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April 18, 2022 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: Proposed Amendments to Exchange Act Rule 3b-16 Regarding the Definition of "Exchange";
Regulation ATS for ATSs That Trade U.S. Government Securities, NMS Stocks, and Other Securities;
Regulation SCI for ATSs That Trade U.S. Treasury Securities and Agency Securities
File No. S7-02-22 (Release No. 34-94062; RIN 3235-AM45)[1]

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 on the captioned release concerning Investor Protections in Communication Protocol Systems (CPSs) and Alternative Trading Systems (ATSs).[1] This proposal builds upon a 2020 proposal[2] and the public comments received in response to the original proposal. It aims to address the regulatory gap and the current disparities that affect competitive balances among like marketplaces for securities.

Counterparts of the SEC in Europe have raised similar concerns on the matter. ESMA published Consultation Paper 70-156-4978[3] in clarifying the definition of multilateral systems and the trading venue perimeter, i.e. providing guidance on when systems should be considered as multilateral systems and seek for authorization as trading venues. We think the **time is right** for policy makers in both the US and Europe to address market structure issues related to these non-lit venues or trading platforms. Some of the changes are **between a rock and a hard place**.

The proposal if adopted would bring more entities within scope to either register as an exchange or comply with Regulation ATS pursuant to Exchange Act Rule 3a1-1(a)(2). The capital markets never lack competition. Indeed, we have **more than enough markets but insufficient farmers and diversity to work in the field**. Market participants are required to comprehend various order types and functions of different lit and dark venues. These **middlemen** (trading venues, TCA, liquidity sourcing, outsourced execution tools and smart order routers) do not care about eroding market efficiency. Instead they **profit from an ever more fragmented market**. We are concerned that **when "everybody is a trading venue, nobody is a trading venue"**. It increases costs to connect with additional venues for BestEx compliance when those additional venues may add little or no real benefit. The current market environment is at **Warring States period**.[4] It is an **Animal Farm**[5] where every constituent wants to negotiate to be "more equal". Smaller firms struggle to survive and merge away because of inequalities in markets. The number of FINRA registered firms has dropped from 4,000+ in 2014 to 3,435 at 2020-year end.

Transparency does not always help advance the goals of the Commission. The larger firms may have wider "shoulders" to bear the burden through big law or consulting firms which smaller players cannot afford, yet this does not mean smaller firms have higher risk than their larger counterparts. **Heighten disclosures in the beautified name of "improve**

[1] https://www.sec.gov/rules/proposed/2022/34-94062.pdf
[2] https://www.sec.gov/rules/proposed/2020/34-90019.pdf
[3] https://www.esma.europa.eu/system/files_force/library/esma70-156-4978_consultation_paper_on_the_opinion_on_trading_venue_perimeter.pdf
[4] https://www.linkedin.com/pulse/warring-states-period-finding-new-equilibrium-kelvin-to/
[5] https://www.linkedin.com/pulse/animal-farm-market-data-negotiate-more-equal-kelvin-to/

transparency" may indeed be bad policies for an **uneven playing field hurting the smaller players**, increase costs to operate an ATS and deter new entrants into the ATS space.

Privacy of commercial transactions should be respected. Extending recordkeeping requirements to technology vendors / CPSs beyond FINRA registered firms, would **give government regulatory agencies an overly invasive power over private information**. These private records would otherwise be unobtainable unless under summons for suspicious illicit activities. Being nosey may create resentments, discomfort feelings, and civic concerns about **massive government surveillance**.[6]

Above are highlights of our biggest concerns. Please see later sections for discussions of related context and our recommendations to resolve the industrywide market structure and related market data problems.

