activities as compared to firms with a simpler business model.

When we said, "Tier 2 and smaller Market-Makers who do not pay or receive any rebate have a simpler business model and deserve appropriate subsidies to encourage their participation", we meant ending the misaligned incentives that skew the playing field of top versus smaller market makers. We were referring to the broader NMS problem of how to facilitate serendipitous opportunities across "echo chambers" through tight spread (subject themselves to risk) without the use of incentive or leverage economy of scope through affiliates, hence reducing potential conflict of interest, and promoting the fair, reasonable, and non-discriminatory (FRAND) principles.

A13. **Data Boiler's** views on whether other Industry Members (including those that do not transact in options) would subsidize the activity of Options Market Makers under the proposal; any views on whether Section 6.4(d)(iii) of the CAT NMS Plan effectively reduces the message traffic of Options Market Makers relative to what it would be otherwise, and thus ultimately reduce the CAT fees they would be assigned under the Participants' proposal; views on how this subsidization would benefit or harm efficiency, competition, and capital formation; views on whether there are other benefits or costs of adopting such an approach; views (in detail) on whether there is an

[18] https://www.sec.gov/news/speech/2014-spch020414jr
[19] http://video.foxbusiness.com/v/1450367194001/dimon-on-price-wars-volcker-rule-stock-prices/?playlist_id=87185
[20] https://www.linkedin.com/pulse/spam-filtering-prohibited-kelvin-to/
[21] https://www.linkedin.com/pulse/volcker-revisions-toxic-loopholes-kelvin-to/
[22] https://crsreports.congress.gov/product/pdf/IF/IF11800
[23] https://www.spglobal.com/marketintelligence/en/news-insights/trending/IiJL9zOpAk76f_BrDunluA2

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alternative approach that would be more beneficial to efficiency, competition, or capital formation; and any views on whether the discount to fees allocated to Industry Members for market making activity described in the Participants' proposal provide a similar magnitude of benefit to Equity Market Makers:

We oppose the CAT operating committee's proposed listed option Market Makers Discounts for CAT.

References to our response to A12, we pointed out how unenforceable it will be regarding the vague definition of market making versus proprietary trading. More discounts or misaligned incentives weaken the governance of NMS. In our opinion, great governance control over the national market system requires principle-based rules to concisely delineate rights and obligations. The CAT operating committee's arguments merely state the different between their proposed calculation formula and the original message traffic approach. They failed to demonstrate what "obligations" these equity/ option market-makers are willing to take on above and beyond their regular duties in order for them to earn extra "rights" or privileges. Without stating what extra "obligations" these elite market-makers are willing to bear specifically related to CAT, the CAT operating committee's proposed CAT related discount, maximum cap, minimum, and other adjustments may be perceived as double down in legitimizing their "transfer of benefits".

We think the CAT operating committee's statement about "recognize the value of the market making activity to the market as a whole" is too generic. It lacks relevance to CAT's specific "rights and obligations". Their second argument about "such discounts would not amount to unfair discrimination or an unnecessary or inappropriate burden on competition" is merely a self-claim. "Recognize the different types of trading operations presented by Options Market Makers and Equity Market Makers, as well as the value of the market makers' quoting activity to the markets as a whole" is one thing. Yet, the relevant of such, or how the "trade-to-quote ratio when calculating the message traffic for Options Market Makers", may affect the respective CAT's "rights" and "obligations" seem missing. The CAT operating committee's arguments lack merit.

The entire CAT funding proposal seems filled with benefit transfers. We are concerned that it will further exacerbate the inequalities in market[11], harm competition and be a detriment to capital formation. How dare the CAT operating committee misstate the Commission for: "afforded market makers favorable regulatory treatment by virtue of their role as liquidity providers"![24] We believe the SEC has always been un-biased to serve the public interest without favoring any group whatsoever. If these elite market-makers dare to pressure the SEC by reducing liquidity and affect market quality, they should be stripped of their market-making license(s). Tolerance nourishes more bad behaviors.

B. Data Boiler's comment on the Proposed Fee Schedule:

B1. **Data Boiler's** views on the determination to allocate 75% of the Total CAT Costs to Industry Members and 25% of the Total CAT Costs to Participants; and any views on whether this proposed allocation is consistent with the funding principles expressed in the CAT NMS Plan, which state that the Operating Committee shall seek, among other things, "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon the Company resources and operations," and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

[24] Page 10 of https://www.sec.gov/comments/4-698/4698-9061306-246406.pdf

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CAT has no reason to allocate an inequitable 75% of CAT cost to Industry Members. The proposed $125 per quarter ($500/ annum) minimum to Industry Members hits 225 industry members in the bottom population (18.2% of 1237). There will be 792 industry members (64%) paying 1 penny to 86 cents above the minimum per quarter under the proposal. If counting from industry members #37 to the #1237 (97.1%), they generate 3.33% of message traffic, but will be required to pay for 4.26% of aggregated industry member fees under the proposal. It is a huge wastage in CAT billing and other administrative functions to collect these "de Minimis" fees or minimums from small industry members; it proves that the proposed funding model is inconsistent with funding principle §11.2(d).

