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February 4, 2020

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:		
	File No. 4-757[1]	Proposed Order Directing the Exchanges and the Financial Industry Regulatory Authority (FINRA) to Submit a **New National Market System (NMS) Plan Regarding Consolidated Equity Market Data**
	File No. S7-24-89[2]	44th , 45th, and 47th Amendment to the Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis
	File No. SR-CTA/CQ-2019-04[3]	30th, 31st, and 33rd Substantive Amendment to the Second Restatement of the CTA Plan and 22nd and 24th Substantive Amendment to the Restated CQ Plan

Dear Ms. Countryman:

On behalf of Data Boiler Technologies, I am pleased to provide the U.S. Securities and Exchange Commission (SEC) with our comments regarding the above Commission's notices. I applaud the SEC in particular for the courage to propose NMS governance structure reform amid large Exchange groups holding tremendous voting power in the Equity Data Plans. As an experienced industry practitioner and inventor of a suite of patent approved solution for the capital markets, I have no objection to the Commission's proposal because the root cause of today's equity market structure problems is the unclear delineation of rights[4].

I consent that the transformation of the Exchanges into publicly owned companies and the emergence of Exchange Groups exacerbate the conflicts of interest issue. The Commission's proposals aimed to strike appropriate balance between respecting the autonomy of Exchanges and improving best practices to advance the NMS related governance structure. Despite securities Exchanges registered with the SEC as self-regulatory organizations (SROs) are quasi-regulatory authorities, but SROs do not enjoy quasi-governmental immunity[5]. Thus, I am not sure if the SEC can force the large Exchange groups administratively to accept the proposal 'as-is'. Large Exchange groups are

[1] https://www.sec.gov/rules/sro/nms/2020/34-87906.pdf
[2] https://www.sec.gov/rules/sro/nms/2020/34-87908.pdf; https://www.sec.gov/rules/sro/nms/2020/34-88017.pdf; https://www.sec.gov/rules/sro/nms/2020/34-87910.pdf
[3] https://www.sec.gov/rules/sro/nms/2020/34-87907.pdf; https://www.sec.gov/rules/sro/nms/2020/34-88016.pdf; https://www.sec.gov/rules/sro/nms/2020/34-87909.pdf
[4] https://www.sec.gov/comments/s7-05-18//s70518-3631338-162376.pdf
[5] https://content.next.westlaw.com/Document/I8aba78e5e4dd11e79bf099c0ee06c731/View/FullText.html

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likely to fight back[6]. That being said, I have long been advocating for "**split up of Exchanges' listing/trading business from data business**" to replace the distorted economy of scope with efficiency gains from fewer fights and more cooperation among trading venues and better economy of scale.[7] Please allow me to elaborate why "spinoff" is a better approach in later paragraphs.

The spinoff of Securities Information Processor (SIP) business from the securities Exchanges is **fair** to everyone because it **relies on market mechanism to determine appropriate values** to compensate for limiting rights that currently owned by the Exchanges. This saves the hassle to re-design and maintain a fair and reasonable revenue allocation formula for distributing plan revenues, as participants' voting rights are also going to be reallocated under the SEC's proposal. The Exchanges will have no excuse not to accept this "split" because "if" they do not even trust the market mechanism that they themselves operate in for a fair price, then how they will be qualified to tell others to trade on their platforms?!

Another key advantage of "spinning-off" SIP is that it **avoids potential litigation fights that delay the implementation of some of the governance best practices** proposed by the SEC. There would no longer be challenges to overcome dominate voting humps hold by the Exchanges. In turn, SIP under new management can **accelerate decision-making** on advancing the SIP's performance and price competitiveness with Exchanges' proprietary products. That being said, this is under the condition of **mandating the use of time-lock encryption**[8] for both SIP's consolidated data and Exchanges' proprietary feeds.

As mentioned in my submitted comments and meeting with the SEC in Dec 2019[8], I think the interpretations of 17 CFR §242.603(a)[9] is incomplete and requires clarification or appropriate updates. "Transmitting or releasing data no sooner than to a Network processor (SIP)" only describes one of the aspects of "fair and reasonable" and "not unreasonably discriminatory" principles required by Reg. NMS. It omitted the fact that market data is highly valuable (it reflects the price discovery created by exchanges) and it requires **proper security protection**. Hence, the secured delivery (in-motion and at-rest)[10] and retrieval of data in a timely manner are equally important. Time-lock encryption is a method to encrypt data such that it can only be decrypted after a certain deadline has passed. The goal is to protect data from being decrypted prematurely. So, regardless of when data is transmitted, everyone including subscribers of Exchanges' proprietary products would only be able to start decrypting when the clock strikes to allow data decryption at SIP.