A. Are dark venues more akin to exchange functions than broker-dealer functions or vice versa?

An ATS is one of the many intermediaries in the capital markets value chain. ATSs together with all the TCA, BestEx compliance, liquidity sourcing, outsourced execution tools and smart order routers were developed to fabricate the fragmented markets that are underserved by exchanges. Dark Pools do offer unique opportunities for liquidity. According to research by the Financial Conduct Authority (FCA) in the UK,[7] it *"showed that market participants doing a proportion of their trading on venues with lower levels of pre-trade transparency, including in periodic auctions, achieved lower transaction costs."*

The legacy purpose of ATS and other tools should be acknowledged, whilst using and interacting with dark pools is a huge challenge (high switching and connectivity costs, as well as learning about nuances like trade-out, allocation, anti-gaming, adverse selection, pool vetting, etc.). Overtime layers of intermediaries' costs become barriers and add to mounting technical debt. The high intermediaries' costs are a detriment to all stakeholders on the two ends of the smile curve[8] (see figure 1 - the performance optimizers, asset gathers, asset maximizers, and retail client services).

Figure 1

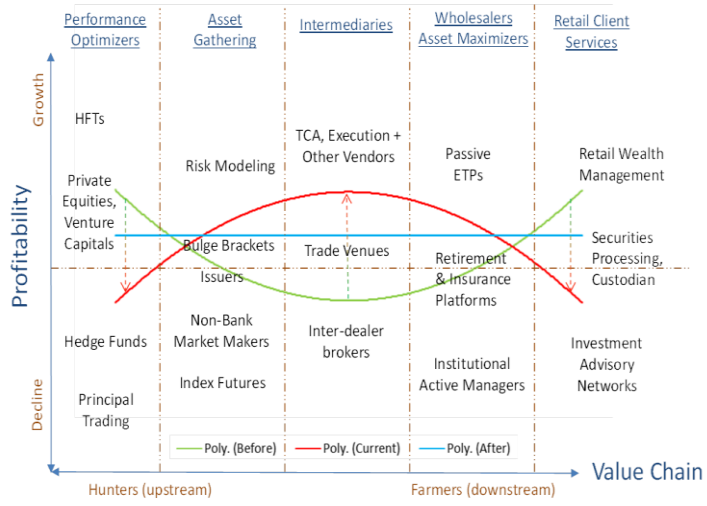
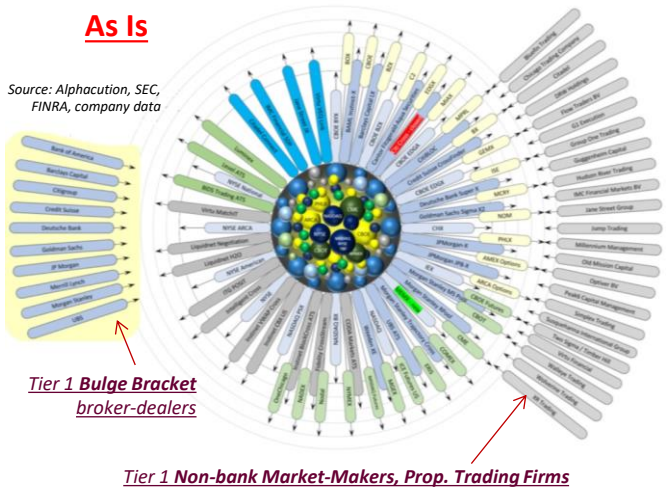


Figure 2



[6] https://cs.stanford.edu/people/eroberts/cs181/projects/ethics-of-surveillance/ethics.html
[7] https://www.fca.org.uk/publication/occasional-papers/occasional-paper-60.pdf
[8] https://www.linkedin.com/pulse/smile-curve-changes-securities-value-chain-evolves-kelvin-to/

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As illustrated in Figure 2, some Exchange Groups have ownership stakes in ATSs. More ATSs are run by Bulge Brackets broker-dealers or affiliated with non-bank Market-Makers/ Principal Trading Firms (PTFs). ATSs buy selected proprietary market data feeds from Exchanges and they earn rebates from Exchanges' Trade Reporting Facility (TRF) Revenue Share Programs[9]. Hence, there is an agency relationship between lit and dark venues. Many smaller broker-dealers are indeed depending on ATSs to counter the disadvantages they face with lit venues' skewed privileges (32 mils super tier rebates, faster proprietary feed market data connections, DMM programs, etc.) provided to the elites. It is an **Animal Farm**[5] where every constituent wants to negotiate to be "more equal". Smaller firms struggle to survive and merge away because of inequalities in markets.