Bifurcated Cost Allocation is inequitable. Why are the CAT fees not imposed on the direct recipients of those that receive benefit from such services but rather a 'tax' on all industry members? If the CAT fee is related to supporting the SEC to "rapidly reconstruct market events/ trading activity" beyond using the public available data, then the Commission may subscribe to the SROs' proprietary feeds for any non-public data, or seek expressed consent to voluntarily share, or use of its permissible authority to summon the relevant private information.

If the CAT fee is related to "facilitating risk-based examinations" and/or "improving abilities for evaluating tips, complaints and referrals of potential misconduct made to regulators, monitoring and evaluating changes to market structure", then the SEC and SROs may go back to the Congress for funding or pay for it using collected fines, penalties, and intragovernmental fees, but not "user fees".

If the CAT fee is related to "better identification of potentially manipulative trading activity, increased efficiency of cross-market and principal order surveillance", then private surveillance businesses affiliated with Exchange Groups stand to receive benefits from CAT, hence they should pay the most if not all such CAT costs. The SEC and other SROs shall have choice to use peers' surveillance system or build their own or buy from other private vendors.

If the CAT fee is related to "improving efficiencies from a potential reduction in disparate reporting requirements and data requests", then it should be segregated into regulators' portion and the users' portion. If CAT is constituted as one of the "user fees" imposed by the SEC and/or SROs, then according to the Government Accountability Office (GAO), these "fees assessed to users for goods or services provided by the Federal Government are deposited to the Treasury as miscellaneous receipts and are generally not available to the agency."

If the SROs argue that CAT fee setting, collection, and dispute resolution are common commercial practices that they should have full discretion, then, CAT would not be part of their arbitral and prosecutorial authority. Hence, the SROs should not enjoy immunity related to their private businesses and the industry members shall then have choice (under antitrust laws), including rights to opt-out of CAT given they are not even users of the CAT system. If CAT fee/ minimum is a "pay to play" bundled cost to participate in a market, then this "tax" is a barrier of entry inconsistent with the competition, capital formation, and other goals of the Exchange Act.

B2. **Data Boiler's** view on the rationale provided that the proposed 75%-25% allocation ensures that Industry Members with the most message traffic pay comparable fees to Participant complexes with the most market share, considering the proposed deletion from Section 11.2(c) of the CAT NMS Plan of the requirement that the fees charged to CAT Reporters with the most CAT-related activity be generally comparable:

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The CAT operating committee's arguments are NOT rational. First, the participants are only looking at their own accounting books, while the CAT budget for the entire industry must also consider what have been incurred from the industry members' perspective. As mentioned in the beginning of this letter, we estimate more than over a thousand industry members have already incurred over 4 times (or $800+ million a year) in both internal efforts and external resources support trying to prepare and comply with the CAT reporting requirements than the near $200 million spent by the plan participants and CAT processors. CAT operating committee failed to account for these social costs when compiling the CAT budget.

Second, the CAT operating committee's proposal to shift the "ATS" category from the "left to right pocket" does not do any good to the overall market. They are just number crunching without looking into the "reason". Again, what constitute as a "meaningful contribution" to the funding of the CAT needs an objective assessment of rights, obligations, private and social costs. In our opinion, dark pools introduce higher implicit risks due to their lack of transparency and vulnerability to potential conflicts of interest[25] than Lit venues. Therefore, dark pools should bear higher CAT cost than SROs. Internalizers / market makers may post higher risks and be more vulnerable to potential conflicts of interest[26] than Dark Pools.

Third, the CAT operating committee pointed to the fact that there are more industry members, and in aggregate these industry members are richer than the participants. We think that cannot be a reason. It is like hating those who have more wealth than us and have policy to discriminate against them. There is no link to the "rights" and "obligations" of CAT. If this can be allowed as a reason, then tomorrow the SROs may argue "there are more foreign financial institutions and in aggregate these foreigners are richer than us …" Their argument is unfit for our US open economy that emphasizes rights, obligations, and accountability.