I already obtained **patent approval** on using Time-Lock Cryptography (TLC) to address this market data and market access problem. Rest assured this is not another speedbump. More importantly, the patent protection is a one-and-for-all approach eliminating the issue (market will not fix the market because of SROs rivalry and rent seeking behaviors) identified by Eric Budish, Robin S. Lee, and John J. Shim's empirical research[11]. There are various ways to build time-lock encryption for different protection requirements. Following points should be noted when designing the Time-Lock Cryptography (TLC):

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[6] https://www.wsj.com/articles/stocks-exchanges-accuse-government-of-ethics-lapse-in-market-data-fight-11561423837

[7] https://www.linkedin.com/pulse/split-restructure-equity-market-kelvin-to/

[8] https://www.sec.gov/comments/4-729/4729-6510588-200169.pdf

[9] https://www.law.cornell.edu/cfr/text/17/242.603

[10] http://www.databoiler.com/index_htm_files/DataBoilerInMotion.pdf

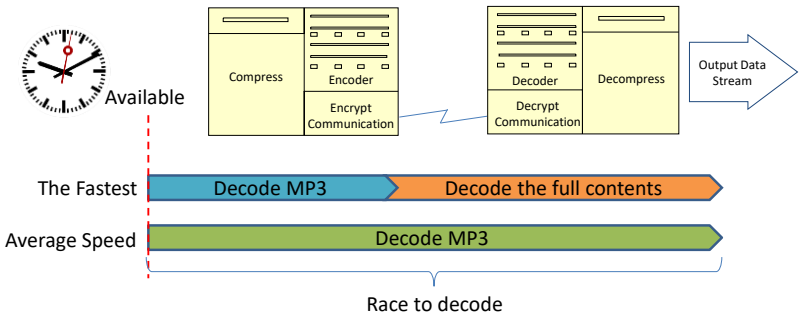
[11] http://www.people.fas.harvard.edu/~robinlee/papers/ExchangeComp.pdf

- The architecture needs precise calibration of time with an independent atomic clock, such as the NIST[12].
- Incorporate time-lock with threshold-cryptosystem is like asking asynchronous distributed network to behave like synchronous network.
- Consistency of server's notion of time depends on joint attestation by clients that subjected to certain tolerance level.
- Data may be vulnerable to alteration if timestamp attached to file before encryption.
- Threshold secret sharing the identity based encryption (IBE) master key among the group avoid single point of failure, but time granularity of consensus architecture may not fit the use case to solve the market data / market access problem.
- Assume no corrupt nodes as a result of deliberately set clocks arbitrarily forward or back, network condition can affect the precision of when the time vault beacon released key to allow decryption of message.
- TLC is on logical time, not real time per se. Witness consigning need to pick an arbitrary before and after tolerance window, which is hard to calibrate. Attempt to correct monotonicity violation may introduce other nuances.
- Asynchronous distributed network may be less expensive, but slow.

Given the above, the design of TLC depends on accuracy and precision requirements, complexity to calibrate any nuances, and the amount of computational resources to decrypt the data. Because we do not want to push the bottleneck to an arms-race of using high-performing computers to decrypt data, therefore, computational resources and the type of data contents must also be considered in the design of a reliable encryption scheme.

In order to match up the race in decrypting/ decoding data, my approved patent invention enables trade activities to transform into musical piece representation and metrical trees that making it possible to leverage Lossy compression methods, such as MP3, to yield a substantially greater compression ratio (60% or more of the original stream) as compared to traditional techniques (only 5-20%) that exploit statistical redundancy, Huffman coding[13], or probability method to represent and compress market data[14]. My methods reduce data storage and booster the efficiency in data distribution, while also enabling the replicate the depth-of-book (DOB) information. Consequently, we are able to best preserve the richness of contents, while making the tool fast, easy, secure and fit for solving the market data and market access problem.

See picture on the right that illustrate the race to decode and decrypt data using the fastest high-performing computers versus the average.



[12] https://www.nist.gov/news-events/news/2018/11/nist-atomic-clocks-now-keep-time-well-enough-improve-models-earth

[13] https://en.wikipedia.org/wiki/Huffman_coding

[14] https://patents.google.com/patent/US20180336632A1/en?oq=US2018%2f0336632A1; https://patents.google.com/patent/US8723701B2; https://patents.google.com/patent/US7417568B2

This brings us back to the point of why "spinning-off" SIP is better than prescribing a particular governance structure and continuous arguments over voting rights. When SIP under new management, they can quickly adopt both the TLC and MP3 approaches to benefit the industry. That way, the SEC can preserve its fairness by:

(1) **Authorizing the spin-off of SIP**; and

(2) **Updating interpretations of 17 CFR §242.603(a)**[9], and **mandating the use of Time-Lock(s) to make market data available securely in synchronized time**.[15]

Again, per my submitted comments to the SIP operating committee[16], Market Authorities and the overall industry must recognize that, because of the immutable latency issue, there has to be some **gives and takes to optimize between processing speed and contents' richness for SIP**. I encourage the industry to consider the following suggested priorities:

(i) First, address the speed differentials between the market data feeds provided by the SIPs and the proprietary products sold by the exchanges in order to get the biggest bang for the buck.

(ii) Second, demand for the depth-of-book information (a replication of the relative strengths in bid/ask price and steepness of the price curve in real-time), so at least the content would be a bit more compatible with the proprietary products sold by the exchanges, while minimizing drags of the SIP processing speed.

(iii) Third, pursuit market structure changes outside of the SIP that will make odd lots become true "outliers"[17] rather than the "norms", and/or ask for a "delayed" odd lot trades and quotations statistics, so that experienced market participants may use reverse-engineering methods to "figure-out" or "project" how these odd lots would play out in sequence. This "alternative", "compromise", or "trade-off" is based on the condition of Exchanges willingness to adopt point (i) – making market data available securely in synchronized time[15].