Dark and Lit venues do have functional similarities (such as matching counterparties' orders, executing trades, operating limit order books, and facilitating active price discovery). They may serve different market segments, and sometimes compete for overlapped segments. This **does not mean that dark venues are more akin to exchange functions than broker-dealer functions**.

Exchanges, as quasi-government entities, are self-regulatory organizations (SROs). SROs are immune from certain liabilities under conditions,[10] while ATSs are not. The temptation to regulate ATSs and CPSs as Exchanges may be convenient in terms of applying fair access rule and other transparency requirements. Again, we remind the Commission that **when "everybody is a trading venue, nobody is a trading venue"**. It **costs more to connect with additional venues** for BestEx compliance. If the SEC was thinking of using the redefinition of "Exchange" to pursue a "killing of 2 birds with 1 stone strategy" to pack the votes for **CT Plan**[11], then it may **harm** the market **rather than help**.

B. When considering what constituted an Exchange within Rule 3b-16(a), are the expectations of the participants regarding how an execution would occur without the discretion of the operator the right focus for the Commission? Is it appropriate to impose non-discretionary method/ fair access rule requirement on all ATSs without exemption?

The Commission's comment of *"orders instruct a trading system to carry out the intention of participants in accordance with programmed trading procedures, orders, along with established, non-discretionary methods, contribute to how trading system participants could understand and expect to receive an execution"* is merely a general description of "order execution process" that could basically apply to any order for any product or service. Hence, it does not qualify as relevant supporting arguments putting an entity within the Exchange Act Rule 3b-16(a).

"Discretion" is a right to the owner of such right. Unless there is an assignment or transfer of such right occurred out of, for example, a sales transaction, the "discretion" remains with the free enterprise (i.e. the service provider). **The "sushi or sashimi, diabetic discrimination" case**[12] offer an inspiring perspective that the Commission should consider. The "sushi" place closed down as a result of this case. Ever since then, all-you-can-eat buffet restaurants impose surcharge on food wastage to deter "tossing out the rice of sushi' situation. Consumers generally get lower quality of fish if they order sushi instead of sashimi. One dispute caused all buffet eaters to suffer, or where to draw the line between consumer's rights versus free enterprise's rights?

In the context of ATS reform, considerations should collectively focus on:

[9] https://www.nasdaqtrader.com/content/productsservices/trading/postnms_revshare.pdf ; https://www.finra.org/rules-guidance/rulebooks/finra-rules/7610b

[10] https://content.next.westlaw.com/Document/I8aba78e5e4dd11e79bf099c0ee06c731/View/FullText.html

[11] https://www.sec.gov/rules/sro/nms/2021/34-92586.pdf

[12] https://www.findlaw.com/legalblogs/law-and-life/diabetic-sues-all-you-can-eat-sushi-discrimination/

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(1) Ways to preserve the rights of free enterprises in offering services,

(2) Balance the right controls with efficient functioning of the market, and

(3) The broader effects to non-contracted parties / future market participants; instead of solely focusing on *"the expectations of the participants regarding how an execution would occur without the discretion of the operator"*.

Policy makers should ask:

(i) Whether imposing fair access rule is the most efficient way to get current non-participants to trade these securities at ATSs?

(ii) Why current non-participants are unable to reach commercially viable deals with ATSs?

(iii) Would ATSs' eligibility requirements include commitment or past track records in provision of liquidity in both good and bad times?

(iv) If track records show one's order flow being toxic, should ATSs have rights or discretion to revoke the eligibility?

(v) Would the fair access rule be exploited where it would be a detriment to market efficiency and capital formation?

Some market participants may not be fully aware of the details of Fair Access Rule and generating a lot of mistrust or baseless claims with the markets. Principal Trading Firms (PTFs) do provide liquidity to Government Securities ATSs. They serve as "messengers" in the market according to this empirical Economist article: "Short-selling – Don't shoot the messenger".[13] Policy makers should consider the fair, reasonable and non-discriminatory (FRAND) principle and refrain from developing rules against one particular group of industry encumbrance.