In addition, CAT participants' attempt to "recoup" 75% or ~$145 million of what they can possibly capitalize as "private assets" is unjust. Industry members have already paid more than a fair share for CAT (please see our response to A8). The bigger problem is, CAT in aggregate has incurred both the plan participants and industry members around $1 billion with no realize benefit. Per our May 3rd, 2021 comment letter – Part C(ii) on page 7, we reiterated our arguments against the proposed "message traffic" concept. If the CAT NMS Plan is meant to prevent future flash crashes, curb suspicious trading behavior and unusual market events, then why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden? The CAT funding model should be driven mainly by fines and settlements. We believe the Commission's current operating cost is also supported substantively by fines and settlements. So, fines and settlements should be considered acceptable revenue streams to cover CAT LLC costs satisfying the Article XI §11.2 funding principles.

If fines and settlements are insufficient to cover all CAT costs, then the SEC and the CAT operating committee may consider imposing a negotiable portion of CAT fee that related to the purpose of "improving efficiencies from a potential reduction in disparate reporting requirements and data requests" (see our May 3rd, 2021 comment letter – Part C(i)(d) on page 6) to those based on materiality and number of suspicious activities reported on the Suspicious Activity Reports (SAR). Those who under report on SAR should get penalize. We think those who "operate at the edge" and have higher risks for potential conflicts of interest, should bear much of CAT cost given the extra efforts in deciphering their complex activities as compared to firms with a simpler business model. Indeed, smaller players who do not accept or pay payment for order flow (PFOF) and who are not

[25] https://www.ft.com/content/98e9b691-291f-3ef6-a917-cf27587b4ff5
[26] https://www.thetradenews.com/baml-slapped-second-time-42-million-fine-masking-orders/

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entitled to access fee rebates deserve appropriate subsidies, so there will be a sustainable pipeline of emerging broker-dealers to participate in the markets.

B3. **Data Boiler's** views on whether allocating Participant fees by market share while allocating Industry Member fees by message traffic, when combined with the proposed 75%-25% split between Participants and Industry Member aggregate fees, introduces frictions (such as effectively double counting the message traffic sent and received by Industry Members, into the CAT fee model due to FINRA's allocation of fees from trade volume reported to trade reporting facilities); views on how frictions would result; any views on how this would benefit or harm efficiency, competition, and capital formation; any views on whether there are other benefits or costs of adopting such an approach; and any views on whether capping FINRA's contribution to CAT fees as described in the Participants' proposal mitigate any benefits or costs and to what extent:

We oppose the Market Share approach to replace or eliminate tiered fixed fees for participants. Muddling with message traffic calculations does not serve the market any good. Friction or not, the message counts are not relevant to CAT, and thus we counter propose to use suspicious activities as the basis to properly account for CAT's rights and obligations. Anything that is not furtherance of the CAT purpose and the goals of NMS, are indeed counterproductive to efficiency, competition, and capital formation. Hence, it is unnecessary cost burden to the market. To preserve the equitable, non-biased, fair, and non-discriminatory principles and fend off any public concerns or potential negative impression of CAT being a "private party" among elite CAT participants with fee cap, maximum, and adjustments, we again suggest adding a new CAT funding principle 11.2(g) about CAT costs allocation should be in proportion with specific public benefits received, i.e. not private benefits of CAT participants; and those that have higher implicit risk and vulnerability to potential conflicts of interest must be charged higher fees than others, to cover what is not already funded by fines and settlements from abuse or other securities law violation cases.

B4. **Data Boiler's** views on potential alternative allocations of Total CAT Costs to Industry Members and Participants, including the allocations considered, but rejected, by the Participants, and the alternative allocations suggested by commenters as discussed in this order:

Please see our response to B2. Despite the CAT operating committee have noted that "it explored allocating the Industry Member Allocation based on revenue related to activities in Eligible Securities, but decided it would be difficult …", we argue that they have not tried looking into using "suspicious activities", securities law violations, and/or how well or poor the market(s) is run, as measurement basis to viably allocate CAT costs.

B5. **Data Boiler's** views on how fees would be passed on to Industry Members and investors if all CAT costs were allocated to Participants; views on how this outcome would be different than under the Participants' proposal; views on whether such an approach would benefit or harm efficiency, competition, and capital formation; and any views on whether there are other benefits or costs of adopting such an approach:

Assuming "all CAT costs" referenced in the Commission's question means the approximate $200 million incurred by the participants. Then, we argue that most if not all these costs should be allocated to the Participants. As we mentioned in the beginning of this letter, those would be "private assets" which the Participants may capitalize in their own accounting books. They will then depreciate it over the life of assets. Write it off or write it down to reflect the true value of this useless "elephant". If the Participants honestly see no value in this outdated design of CAT, then let's do the responsible thing to call for a stop.