Last but not least, I hope your takeaways from this comment letter include:

- "Spinning-off" SIP is better than prescribing a particular governance structure and continuous arguments over voting rights because:
  - Market mechanism is a fair way to determine appropriate values to compensate for limiting rights that currently owned by the Exchanges;
  - Accelerate the implementation of some of the governance best practices proposed by the SEC if SIP can be under new management, rather than dragging on needy-greedy arguments among lobbyists that often resulted in a "I will be gone or you will be gone" phenomenon;
  - Accelerate SIP decision-making in adopting TLC and MP3 approaches to match up with Exchanges' proprietary products (avoid pushing the bottleneck to an arms-race of using high-performing computers to decrypt data).
- Patent approval is already obtained on using Time-Lock Cryptography to address this market data and market access problem; this patent protection eliminates the issue of "Market won't not fix the market itself" (because of SROs rivalry and rent seeking behaviors)[11].

[15] https://www.linkedin.com/pulse/market-data-available-securely-synchronized-time-kelvin-to/

[16] https://www.theice.com/publicdocs/DataBoiler_OddLots_Comments.pdf

[17] Instead of bluntly get rid of odd lots by changing the round lot size, one should ask what are the various reasons for the existence of odd lots. For example, the causes related to a lack of stock split, the segment's specific needs in moving blocks under the impending dynamics between lit and dark venues, etc.

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- The SEC ought to update interpretations of 17 CFR §242.603(a)[9] regarding the "data protection and availability" aspects;
- For the industry, it is time to prioritize on addressing the speed differentials issue; then considering the use of a replication of the Depth-of-Book curve and a "delayed" odd lot trades and quotations statistics.[8]

We hope the above comments and the detailed responds to the Commission's specific questions below will be helpful to the SEC and benefiting the broader industry in improving the current market data system. Feel free to contact us with any questions, and I'll be happy to elaborate my suggestions further (including how my patent approved invention is able to solve the IOSCO[18] or Consolidated Audit Trail[19] surveillance challenges when analyzing order books amid the unsynchronized clock issue[20]). Finally, the way to deemphasize speed as a key to trading success[21] is by democratization of technologies – fostering a healthy competition of discovering new patterns and trade strategies instead of immerse in a drag race. Thank you and we look forward to engage 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 Jay Clayton, Chairman
The Honorable Robert J. Jackson Jr., Commissioner
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman, Commissioner
The Honorable Allison Herren Lee, Commissioner
Mr. Brett Redfearn, Director, Division of Trading and Markets
Ms. Andrea Orr, Counsel to the Director of Trading and Markets

This letter is also available at:
www.DataBoiler.com/index_htm_files/DataBoiler%20SEC%20Consolidated%20Data%20Governance.pdf

[18] https://www.iosco.org/library/pubdocs/pdf/IOSCOPD389.pdf
[19] https://www.linkedin.com/pulse/hr-block-analogy-cat-combating-fraud-kelvin-to/
[20] https://www.linkedin.com/pulse/clock-synch-challenge-new-solution-kelvin-to/
[21] https://www.sec.gov/news/speech/2014-spch060514mjw

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I. Whether the Amendment to the current Plan addresses the concerns outlined in the Governance Notice or whether they should be further enhanced regarding the identification and protection of confidential information.

Question I-01

Do commenters believe that Participants involved in the operation or governance of each Plan have, by consequence of their position, access to information of substantial commercial and competitive value? Yes

If so, do commenters believe that certain of that information, including customer-specific financial information, customer-specific audit information, personally identifiable information, and information concerning the intellectual property of Participants or customers, is highly sensitive to such a degree that its possession and use should be more tightly controlled? Please explain. For example, should the Amendment require logs and written attestations when a Covered Person shares Highly Confidential Information with other employees or agents of the Participant or its affiliates? Yes. Logs to track proper access, use, and discard of highly confidential information would be good practices. Yet, attestation only creates bureaucracy that benefits law firms or big consultants as we have seen in the Dodd-Frank Volcker Rule CEO's attestation process, so we do not recommend such attestation requirement.

Do commenters believe the Amendment should specifically address commercial use of information that is of substantial competitive value? Yes, but spinning-off SIP is a better approach than prescribing particular procedures, please see comments in the earlier part.

Question I-02

Do commenters believe that Participants' representatives should be subject to restrictions and/or information barriers as part of the confidentiality policy to address their direct or indirect involvement in the development or sale of proprietary data products to SIP customers? For example, do commenters believe that Participants' access to a list of the Processor's customers as well as information on those customers' data usage and fees paid to the Plan has competitive implications? Yes

Do commenters believe that the Plan should require recusal in certain circumstances (e.g., during Executive Sessions or Operating Committee meetings) because the potential for misuse of competitively sensitive confidential information is too great? If so, what should those circumstances be? Yes, but rather than listing circumstances, which will never be comprehensive enough to cover all scenarios, or using some sorts of "catch-all" clause, the emphasis should instead focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest.