The Commission has stated that, *"applying the Fair Access Rule could … impose costs on existing subscribers who may currently benefit from limiting access to the trading venue, though the Commission recognizes these costs would amount to transfers."* Also, the Commission's economic analysis has stated that *"if an ATS that is the sole provider of a niche service limits the trading in certain securities to avoid being subject to the Fair Access Rule, it could be more difficult for some market participants to find an alternative trading venue for that niche service, which would result in a larger increase in trading costs."* We do not disagree with these two statements and we find it **contradictory with the vague benefits cited by the Commission** *"including enhanced regulatory oversight and protection for investors, a reduction in trading costs and improvement in execution quality, and enhancement of price discovery and liquidity"*. Please see Section G for discussion about divergence between private and social cost.

We think the 5% fair access threshold for NMS stocks and 3% threshold for U.S. Treasury Securities are appropriate. Extending the 5% threshold to equity securities that are not NMS stocks, corporate bonds, or municipal securities might be a challenge because they are not as liquid as NMS stock. If eliminating all these thresholds, it would make the US rule as rigid as the EU (see Section E). Smaller ATSs need sufficient nimbleness to reach market segments that would otherwise not be reachable by larger trading venues.

We have no objection with the Fair Access Rule being applied on a security-by-security basis for NMS stocks and equity securities that are not NMS stocks, and on a category (aggregate) basis for corporate bonds and municipal securities. We think the problem with aggregate volume of ATSs operated by a common broker-dealer or operated by affiliated

[13] https://www.economist.com/finance-and-economics/2003/02/27/dont-shoot-the-messenger

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broker-dealers would have been addressed by reinvigorating a strong Volcker Rule[14] and scrutinizing on Securities Inventory Plan / Reasonable Expected Near-Term Demand (**RENTD**)[15].

C. Do market participants need better ability to evaluate potential conflicts of interest?

No. **Market participants are not "polices"** to regulate trading venues, **the Commission is**. The public relies on market regulators and SROs to assure that they are not scammed in the open market. Such a market is called the Exchange. Otherwise, civilians are left with reading all the "small print" (Form ATS, ATS-N, ATS-R, ATS-G and other enhanced disclosures) on their own and taking risk engaging with a trading partner or counterparties. These are called bilateral deals or multilateral trade agreements. The trade terms and corresponding recordkeeping are subject to **privacy protection**. Regulators should refrain from intervening legitimate private practices.

A broker-dealer able to offer multiple ATS marketplaces is not a problem, whilst alleged exploitations or potential **conflict of interest** is. Those who point to a slew of settlement cases between ATS operators and regulators do have some merit. Per Steven and Steven's empirical research, "Market makers are willing to reduce or eliminate execution advantage to exploit the information advantage."[16] Hence, raising additional concerns for "**selective timing**" to get in-and-out of market, or if firms may classify a trade as dealing with "**counterparties**" when they want to escape the fiduciary responsibilities, and classify a trade as dealing with "**clients**" for the ease of Volcker Rule compliance.[17]

It is not how a broker-dealer "claims" the trades were dealing with a customer or counter-party. Rather, as the trade data would reveal, with **consistency**, whether the firm was "in effect" acting in the best interest of the customer rather than treating the party as a counter-party (i.e. without fiduciary responsibility). Therefore, an **automated system** is needed to conduct the "regular and rigorous review" for "best execution" compliance if regulators want to discourage the "flipping-a-switch" between clients versus non-clients behavior. Also, the automated checking would need to access if a **market-maker's risk profile**[18] may suddenly change and under what market conditions.

Some of the **biggest threats** to capital markets **are the result of many small-incremental-exploitations**[19] or hedges and/or commitments – **each accumulate into outsized bets or bubbles**.[20] Toxic positions can be so tangled-up that banks do not want to hold risky assets because of higher capital surcharge. But, a fire sale could cause major losses for the bank, or potential crashes. It is a dilemma for trading desks to determine optimal strategy and market timing for their protective hedges. This FCA research's findings[21] have exposed the ugly truth about how quick banks **withdrew liquidity at the time of the crash**. Although a huge proprietary trading loss may not necessarily trigger an emergency bail out of a bank using taxpayer money, a billion dollar trading loss could trigger **systemic failure**, like the downfall of Barings and other crises.[22]