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Splitting a $200 million hit among the Participants is hard, but it is better than sinking more money into this wasteful "vault" and brings down an entire industry with it. Reluctant to learn and blindly sinking more money and resources beyond the one billion dollar mark we estimated with no realize benefit to NMS may indeed be considered as 'spending beyond reasonable means'. It possibly violates the CAT funding principles. Prevent wasteful CAT costs rather than tolling every market participant like a Financial Transaction Tax[27] as it is ultimately passed down to the end investors. Find new opportunities for the industry to go after and grow the overall pie.

Taking a temporary setback will have greater benefits to the market and the broader economy in the long term. Go back to the drawing board, learn from the past failed experiences and focus on the right design. Then the money spent would become an investment into the future. The $200 million would just be a blip if this can inspire a restoration of our industry to re-focus on "rights" and "obligations". Develop a more open and effective mechanism to delineate "rights" and "obligations", it will enhance the market efficiency, ensure healthy competition by uplifting the FRAND principles, and foster capital formation.

B6. **Data Boiler's** views on whether Industry Members have sufficient information to estimate and budget for their expected allocation of CAT fees each quarter; if not, any views on what additional information would Industry Members need to develop an estimate of these fees:

We think neither the industry members nor the participants have sufficient information to estimate or budget CAT costs. Both sides are only looking at their own books rather than have a joint view to honestly review the true and benefits of CAT. CAT participants and industry members seem to address themselves to the parable of the blind men and an elephant[28] and/or hustle to seek shelter – immunity[29] and/or defer until "accommodate the unending demands of the industry"[30].

First, there is no objective assessment on the divergence between private and social costs.[5] Do not forget there are un-contracted parties incurring cost as result of CAT implementation. Second, we disagree with the CRA report because their three types of breach scenarios are insufficient to represent the potential damages to our country's economy and national security in case of a breach. Hence, the liabilities number may be grossly underestimated. Third, the cloud vendor of FINRA CAT LLC stands to gain the most with the ever-growing data volume stored at their vault. These reflect a poor management of resources by the CAT operating committee, or there is a wide gap in terms of the public expectations.

We would expect most of the CAT resources be deployed in developing analytics, so that there will be provisions of real-time early warning signals to deter or prevent potential market manipulations or possible flash crashes. However, nothing in the budget pertains to real-time analytics. The CAT operating committee's approach seems to rely on "bulk-download" and "queries" to the entire database at "T+5" regulatory access. That is like finding needle in a haystack and exposes the industry's data to unnecessary security threats!

The problem at hand is beyond the participants providing additional information to industry members. We believe the public already lost trust in the stewardship of CAT because the funding and other propose amendments have significant bias towards the elites.

[27] https://securitytraders.org/wp-content/uploads/STA-FTT-Letter-FINAL-03_16_2021.pdf
[28] https://en.wikipedia.org/wiki/Blind_men_and_an_elephant
[29] https://www.sec.gov/rules/sro/nms/2021/34-91487.pdf
[30] https://www.sec.gov/comments/s7-10-20/s71020-8077540-226001.pdf

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B7. **Data Boiler's** views on whether a Section 31 fee-like cost allocation framework (i.e., a transaction-based fee framework) would benefit or harm efficiency, competition, and capital formation, and any views on whether there are other benefits or costs of adopting such an approach:

If the CAT fee is related to "improving efficiencies from a potential reduction in disparate reporting requirements and data requests", then it should be segregated into regulators' portion and the users' portion. If CAT is constituted as one of the "user fees" imposed by the SEC and/or SROs under Section 31, then according to the Government Accountability Office (GAO), these "fees assessed to users for goods or services provided by the Federal Government are deposited to the Treasury as miscellaneous receipts and are generally not available to the agency."[31] Therefore, funds may not be available to FINRA CAT LLC. If CAT fee is related to other purposes (see our response to A3), then industry members should NOT be subjected to a Section 31 fee because rulemaking to seek sole benefit for the government agency or the affiliated SROs should be prohibited.

We challenged the Article XI §11.2 Funding Principles being insufficient to check against the CAT operating committee's legislative power to (a) approve budget of CAT and (b) establish fees for themselves as well as for all industry members, the committee's executive power in (c) imposing and collecting of all Consolidated Audit Trail Funding Fees, and the judicial right to (d) assign and change the tier assigned to any particular Person, resolution of disputes upon reasonable notice to such Person. Even though the SROs must file the fee schedules with the Commission, such unchecked power of the CAT operating committee would not ease the public or the industry community's concerns for potential biases.