Do commenters believe that any Participant or Advisory Committee member that is directly involved in the management, sale, or development of similar proprietary market data products that may be sold to customers of the SIPs should have access to any customer information from the SIPs? No

Do commenters believe that Operating Committee members, as well as the Administrator, Processor, and auditor should be prohibited, unless otherwise required by law, from sharing confidential information with individuals that are not involved with the operation of the Plan and individuals employed by or affiliated with the same entity if such individuals are involved in the management, sale, or development of proprietary data products that are offered separately to a substantially similar customer base, i.e., customers or potential customer of the SIPs? Yes

Would these concerns also be present for the sale of related data products that are supplemental to SIP data? Yes, that's why Exchanges should "spin-off" SIP business entirely (please see comments in the earlier part).

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Question I-03

Do commenters believe that the Plan should require all Participants and other Covered Persons to establish, maintain, and enforce policies and procedures to safeguard confidential and proprietary information received via their participation in the Plan and to prevent its misuse by such Participants or entities controlling, controlled by, or under common control with such Participants? If so, do commenters believe the proposed Amendment sufficiently achieves that goal?

Enforce policies and procedures to safeguard confidential and proprietary information makes sense, and it is a control best practice that applicable to any organization.

Question I-04

Do commenters believe the proposed guidelines and procedures for identifying and categorizing types of confidential information, including for providing increasing degrees of protection for more sensitive types of confidential information, provide sufficient detail and a sufficiently comprehensive process and procedures to identify, classify, and subsequently protect confidential information? Or do commenters believe that further efforts are necessary to identify, categorize, and protect confidential information and/or information of substantial competitive or commercial value? Do commenters believe that a need may arise for information or data that are not initially categorized as confidential to be categorized as such at a later point in time and, if so, what should the process be for doing so? For example, should the Operating Committee be able to classify or de-classify material as appropriate based on a majority vote?

The proposed guidelines and procedures for identifying and categorizing types of confidential information make sense. However, it shouldn't be too prescriptive that affects private practices, unless the mandate is necessary to curb certain conflicts of interest situation. Again, spinning-off SIP is a better approach than prescribing particular procedures (please see comments in the earlier part).

Question I-05

Do commenters believe that the Administrator and Processor should be solely responsible for classifying material according to the proposed standards? Or do commenters believe the decisions of the Administrator and Processor should be subject to review, for example upon the request of a member of the Operating Committee? Responsibilities, accountabilities, who to inform and consult are some of the governance best practices that every organization should properly define. Yet, if a member of the Operating Committee asks to review every decision of the Administrator and Processor, it would create much bureaucracy. The emphasis here should be aligning their interests, or let dysfunctional party "off-the-bus" by spinning off SIP.

Do commenters believe that potential conflicts of interest should preclude the Administrator and Processor from solely and independently making classification determinations in those circumstances when entities with which they are directly or indirectly affiliated separately offer proprietary data products to a substantially similar customer base, i.e., customers or potential customers of the SIPs? Yes

Question I-06

Do commenters believe that certain information or data generated, accessed, transmitted to, or discussed by the Operating Committee, such as information regarding contract negotiations with a potential new Processor, Administrator, auditor, or other third party service provider, should be designated as confidential and, if so, what level of confidentiality should such information be afforded? Not necessary. Consider spinning off SIP and making it a public utility, these contracts, audit engagement, etc. might then be required to be transparent.

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Question I-07

Do commenters believe that information shared in Executive Sessions should be classified as Highly Confidential simply by virtue of it having been shared in an Executive Session, or should such information be classified based solely on its content and competitive sensitivity?

Yes, or else it shouldn't be called an "Executive Session". However, "if" the process of Executive Session is being abused, then stakeholders should have rights to reject matters going into an Executive Session.

Question I-08

Do commenters believe that information that is not classified at some level of confidentiality should be considered public and may be shared freely outside of the Operating Committee? What specific information do commenters believe should be considered public and shared outside of the Operating Committee?

No, information classified as non-confidential do not necessary means they should be publicly available. There can be restricted information only allowed to be accessed and used by selected stakeholders at appropriate time. And after a certain restrictive period, the information may then publicly disclosable, but those should be guided by the organization's security and record retention policies. Regulatory requirements shouldn't be too prescriptive that affects private practices, and spinning off SIP is a better approach.

Question I-09

Do commenters believe that the proposed guidelines and procedures setting forth the circumstances in which disclosure of confidential information may be authorized are sufficiently clear and comprehensive? We recognize that the proposed guidelines and procedures covered many of the key governance and control best practices. Yet, it may never be comprehensive enough and there will always be arguments by different stakeholders. Regulators shouldn't be in the position to judge these private practices or step-in every time when there are disputes among stakeholders.

Do commenters believe that the proposed provisions allowing Participants to disclose confidential and highly confidential information to other employees or agents of the Participant or its affiliates as needed as they reasonably determine is appropriate? Or do commenters believe that, if a Participant is either employed by or affiliated with an entity that offers proprietary data products that are offered for sale to a substantially similar customer base (i.e., customer or potential customers of the SIPs), that Participant should be required to develop policies and procedures that govern the sharing of confidential information? Again, that's private practice and regulators shouldn't interfere.

Do commenters believe such policies and procedures should be reviewed by the Operating Committee and Advisors and made publicly available via the Plan's website? Yes

Do commenters believe that the potential conflicts of interest involved and the difficulty of mitigating the potential harm and potential burdens on competition are so great that Participants should be explicitly prohibited from disclosing restricted and confidential information at all or only if authorized to do so on a case-by-case basis from the Operating Committee, unless such disclosure is otherwise required by law? If disclosure is required by law, should the Covered Person be required to first notify the Operating Committee (e.g., to provide the Operating Committee with an opportunity to redact information if permitted by applicable law or to dispute the requirement to provide in its entirety)?