[14] https://www.databoiler.com/index_htm_files/DBTPublicStatementVolckerRevision.pdf
[15] https://www.linkedin.com/pulse/reasonable-inventory-i-cant-see-kelvin-to
[16] http://sbufaculty.tcu.edu/mann/alonefeb99.pdf
[17] https://www.linkedin.com/pulse/volcker-rule-mocked-vs-revisions-kelvin-to/
[18] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2799798
[19] http://sbufaculty.tcu.edu/mann/alonefeb99.pdf
[20] https://www.linkedin.com/pulse/fiduciary-suitability-best-interest-what-kelvin-to/
[21] https://www.fca.org.uk/publications/research/analysis-circuit-breakers-uk-equity-markets
[22] https://www.databoiler.com/index_htm_files/DataBoiler%20Rogue%20HOF.pdf

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In the past decade, our industry has experienced too much short-sightedness, gimmicks to get ahead of others, alleged conflict of interest in order-routing,[23] dodge regulatory oversight,[24] use synthetic created trades to bypass scrutiny,[25] misaligned incentives and distorted rebates; **all favoring the elites**. What really made our industry stagnate, inefficient or not achieving accelerated development, are **bandages-over-bandages of bureaucracy that widened the gap between the 'haves' and 'have nots'**.

Regarding the evaluation of potential conflicts of interest, it is about defining the line between the permissible use of one's "economy of scope/ scale" to discover new revenue streams and the potential prohibited action(s) that generates a spectrum of adverse effects inflicting damage onto others. The Commission may consult market participants for insights and/or have whistleblower programs. Yet, the **responsibilities to conduct evaluations** and draw the line **remain with the regulators and SROs**.

Given ATS must register as a broker-dealer and become a member of an SRO, and SROs must set standards of conduct for its members and administer examinations for compliance with these standards, then wouldn't it be a **supervisory fail** if the SRO(s) failed to curb conflicts of interest activities or other alleged misconducts of the ATSs? **Shouldn't the SEC go after the SROs** to mandate improvements of their **standards of conduct** and **surveillance systems** to enforce proper compliance by the ATSs?

Tolerating the SROs from fulfilling their supervisory oversight responsibilities over ATSs, would that be something worth self-reflecting by the SEC? SROs have substantially more resources than the SEC to properly guard against ATSs' misbehaviors. **Shifting this burden to market participants is unfair** and indeed implies that ATSs are more **akin to broker-dealer functions**.

D. Is the proposed re-definition of "Exchange" appropriate?

We are aware that Former SEC Deputy General Counsel Mr. Andrew N. Vollmer also commented[26] on this release of proposed amendments, cited *"The SEC does not have power to expand the statutory definition of an exchange to reach actions not within the scope of Congress's decision to regulate… The authority to define technical, trade, and accounting terms does not permit the SEC to redefine a critical concept Congress put at the heart of the Securities Exchange Act. The SEC needs statutory authorization from Congress for the definition of exchange to include communication protocol systems. Even if the SEC believes that it has the necessary statutory authority, the better policy approach is to defer and obtain statutory approval because of the significance of the matter."*

The current version of the Rule 3b-16(a)(2) has clear and concise language. It authoritatively takes out the right of Exchanges to use "discretionary" method, so they are required to provide equal access to all. Specifically, "interact of orders" and "agree to the term of a trade" are the **conditions under which the entity is obligated** within scope of the Exchange Act requirements. It is **unwise to change this time-tested and prominent language** in the Exchange Act established by the Congress.

Taking out the words "*… such orders … entering such orders agree to the terms of a trade*" from the original version of Rule 3b-16(a)(2) may cause **confusion**. ESMA does emphasize on "**trading interest**" (orders are able to interact)

[23] https://www.thetradenews.com/baml-slapped-second-time-42-million-fine-masking-orders/

[24] https://www.hsgac.senate.gov/subcommittees/investigations/hearings/chase-whale-trades-a-case-history-of-derivatives-risks-and-abuses

[25] http://www.theage.com.au/news/business/theory-grows-that-socgen-trader-did-not-act-alone/2008/02/11/1202578693509.html