If the CAT operating committee argues that CAT fee setting, collection, and dispute resolution are common commercial practices that they should have full discretion, then, CAT would not be part of their arbitral and prosecutorial authority. Hence, the SROs should not enjoy immunity related to their private businesses and the industry members shall then have choice (under antitrust laws), including rights to opt-out of CAT given they are not even users of the CAT system. If CAT fee/ minimum is a "pay to play" bundled cost to participate in a market, then this "tax" is a barrier of entry inconsistent with the competition, capital formation, and other goals of the Exchange Act.

B8. **Data Boiler's** views on the calculation of the Participant Allocation and the Adjusted Participant Allocation:

The CAT operating committee's proposal with discount, maximum cap, minimum, and other adjustments would further exacerbate the inequalities in the market. Establishment of a funding model without involvement of the industry members and the public may raise concerns or potential negative impression that CAT being a "private party" among elites to seek unfair advantages over others. Rulemaking to seek sole benefit for the government agency or the affiliated SROs should be prohibited.

B9. **Data Boiler's** views on the determination to allocate 60% of the Adjusted Participant Allocation to Equities Participants and 40% to Options Participants, including views on whether the proposed allocation is consistent with the funding principles expressed in the CAT NMS Plan that state that the Operating Committee shall seek, among other things, "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading

[31] Fees assessed under the authority of the Independent Offices Appropriation Act of 1952 (codified at 31 U.S.C. § 9701), rather than under a specific authorizing statute, must be deposited to the Treasury as miscellaneous receipts and are not available to the agency or program that collected the fees, unless otherwise authorized by law.

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operations of Participants and Industry Members and their relative impact upon the Company resources and operations," and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

The CAT operating committee stated that "the proposed 60%-40% allocation … based on activity in options and equities, and explains that the allocation was the subject of negotiations among the Participants". We argue whether this should be a "negotiation" per se? Why base on "activity" in options and equities? What constitutes as "activity"? In our opinion, the right counting of "activity" should correspond to whether these activities attributed to "suspicious activities" or "confirm cases" of market manipulation, flash crashes, or other market irregularities requiring scrutiny. The dividing line may not be between "Equity" and "Option", but more so on whether a marketplace is well run versus poorly run. The more troubles a marketplace has, the more that market should pay. We advocate for a merit system to promote accountability that allocating "rights" and "obligations" accordingly.

B10. **Data Boiler's** views on an alternative approach that would split costs between Participants and Industry Members by proportion of aggregate message traffic, then allocate the Participants' portion of fees across Participants by market share, with or without the proposed 60%-40% split between Equities and Options Participants; any views on whether this would benefit or harm efficiency, competition and capital formation when compared to the Participants' proposal; and any views on whether there are other benefits or costs of adopting such an approach:

We reiterate our arguments against the proposed "message traffic" concept. If CAT NMS Plan is meant to prevent future flash crashes, curb suspicious trading behavior and unusual market events, then why should one who is doing things fairly and squarely be subjected to regulatory scrutiny and CAT cost burden? Muddling with message traffic calculations does not serve the market any good. Friction or not, based on the FOCUS (Financial and Operational Combined Uniform Single) Report's numbers, Form 1 amendments, and what not computed by the CAT operating committee, we think the message counts are not relevant to CAT.

To be relevant to CAT, the formula needs to speak to which specific "rights" that the recipient of benefit is permitted to enjoy because availability of CAT to perform certain function. Correspondently, such recipient should be liable for what "obligations" and fee she or he should be held accountable to for CAT. Per our May 3rd, 2021 comment letter – Part C i on page 6, we illustrated that most if not all CAT purposes or benefit recipients are NOT the industry members. If the SROs Participants are the rightful recipients of CAT benefits, then their delegated authority per se cannot be used as an excuse to escape the obligations to pay and/or fulfill their obligations. Otherwise, they may place themselves above the law and against the public interest.

The Commission and SROs do have the authority to use fines and settlements to cover CAT costs because it is relevant to the existence of CAT, i.e. a tool to deter wrongdoing, prevent flash crashes and other market irregularities. Therefore, we counter propose to use suspicious activities as the basis to properly account for CAT's rights and obligations. We believe the Commission's current operating cost is also supported substantively by fines and settlements. So, fines and settlements should be considered acceptable revenue streams to cover CAT LLC costs satisfying the Article XI §11.2 funding principles.