Disclosure doesn't help. Spinning-off SIP is a better approach (please see comments in the earlier part).

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Question I-10

Do commenters believe that certain confidential information may become less sensitive if it is anonymized and aggregated? If so, do commenters believe that certain types of restricted or highly confidential information could be anonymized and aggregated to the point where it could be classified as public? Yes

What methodology for anonymizing confidential information would commenters suggest, and should the methodology be standardized such that the Administrator, Processor, and auditor all follow a consistent practice for anonymizing such information? Do commenters believe that certain information is so sensitive, whether anonymized or not, that it should never be shared outside of the Operating Committee or outside of the Administrator?

Aggregate rollup to simplify is one common way to anonymizing confidential information, but not the only mean to protect confidential information. There are various ways to do data obfuscation (modifying the stored format of data so that it is not easily readable or accessible). Also, there are ways to introduce randomness, separate and scramble, etc. However, it'll always be a continuous race against reverse-engineering, business intelligence, machine learning, etc. Confidential information should be properly encrypted and use appropriate eradication to remove the data as soon as it has been transmitted/ used.

Question I-11

Do commenters believe that the scope of the proposed Amendment is sufficiently comprehensive to cover all parties that might have access to confidential information, or should the scope be broadened to apply to additional classes of persons? It is well written and covered many of the key governance and control best practices. Yet, it may never be comprehensive enough and there will always be arguments by different stakeholders. Regulators should refrain from interfering private practices.

For example, should outsourced service providers (including, but not limited to, firms and persons that provide audit services, accounting services, or legal services to the Plan, the Administrator, or the Processor) be subject to additional restrictions, particularly if they are directly or indirectly affiliated with a Participant, the Administrator, the Processor, or any entity that offers separately proprietary data products to a substantially similar customer base, i.e., customers or potential customers of the SIPs? Not necessary, as long as there is no violation of Reg. SCI, it should be fine.

If so, should the Plan explicitly preclude itself from engaging with an Administrator, Processor, auditor, or any agents or third parties thereof, unless the entity establishes, maintains, and enforces policies and procedures to safeguard confidential and proprietary information and to prevent its direct or indirect misuse? If so, should the Operating Committee review those policies and procedures and/or should they be made public (i.e., provided on the Plan's website)? For example, if the Administrator oversees a Plan's audit function (directly or through an agent or third party) but also is affiliated with an entity that sells proprietary data products to SIP customers, do commenters believe that potential conflicts of interest should preclude the Administrator from independently determining its own confidential information policies as they apply to the audit function? Or, should such policies be subject to review and approval by the Operating Committee, and be posted publicly, to help ensure their adequacy and completeness?

Again, the emphasis here should be aligning their interests, not creating bureaucracy. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (please see comments in the earlier part).

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Question I-12

Do commenters believe that Advisory Committee members need access to sensitive information of substantial commercial and competitive value in order to perform their duties? Depends, but it sounded like too many information are currently classified as confidential and only accessible to those in Executive Session, causing the Advisory Committee unable to perform their duties.

Do commenters believe that the Advisory Committee members need access to underlying information relied on by the Participants when making decisions on funding of and improvements for the SIPs?

Advisory Committee can perform like eyes and ears to keep abreast of modern technology developments and recommend appropriate improvements for the SIPs. However, Advisory Committee's role is party to "consult", not party involves in the day-to-day management of SIP operations. Funding decision should always be at the discretion of SIP voting members.

Question I-13

Do commenters believe the proposed remedy in the event that a Covered Person discloses "Highly Confidential Information" in a manner inconsistent with the proposed policy is sufficient, or should any other consequences of such disclosure be provided?

"If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

Question I-14

Similarly, do commenters believe the Amendment would sufficiently deter unauthorized disclosure of "Confidential Information" by a Covered Person without authorization by the Operating Committee? Do commenters believe appropriate remedies for Participants and Advisors should differ, or should potential remedies for Participants that disclose confidential information also include the possibility of removal of that Participant from the Operating Committee?

"If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

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II. Proposed Disclosure

Question II-01

The text of the Amendment, set forth above, states that: "With Exchanges permitted to offer both proprietary market data products and also acting as Participants in running the public market data stream, potential conflicts of interest are inherent in the structure developed under Regulation NMS." The Amendment further notes that "[t]here may be instances in which representatives from the Participants and Advisory Committee members have responsibilities with respect to both proprietary data and [SIP] data" and that "such overlapping responsibilities may give rise to potential conflicts of interest." Do commenters believe the proposed Amendment adequately addresses those potential conflicts? Please provide sufficient detail to support your views, including, to the extent available, actual or possible examples.

The amendment is an applaudable effort aimed to addresses potential conflicts. Yet, spinning off SIP is a better approach (please see comments in the earlier part).

Question II-02

If commenters do not believe that the proposed Amendment adequately addresses the potential conflicts of interest arising from the Plan's current governance structure, is that because commenters believe the Amendment is inadequate in any particular way? Or is it because commenters believe that the potential conflicts of interest have not been characterized accurately? If so, in what ways do commenters believe the Amendment fails to describe the current environment and potential conflicts of interest?