[26] https://www.sec.gov/comments/s7-02-22/s70222-20119183-271990.pdf

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throughout their consultation paper.[3] CPSs operate internationally would have a hard time following the U.S. proposed redefinition, given the trimmed language of "*buyers and sellers interact*" can mean anything. We can comprehend the intend of the Commission's attempt to replace the term "*uses*" with "*makes available*" in order to apply regulatory oversights to CPSs "*because such systems take a more passive role in providing to their participants the means and protocols to interact, negotiate, and come to an agreement…"* This change is similar to ESMA Recital 8 of MiFIR that focuses on the functioning of the arrangement not meeting all 3 characteristics would determine such CPS or alike system is within scope of a "Multilateral System" (see Appendix 1).

Also, the proposed term – "*makes available*" may imply that one may no longer be able to keep the method being used "private and confidential". Keeping proprietary methods secretive other than essential limited access by a regulatory body could help preserve intellectual property (IP) rights free from copycat by others. There is the clear difference with the original language – "*uses*". We believe regulators do not like "black box", yet the proposed redefinition if adopted will **hinder IP development and market innovations**.

We acknowledge the Commission's statement, cited *"the term 'multiple' could be misconstrued to mean that RFQ systems, for example, do not meet the criteria of Rule 3b-16(a) because a transaction request typically involves one buyer and multiple sellers or one seller and multiple buyers… Footnote 104: The mere inter-positioning of a designated counterparty to provide for the anonymity of counterparties to a trade or for settlement purposes after the purchasing and selling counterparties to a trade have been matched would not, by itself, mean the system does not have multiple buyers and sellers."* The proposed removal of reference to "*multiple*" in Rule 3b-16(a)(1) is similar to ESMA's example of *"a single dealer system operated by someone other than the market maker. It should be considered as a multilateral system as it involves a third-party operating the system ... having a single liquidity provider is not sufficient for the system to be considered bilateral…"*

Overall, the US version **seems blurred** relatively to the ESMA's approach in bringing *"a party other than the organization, association, or group of persons performs a function of the exchange… be captured for purposes of determining the scope"*. We anticipate many international CPSs would find the US version **hard to follow**, and lead to **countless arguments and legal disputes**. Both the US and EU's changes are **between a rock and a hard place**. See Section E for discussion about the harshness of the rules' requirements and the various adverse consequences.

We think policy makers should seek **alternative ways to achieve the same policy objective**. For example, CPSs are subscribers of SROs market data feed(s), **SROs may** use its authority over its members or through commercial contracts to **impose certain "standards of conduct"** for CPSs. There is no necessity for the SEC to directly manage these CPSs when SROs have substantially more resources, including surveillance systems and other tools to guard against misbehaviors. Given the available of better alternatives, we do not see the need to replace the existing language in Rule 3b-16(a)(2) with *"makes available established, non-discretionary methods under which buyers and sellers interact"*.

E. How are the SEC's proposed amendments in the US different from ESMA's consultation paper in Europe? Is it appropriate to extend Regulation ATS to include systems that offer the use of non-firm trading interest and provide protocols to bring together buyers and sellers for trading any type of security and forcing CPS to either register as exchanges or register as broker-dealers and comply with Regulation ATS?

The SEC's proposed amendments in the US versus the ESMA's opinion on the trading venue perimeter[3] in Europe are quite different. The Rules, despite the policy objectives and their unpopularity, are about the same. **Usually regime**

differences are over "subjective" matters. Such as **how much discretion or rights** that one should have or is entitled to, and they bear the corresponding obligation and/or regulatory burden. **The difference this time, however, pertain to the characteristics** or principles in determining when a "subject" or "object" meeting certain condition(s) would be considered "**what**". This ISDA presentation[27] in 2017 provides some background contexts to the matter. Prior to ESMA opinion in CP70-156-4978[3], the FCA in UK have stated in HM Treasury consultation[28] that, *"it is sometimes not clear if these technology firms, who are bringing buyers and seller together on an informal basis, need to be authorized as an MTF"*. A review paper[29] by the Dutch Authority for the Financial Markets (AFM) stated, *"It is also becoming clear that the boundary between a regulated multilateral venue and a technology/ communication platform is thin. As MiFID II has significantly raised regulatory burdens for operating a trading venue, this has incentivized firms to avoid these costs and to operate close to or beyond regulatory delineations. Sometimes even unintentionally…"*