B11. **Data Boiler's** views on whether elements of the Participants' proposal entail cross-subsidization of activities (for example: allocating 60% of Participants' fees to Equities Participants and 40% to Options Participants is unlikely to reflect these groups' relative message traffic; and discounting fees associated with message traffic for market-making activities based on quote/trade ratios reduces fees paid by Industry Members who are market makers);

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any views on how these cross-subsidizations benefit or harm efficiency, competition, and capital formation; and any views on whether there are other benefits or costs of adopting such an approach:

FINRA and Amazon Web Services (AWS), FINRA's cloud vendor, should fend off any public concerns about too big to fail (TBTF) by voluntarily providing full disclosure. The SEC should scrutinize that CAT funding won't be mixed-in and/or cross-subsidizing existing surveillance and cloud processing business. There is a thin line between synergy and potential conflicts of interest (especially, FINRA also holds the SRO power to fine broker-dealers over surveillance system deficiencies[17]).

The CAT operating committee's proposal with discount, maximum cap, minimum, and other adjustments would further exacerbate the inequalities in the market (Please see our response to A6, A7, A11 and A13). We argue the dividing line may not be between "Equity" and "Option". Again, the right focus should be whether a marketplace is well run versus poorly run (please see our response to B10). It is a "double down" to reinforce the advantages of the elites and large exchange groups' would always be over the Tier 2 and smaller players.

B12. **Data Boiler's** views on whether the lack of Industry Member participation on the Operating Committee prevents the Participants from arriving at an equitable allocation of CAT fees between Participants and Industry Members, and across members of those groups:

Like the newly approved CT Plan[32] that governs the public dissemination of real-time, consolidated equity market data for NMS stocks, we noted that the Commission may be thinking using similar 2/3 SROs and 1/3 Non-SROs representatives structure to broaden the diversity and strengthening the governance of CAT operating committee. We are a strong advocate of Governance, Risk, and Compliance (GRC), and we encourage all business and their operating committee to strengthen their governance controls.

While we delve deep into the NMS, we also realize the said 2/3 and 1/3 voting rights may result in a divide along partisan lines and only pass trivia matters. The division would lead the CAT LLC to run astray because of the bureaucracy. The large exchange groups may raise possible lawsuits to challenge the authority to give non-SROs voting power on the operating committee. In turn, it may defer the progress of CAT.

More importantly, this is in effect "OUTSOURCING" of decision making authority to the operating committee.[33] The Commission should really think about: (1) would the composition of the operating committee ends up being a "Private Party"; (2) would the Elites be "dividing up" the markets, or how will "rights" and "obligations" be properly consider; (3) would Tier 2, smaller firms, and non-contracted parties be under represented; (4) how the operating committee will be objectively carrying out a fair assessment of the divergence between private and social costs? [5] In our opinion, it is better for the Commission to directly use principle-based rules to concisely delineate rights and obligations now rather than "outsource" the decision-making authority to the operating committee.

B13. **Data Boiler's** views on how any inherent conflicts of interest may be addressed in the proposal:

We hope the Commission can see that throughout our comments we consistently advocate for accountability that allocate "rights" and "obligations" accordingly. Clear "rights" and "obligations" concisely defined by principle-based rules are indeed the best way to address inherent conflicts of interest. CAT funding model should

[32] https://www.sec.gov/rules/sro/nms/2021/34-92586.pdf
[33] https://www.linkedin.com/pulse/new-administration-showcases-what-governance-means-kelvin-to/

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be driven mainly by fines and settlements to hold poorly run market(s) and securities law violators accountable. This will be a merit system. Those who "operate at the edge", have a higher implicit conflict of interest and/or require closer scrutiny on suspicious activities should pay more. For those who are doing things fairly and squarely should not be subjected to regulatory scrutiny and CAT cost burden.

Frankly, CAT's biggest problem is rooted in its outdated design. This "gigantic vault" is the big elephant in the room. CAT inherently has this conflict the more data its stores, the more FINRA CAT LLC's partner AWS would get paid. Finding the needle in a haystack by making an ever-bigger pile multiplies the CAT costs. When CAT costs and liabilities are unbearable, people are motivated to escape or resist. Why would the large Exchange Groups with robust surveillance systems and linked to market data feeds at nanosecond precision need a "50± millisecond tolerance" CAT system? Why would any industry member want his/her data to be used by regulator(s) to develop policies that potentially may discriminative against him/her? In turn, those elites with the power to exploit would naturally consider self-interests over others. Consequently, those tier 2, smaller players, and non-contracted parties suffered.