As mentioned in the earlier part, I have no objection to the Commission's proposal because the root cause of today's equity market structure problems is the unclear delineation of rights[4]. I consent that the transformation of the Exchanges into publicly owned companies and the emergence of Exchange Groups exacerbate the conflicts of interest issue. The Commission's proposals aimed to strike appropriate balance between respecting the autonomy of Exchanges and improving best practices to advance the NMS related governance structure. Despite SROs are quasi-regulatory authorities, they do not enjoy quasi-governmental immunity[5]. Thus, I am not sure if the SEC can force the large Exchange groups administratively to accept the proposal 'as-is'. Large Exchange groups are likely to fight back[6].

"Spinning-off" SIP is better than prescribing a particular governance structure and continuous arguments over voting rights because:

- Market mechanism is a fair way to determine appropriate values to compensate for limiting rights that currently owned by the Exchanges;
- Accelerate the implementation of some of the governance best practices proposed by the SEC if SIP can be under new management, rather than dragging on needy-greedy arguments among lobbyists that often resulted in a "I will be gone or you will be gone" phenomenon;
- Accelerate SIP decision-making in adopting TLC and MP3 approaches to match up with Exchanges' proprietary products (avoid pushing the bottleneck to an arms-race of using high-performing computers to decrypt data).

Question II-03

In their filing, the Participants state that the proposed questions in the disclosure document are tailored to elicit information relevant to assess the extent of an individual's potential conflict of interests with the Plan. Do commenters believe that the questions for Participants, Processors, Administrators, and members of the

Advisory Committee are sufficient to elicit information to provide insight into all potential conflicts? No. *Will public availability of the responses increase transparency and confidence in the governance of the Plan?* No
Do commenters believe the proposed disclosures are sufficient or should enhanced disclosures be required? If so, what additional items of disclosure should be required and why? Do commenters believe that additional disclosures should be required for the representatives and alternative representatives of a Participant, Processor, Administrator, or member of the Advisory Committee?
No, disclosure doesn't help. The emphasis should instead focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

Question II-04
In their filing, the Participants state that a disclosure-based regime is a pragmatic step to address potential conflicts of interests. Do commenters agree or disagree with that statement? Disagree
Do commenters believe that a disclosure-based regime is sufficient to address the potential conflicts that Participants, Processors, Administrators, and members of the Advisory Committee may face in their roles within the Plan? No

Question II-05
Do commenters think any other types of persons should be required to provide disclosures, such as services providers to the Administrator that provide audit, accounting, or other professional services? As an example, if auditing services are outsourced to a Participant's employer or an affiliate that also is offering proprietary data products to SIP customers and/or conducting audits for those products, should that entity also be required to disclose its conflicts and otherwise be subject to the terms of the conflicts of interest policy, even if it is neither the Administrator nor Processor?
When there is no trust, whatever disclosure would be meaningless. Only until parties involve have stakes to loss if they act against public interest, it is rational to expect everyone acts to maximize self-interest.

Question II-06
Do commenters believe that an alternative approach could better identify and address conflicts of interests among Participants, Processors, Administrators, and the Advisory Committee, as well as auditors? For example, should a disclosure regime be supplemented with certain prohibited conduct or procedural requirements, such as a prohibition on a Participant voting when that Participant has direct business responsibilities related to producing, selling, or managing competing data products? If you believe an alternative approach is appropriate, please provide details on any such alternative approach. Do commenters regard the Plan's ability to identify and protect the confidentiality of competitive information as an important component to the Plan's ability to manage conflicts of interest? If so, how do commenters regard the interaction between this proposed Amendment and the separate proposed Plan amendment to govern treatment of confidential information noted above?
Yes, I have long been advocating for "**split up of Exchanges' listing/trading business from data business**" to replace the distorted economy of scope with efficiency gains from fewer fights and more cooperation among trading venues and better economy of scale.[7] The spinoff of SIP from the securities Exchanges is **fair** to everyone because it **relies on market mechanism to determine appropriate values** to compensate for limiting rights that currently owned by the Exchanges. This saves the hassle to re-design and maintain a fair and

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reasonable revenue allocation formula for distributing plan revenues, as participants' voting rights are also going to be reallocated under the SEC's proposal. The Exchanges will have no excuse not to accept this "split" because "if" they do not even trust the market mechanism that they themselves operate in for a fair price, then how they will be qualified to tell others to trade on their platforms?!

Another key advantage of "spinning-off" SIP is that it **avoids potential litigation fights that delay the implementation of some of the governance best practices** proposed by the SEC. There would no longer be challenges to overcome dominate voting humps hold by the Exchanges. In turn, SIP under new management can **accelerate decision-making** on advancing the SIP's performance and price competitiveness with Exchanges' proprietary products. That being said, this is under the condition of **mandating the use of time-lock encryption**[8] for both SIP's consolidated data and Exchanges' proprietary feeds.

Please see comments in the earlier part for an elaborated discussion of this alternate approach.

Question II-07

Do commenters believe that the proposed disclosure questions for each party are sufficient to identify the specific relationships that may give rise to a conflict under the Plan and related information? Not really

Separately, do commenters believe that the proposed questions effectively require all material facts necessary to not only identify the nature of the conflict, but also the effect it may have on the Plan? Should the Amendment require more disclosure of such potential effects or greater details with respect to the disclosures that are made?