Appendix 1 is a flow chart on ESMA's Trading Venue Perimeter prepared by us at Data Boiler. As illustrated, "trading interest" (colored in brown) are one of the key deterministic factors to consider what constitutes a "multilateral system". In contrast, the US **SEC is proposing to replace the language of "bring together order" (trading interest) with a broader definition of "bringing together buyers and sellers"**. Without the word "order" or "trading interest", the interpretation of the provision may go beyond the intent to engage in buyer/ seller relationships. Whatever formalization of arranged transactions or the ultimate execution of transactions may become irrelevant in context of this US proposed rule. "**Bulletin board**" type of entities in the EU would be **uneasy** if their business in the US may be brought within scope of CPSs that requires to be registered as Exchanges or ATSs. To determine the activity does not require authorization in the EU. The 3 characteristics about the functioning of the arrangement per Recital 8 of MiFIR are concise and absolute:

- Consist of an interface that **only** aggregates and broadcasts buying and selling interests in financial instrument;
- **Neither** allows for the communication or negotiation between advertising parties **nor** imposes the mandatory use of tools of affiliated companies;
- **No possibility** of execution or the bringing together of buying and selling interests in the system.

Also, "**Inward looking OMS**", "**general-purpose communication system**", and "**extension of the trading venue** for formalize negotiated or pre-arranged transactions benefit from Article 4 waivers[30] that **do not seek authorization as trading venue"** in the EU, may all of a sudden be subjected to compliance requirements of Exchange or ATS if they have business in the US. This proposed amendment is like a knife above every vendor's head. "**Rule by fear**"[31] would never solidify civil obedience to a police-state.

It is a **slippery slope** when deviating from an objective basis in establishing clear boundaries between prohibited and permissible activities to delineate rights and obligations. Subjective judgements by a ruler's taste lead to disputes and arguments detrimental to productivity of our industry and Nation. Alleged violations would not reach definitive conclusions. More cases end up in settlement favoring the '**Too Big to Fail**' (TBTF) rather than seeing justice prevails.

[27] https://financialmarketstoolkit.cliffordchance.com/content/dam/microsites/micro-facm/pdf/MiFID/ISDA%20Cross-border%20Debate%2079801-5-12973%20v0%204.pdf

[28] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/998165/WMR_condoc_FINAL_OFFICIAL_SENSITIVE_.pdf

[29] https://www.afm.nl/~/profmedia/files/rapporten/2021/mifir-review-june-2021.pdf?la=en

[30] https://www.esma.europa.eu/databases-library/interactive-single-rulebook/clone-mifir/article-4

[31] https://www.jstor.org/stable/2215084

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Victims may not be identified in many of these cases and settlement fines are usually divided among regulators (see Section G). **Officials craving for evermore powers may lead to unethical behaviors in exploiting the governed**.

If a CPS or an ATS prefers to not register as an Exchange, the only escape they have to avoid falling within Rule 3b-16(a) is – restricting their system to display bona fide, **non-firm trading interest** or **do not establish rules** or operate a trading facility. It seems **contradictory** when the Commission stated in the proposed amendments it would replace the language of "bring together order" (**trading interest**) with a broader definition of "bringing together buyers and sellers". Further clarification is required. Also, even in absent of rules which facilitate interaction of **trading interest**, ESMA has stated that whether a firm *"would reach out to other clients to find a potential match when receiving an initial buying or selling interest, would also be characterized as a system".* Does the Commission apply the same or similar judgement here?