We suggest adding a new CAT funding principle 11.2(g) about CAT costs allocation should be in proportion with specific public benefits received, i.e. not private benefits of CAT participants; and those that have higher implicit risk and vulnerability to potential conflicts of interest must be charged higher fees than others, to cover what is not already funded by fines and settlements from abuse or other securities law violation cases. Suspicious Activity Reports may be a good basis to account for a negotiable portion of the CAT fee applies to industry members if it is related to "reduction in disparate reporting requirements and data requests"; those who under report or report late on SAR should get increased fines.

B14. **Data Boiler's** views on how allowing the Operating Committee to determine by vote how Participant fees are allocated across Participants would benefit or harm efficiency, competition, and capital formation, assuming that some proportion of CAT fees are to be allocated to Participants as a group; and any views on whether there are other benefits or costs of adopting such an approach:

If CAT fee/ minimum is a "pay to play" bundled cost to participate in a market, then this "tax" is a barrier of entry inconsistent with the competition, capital formation, and other goals of the Exchange Act. Deferring or "outsourcing" the decision-making authority to the CAT operating committee or by vote inclusive of industry member representatives, this will still be a "private party". When it is a private negotiation, the elites may dominate and exploit on governance loopholes.

We think a merit system to call for those who "operate at the edge" or violate securities rules to pay more would better align the interest. Also, we applaud the SEC whistle-blower program because it takes crowd intelligence to discover the 'unknown unknowns'[34] (e.g. flash crashes) and provide early warnings to crisis and other market irregularities. Again, it is better for the Commission to directly use principle-based rules to concisely delineate rights and obligations now rather than "outsource" the decision-making authority to the operating committee.

Please also see our response to B12, B13 and Appendix 2 of our May 3, 2021 comment letter.

B15. **Data Boiler's** views on the proposed quarterly Participant CAT fee, including views on its calculation; any views on whether the proposed fee raises any competitive issues; and any views on whether the proposed fee is consistent with the funding principles expressed in the CAT NMS Plan, which state that the Operating Committee

[34] https://www.pmi.org/learning/library/characterizing-unknown-unknowns-6077

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shall seek, among other things, "to create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs of the Company;" "to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act taking into account . . . distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon the Company resources and operations;" and "to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality."

We think the proposed quarterly Participant CAT fee would be a "double down" to reinforce the advantages of the elites and large exchange groups' would always be over the Tier 2 and smaller players, instead of providing additional cost transparency. It is detriment to competition. Please see our response to B11 and A8. The funding principle calls for the Operating Committee "to create transparent, predictable revenue streams …" is not wrong. Yet, the emphasize should also be on our recommended adding of a new CAT funding principle 11.2(g) about CAT costs allocation should be in proportion with specific public benefits received (please see our response to B13). Again, this is about accountability that allocating "rights" and "obligations" accordingly, the divergence between private and social costs[5], as well as whether a marketplace is well run versus poorly run. Please see our response to B9.

B16. **Data Boiler's** views on the decision to use total budgeted costs for the CAT for the relevant year as the Total CAT Costs for calculating fees for Participants and Industry Members, rather than costs already incurred; views on the statement that the total budgeted costs for the CAT may be adjusted on a quarterly basis by the Operating Committee; and views on the treatment of any surpluses:

The "annual cost data by providing, upon request, its audited financial statements", which the CAT operating committee has made publicly available in compliance with Section 9.2(a)'s requirements of the CAT NMS Plan may reflect only the participants' portion of the CAT costs. Total budgeted costs may merely refer to the accounting books of Consolidated Audit Trail LLC, CAT NMS, LLC, and FINRA CAT LLC, plus the corresponding ledgers on the participants' records. As mentioned in the beginning of this letter, we estimate more than a thousand industry members in aggregate have already incurred over 4 times (or $800+ million a year) in both internal efforts and external resources support trying to prepare and comply with the CAT reporting requirements than the near $200 million spent by the plan participants and CAT processors.

We believe when other commenters are complaining "a lack of industry participation in the development of the Proposed Funding Model", to some extents they may indeed mean – the CAT operating committee failed to account for the "social costs"[5] when compiling the CAT budget. The CAT participants' attempt to "recoup" 75% or ~$145 million of what they can possibly capitalize as "private assets" is unjust. The CAT LLC's audited financial statements contain the following categories: "technology costs, legal, amortization of developed technology, consulting, insurance, professional and administration, and public relations" are likely expense items in the P&L. Yet, how assets are capitalized in balance sheet, depreciation or what should be written-off, and the handling of related parties' transactions, etc. are not as transparent.