No, disclosure won't be effective. The emphasis should instead focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

Question II-08

Do commenters believe that the Plan should require additional public disclosures of any personal, business, or financial interests, and any employment or other commercial relationships that could materially affect the ability of a party to be impartial regarding actions of the Plan?

I get that, publics like transparency. Yet, the best way to provide transparency is by spinning off SIP and making it a public utility.

Question II-09

The Participants propose to continue to post the conflicts of interest disclosures for each party on the Plan's website. Do commenters believe that doing so provides sufficient public notice of potential conflicts? No

If not, in what other manner should the disclosures be made public? For example, should Participants be required to acknowledge potential conflicts when discussing specific matters at Operating Committee meetings or subcommittee meetings that present a conflict? Should a complete set of the disclosures be included in the materials for each Plan meeting? Is he timing clear with respect to the requirement that a Disclosing Party "promptly" update its disclosures, or should the Amendment be more specific? What do commenters consider sufficiently prompt? Within one week? Within 30 days? Some other time frame?

Again, the best way to provide transparency is by spinning off SIP and making it a public utility.

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Question II-10

As proposed, the Amendment states that disclosures will be made and updated annually or upon any material change. Do commenters believe that these intervals are sufficient, or should updates be required more frequently such as in advance of scheduled Plan meetings? What constitutes a "material" change that should require the filing of an amended disclosure? Please explain.

Instead of puzzling with the definition of "material" change, the emphasis should focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

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III. Proposed Disclosure for Participants

Question III-01

Do commenters believe that any individual representing a Participant that is directly involved in the management, development, pricing, or sale of proprietary data products offered to SIP customers should participate in discussions and related Plan votes regarding the pricing of SIP data products? No

If so, how do commenters believe Participants should address the conflicts their representatives may face in their dual role of pricing and developing SIP data products as well as their own proprietary data products?

Spinning-off SIP is a better approach (please see comments in the earlier part).

Question III-02

Do commenters believe that a Participant should be recused from voting when it or an affiliate is competing for a contract to serve as a Processor for the Plan? Why or why not? Are there any other scenarios that present conflicts that should result in a Participant being recused from voting?

Yes, being sensitive about actual or imply conflicts are always welcome.

Question III-03

Do commenters believe recusal on certain Plan action when a potential conflict is present is an appropriate mechanism to address conflicts? If so, under what circumstances? If applicable, do commenters believe that recusal should be mandatory or should it be voluntary? Why or why not?

It makes sense to use recusal, but not all the time because it'll be wasting everybody's time when the recusal process might be abused.

Question III-04

Do commenters believe that Operating Committee members should be permitted to raise the issue of a potential conflict of interest of another Participant for discussion before the Operating Committee, even if the Participant did not itself disclose the potential conflict? Yes

Do commenters believe that the Operating Committee should have the ability to take action in response to disclosed or undisclosed conflicts, such as requiring the Participant to recuse itself from a certain discussion or vote on a particular matter? If so, how should the Operating Committee take such action? Should the Participants vote on recusal or should the Participants seek input from the Advisory Committee? Why or why not? Both Operating Committee and the Participants working together to find appropriate resolution would be ideal. However, "if" there is dysfunctional party, it is better to let them "off-the-bus". Spinning off SIP is a better approach to address conflicts of interest (see comments in the earlier part).

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IV. Proposed Disclosures for Processors

Question IV-01

Do commenters believe that the proposed disclosure questions for the Processor are sufficient to identify the specific circumstances in which a Participant is both voting on an Operating Committee and competing to act as Processor for the Plan? Do commenters believe that the disclosure questions are tailored to the role that the Processor performs and the fact that the Processor is present at Plan meetings but do not vote on Plan matters, or should different or additional disclosure be required for the Processor? Those are well written questions, but why adding burden on the processor? It is hard enough to serve multiple bosses!

Separately, do commenters believe that the proposed Processor questions effectively require all material facts necessary to not only identify the nature of the potential conflict, but also the effect it may have on the Plan? Should the Amendment require more disclosure of such potential effects? Should the Amendment elaborate on what "profit or loss responsibility for a Participant's Proprietary Market Data products" means in the context of the required disclosures? I think it places the Processor in an awkward position.

Alternatively, do commenters believe that the Plan's separately-proposed confidentiality proposal would address some of the potential effects of conflicts of interests if approved?

Still, spin-off SIP is a better approach to eliminate conflicts of interest (see comments in the earlier part).

Question IV-02

Do commenters have concerns about affiliations between a Plan's Processor and a Participant? If so, do commenters believe the conflicts of interest disclosure is sufficient to address those concerns? Should the Amendment require a description of the nature of the affiliation?

While understand the rationale behind concerns about affiliations, but it is much like the Volcker Rule's covered fund and Super 23A provisions, I think this is getting way too complex.

Question IV-03

Do commenters believe that a Participant or its affiliate that is competing for a contract to serve as a Processor for the Plan should participate in discussions and related Plan votes regarding the selection of the Processor for the Plan? If so, how do commenters believe Participants should address the conflicts they face in their dual role of competing to serve as a Processor while serving as a Participant that participates in the discussion of, and ultimately votes on, selection of the Processor?