The CAT operating committee's "intention" or self-claim of having "a strong focus on cost management …" is not equivalent to a "reason" justifying the proposed amendments. Also, there seems to be gap between "ability" and "intend" to focus on cost management. For example, the enhanced security proposal referenced to an outdated NIST guideline. Additionally, the CRA report grossly underestimated the potential damages to our country's

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economy and national security in case of a breach and potential function creep[10] by the participants. Despite the public has repeatedly warning of the CAT's outdated design flaws, the CAT operating committee seems to keep heading the wrong direction to build a gigantic useless "vault" and ultimately ending up with the "train wreck"[2]. We doubt whether the resources were used wisely.

Budget shortfalls or excess fees are signs of "weak" cost management. In addition, the manner of which the CAT operating committee tried to explain the increases in CAT costs from prior estimates seem to place their self-interest over others. We despise the bold and supercilious attitude – "data processing and storage costs are the primary CAT cost drivers and that these costs have increased significantly each year…", it sounded almost like telling the public to accept the toll or "tax" increase every year.

We understand storage cost increases may relate to one of the inherited flaws of CAT as a gigantic vault. However, if the CAT operating committee is conscience to serve the public interest, they could have called for a revisit of CAT's design. FINRA and Amazon Web Services (AWS), FINRA's cloud vendor, should fend off any public concerns about too big to fail (TBTF) by voluntarily providing full disclosure. The SEC should scrutinize, to ensure CAT funding won't be mixed-in and/or cross-subsidizing existing surveillance and cloud processing business. There is a thin line between synergy and potential conflicts of interest (especially, as FINRA also holds the SRO power to fine broker-dealers over surveillance system deficiencies[17]).

It is now a deep regret. Industry members have already paid more than a fair share for CAT. CAT in aggregate has cost both the plan participants and industry members around $1 billion with no realize benefit. The proposed funding model and fee schedule "shuffles" funding sources from pockets to pockets. The CAT operating committee's suggestion with "updates to the budgets and operational reserves" would not add new funding sources, nor replace existing funding sources with more appropriate means. "Any surplus would be treated as an operational reserve to offset fees in future payments" does not mean it will yield enough cost savings to make this CAT project sustainable. "Break-even basis" may likely be a continuous heightening of quarterly CAT fee adjustments to ask the industry members to pay up more. The total costs for CAT already outweighed its benefit.

Last but not least, establishment of funding model without involvement of industry members and the public to engage in an objective assessment between the divergence of private and social costs[5] may raise public concerns or potential negative impression that CAT being a "private party" among elites to seek unfair advantages over others. Rulemaking to seek sole benefit for the government agency or the affiliated SROs should be prohibited because it is contrasted with serving the public interest.

Other remarks and Conclusions:

Thank you for taking time to read our comments. We assert that the CAT operating committee's arguments are without merit and failed to demonstrate that a NMS plan filing is consistent with the Exchange Act and the rules and regulations issued thereunder is on the plan participants that filed the NMS plan filing. Their proposals will NOT remove impediments to, and will NOT perfect the mechanisms of the NMS, will NOT furtherance of the purpose of the Exchange Act, but would exacerbate the potential exploitation of powers allegedly by the CAT Participants leading to inequitable, biased, unfair, discriminatory situations harming smaller industry members, putting burden on competition, and may destabilize the fairness and orderly markets. We thank the Commission for clearly emphasizing the burden to demonstrate is on the CAT participants.

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Taking a temporary setback will have higher benefits to the market and the broader economy in the long term. It is better than sinking more money into this wasteful "vault" and brings down the entire industry with it. Be cautious with implementing a CT Plan[32] like governance structure for the CAT operating committee, because it is in effect "outsourcing"[33] the decision authority. If we can all go back to the drawing board, learn from the past failed experiences and focus on the right design, then the money spent would become an investment into the future. The $200 million consumed would just be a blip if this can inspire a restoration of our industry to re-focus on "rights" and "obligations". By developing a more open and effective mechanism to delineate "rights" and "obligations", it will enhance the market efficiency, ensure healthy competition by uplifting the FRAND principles, and foster capital formation.

Feel free to contact us with any questions. Thank you and we look forward to engaging in any opportunities where our expertise might be required.

Sincerely,

Kelvin To

MSc Banking, MMGT, BSc
Founder and President
Data Boiler Technologies, LLC

CC: The Honorable Gary Gensler, Chairman
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline A. Crenshaw, Commissioner
Mr. David Saltiel, Acting Director, Division of Trading and Markets

This letter is also available at:
https://www.DataBoiler.com/index_htm_files/DataBoiler%20SEC%20CAT%20Funding%20202108.pdf