Well, how FINRA is able to bid and take up the CAT project, whilst CAT is going to sunset FINRA's OATS … the discussions can go on and on. Yet, the industry urgently needs an efficient and effective way to address the current market data and market access problem. So, to get the ball rolling in eliminating conflicts and accelerate SIP decision making in adopting TLC and MP3 approaches in order to match up against race with Exchanges' proprietary products – the best way is still, spin-off SIP (see comments in earlier part).

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V. Proposed Disclosures for the Administrator

Question V-01

Do commenters believe that the proposed disclosure questions for the Administrator are sufficient to identify the specific interests and employment, commercial or other relationships that may give rise to a conflict under the Plan? Those are well written questions, but disclosure does not effectively and efficiently eliminate conflicts of interest.

Separately, do commenters believe that the proposed Administrator questions effectively require all material facts necessary to not only identify the nature of the conflict, but also the effect it may have on the Plan? Should the Amendment require more disclosure of such potential effects or greater details with respect to the disclosures that are made?

Instead of puzzling with what constitute as "material facts", the emphasis should focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

Question V-02

To the extent that the Administrator enlists assistance from an auditor or any other professional services subcontractor for any of the Plan(s), and the subcontractor is affiliated with an entity that is involved in the development, pricing, or sale of proprietary data products offered to SIP customers, or is subject to any other conflict, should all of the disclosures and conflicts policies referenced above also be applicable to them? Or do commenters believe that concerns arising from potential conflicts of interest would be more appropriately addressed for a subcontractor if the subcontractor could attest that it is sufficiently walled-off from the proprietary data business of its affiliate?

Not necessary, as long as there is no violation of Reg. SCI, it should be fine. Again, the emphasis here should be aligning interests, not creating bureaucracy. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (please see comments in the earlier part).

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VI. Proposed Disclosures for Members of the Advisory Committee

Question VI-01

Do commenters believe that the proposed disclosure questions for Advisory Committee members are sufficient to identify the specific interests and employment, commercial, or other relationships that may give rise to a conflict under the Plan? Please, do not add unnecessary burden on the Advisory Committee, they should be free to offer any consultative advice. At the end of day, advisory committee members are not decision makers. *Separately, do commenters believe that the proposed Advisory Committee members' questions effectively require all material facts necessary to not only identify the nature of the conflict, but also the effect it may have on the Plan? Should the Amendment require more disclosure of such potential effects or greater details with respect to the disclosures that are made? Should the Amendment require Members of the Advisory Committee to identify affiliations with any Disclosing Party, and clarify that both direct and indirect ownership interests in a Participant are subject to disclosure? Is it clear what "actively participate in any litigation against the Plans" means, or should the Amendment require additional detail?*

Instead of puzzling with what constitute as "material facts", the emphasis should focus on periodically verifying if the acted behaviors are indeed consistent and free from any conflicts of interest. "If" there is dysfunctional party, let them "off-the-bus" by spinning off SIP (see comments in the earlier part).

Question VI-02

Do commenters believe that the Plan should require additional public disclosures of any personal, business, commercial, or financial interests, and any employment relationships that could materially affect the ability of the Advisory Committee Member to participate impartially in discussing actions of the Plan?

Again, please do not add unnecessary burden on the Advisory Committee.

Question VI-03

Do commenters believe that Advisory Committee members that purchase SIP data products should participate in discussions regarding the pricing of SIP data products? If so, how do commenters believe Advisory Committee members should address that potential conflict?

As long as they are Advisory Committee members, their participation in discussions should not be limited in scope. There is no need to address whatever potential conflict concerns for Advisory Committee because they are merely offering advice, they are not decision makers or processors or administrators.

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VII. Participant Statement Regarding Competition

Question VII-01

The Participants state in their filing that the Amendment does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. Do commenters believe that the Amendment to the Plan imposes any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act? Please explain.

We have no opinion on this question, except we think spinning off SIP (see comments in earlier part) and mandating the use of TLC to make market data available in synchronized time[15] is a better approach.

Question VII-02

What effect might the Amendment have on competition, if any? Please explain. How would any effect on competition from the proposal benefit or harm the national market system and/or various market participants? Please describe and explain how, if at all, aspects of the national market system or different market participants would be affected. Please support any response with data, if possible.

"**Split up of Exchanges' listing/trading business from data business**" replaces the distorted economy of scope with efficiency gains from fewer fights and more cooperation among trading venues and better economy of scale.[7] The spinoff of SIP business from the securities Exchanges is **fair** to everyone because it **relies on market mechanism to determine appropriate values** to compensate for limiting rights that currently owned by the Exchanges. This saves the hassle to re-design and maintain a fair and reasonable revenue allocation formula for distributing plan revenues, as participants' voting rights are also going to be reallocated under the SEC's proposal.

Another key advantage of "spinning-off" SIP is that it **avoids potential litigation fights that delay the implementation of some of the governance best practices** proposed by the SEC. There would no longer be challenges to overcome dominate voting humps hold by the Exchanges. In turn, SIP under new management can **accelerate decision-making** on advancing the SIP's performance and price competitiveness with Exchanges' proprietary products. That being said, this is under the condition of **mandating the use of time-lock encryption**[8] for both SIP's consolidated data and Exchanges' proprietary feeds.

Please see comments in the earlier part for an elaborated discussion of this alternate approach.