Modern technologies would have established "rules" or "protocols" to automate "streaming" and/or other "interaction" with on-demand requests. Is the Commission expecting technology vendors to revert to manual human intervention every time they need to exercise "discretion" to fulfill a request? Such request may or may not be an "order" or "**trading interest**" or something else. ESMA has stated *"the type of technology used or the fact that it is an automated or non-automated system, does not determine whether it is a system."* Some may argue these EU requirements being too harsh, especially those advocated for a "craft-out" of block-chain technology.[32] It is **uncertain** whether the Commission would allow technology solutions that "**influence the operation of the system**" and the routing of the orders for the investment firms not classified as CPS within Rule 3b-16(a) or Regulation ATS. The proposal did not state how "**third party or affiliate relationships**" would be objectively tested by the SEC when considering to approve or disapprove Form ATS-N. In view of London Metal Exchange (LME)'s recent halt and cancel trade decisions in Nickel trading[33] (who may be exerting influence, does it involve Too Big To Fail, would it **weaken market integrity**) we think these are legitimate concerns applicable to all trade venues. The Commission should adopt a definition of "affiliate" for purposes of Part III in consistent with other SEC rules, such as Volcker.

By scaling-up Fair Access and pushing CPSs to be regulated Exchanges or ATSs, the "push" may dissipate some of the benefits of regulated markets. Again, when "**everybody is a trading venue, nobody is a trading venue**". We have **more than enough markets but insufficient farmers and diversity to work in the field to bear fruits**. The number of FINRA registered firms has dropped from 4,000+ in 2014 to 3,435 at 2020-year end. The SEC should go after the SROs to turnaround that decline number of registered broker-dealers, or else faces non-renewal of Exchange license. The SROs should also be held accountable for improving the "standards of conduct" of their members, including ATSs (see last paragraph of Section C).

Extending recordkeeping requirements to CPSs / tech vendors beyond FINRA registered firms, would give government regulatory agency an **overly invasive power over private information**. These private records would otherwise be unobtainable unless under summons for suspicious illicit activities. Again, being nosey may create **resentments**, **discomfort** feelings, and **civic concerns** about **massive government surveillance**.[6]

We understand that differences in regulatory policies across countries are non-novel (e.g., proprietary trading rules for banks – Volcker in the US, Liikanen for German and France, and Vickers in the UK). Market data reform[34] is an example of divergent policy directions for the US (competing consolidators) and the EU (single consolidated tape for each asset

[32] https://www.sec.gov/comments/s7-02-22/s70222-20119183-271990.pdf
[33] https://www.yahoo.com/entertainment/fca-bank-england-investigate-london-084118528.html
[34] https://www.linkedin.com/pulse/market-data-lot-going-anywhere-kelvin-to/

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class). The ESMA 34-pages consultation paper is short and precise from the standpoint of "definition" of a "subject" or an "object". Comparatively, the 591-pages SEC proposed amendments look blurry and cumbersome. **We dislike both** the US and EU policies that **brought too many entities within scope**.

The blurriness of the **US proposed rules** may be seen as a positive among **TBTF elites**. They have wider shoulders to bear the compliance burden than smaller firms. The US requirements largely focus on written policies and standards, usually those **victimless cases** end up in settlements. A "toothless rule" won't bite; it will not help prosecute wrongdoers in recouping losses for the harmed victims (see Section G). In turn, TBTF elites may **factor in such regulatory fines and settlements as part of their costs in doing business**. We despise self-serving rules benefiting a government agency more than serving the public's best interest. The precise and absolute terms in the **European version** may sound appealing to those who do not operate close to the edge (grey areas). Yet, the requirements come along with clear definitions that can hurt the industry negatively. For example, the requirements might be **too strict or rigid** that an OTF operator, which is usually a broker-dealer, would be **prevented from trading against its capital**.[35] To some extent, it leads to **drying up of market liquidity**, a detriment to institutional investors. ESMA seems to be not proposing to establish a **threshold-based regime** for OTFs,[36] while the US proposed rules afford such leeway.

A jurisdiction or sovereign state may apply judgements for the most suitable, efficient, and effective ways to govern and regulate the orderly functions of society. We are good with these kinds of differences that promote healthy competition across nations and/or regions. However, both the US and EU's changes are **between a rock and a hard place**. There is no point in picking the 'pros' and the 'cons' between the two bad policies. Policy makers should instead look for alternative solutions, which we have identified and recommended in Section I).

F. Where and how scrutiny of potential price discrimination is appropriate?

The Commission may **scrutinize any potential illicit price discrimination**. Bundling offers (e.g. using affiliated clearing services in attempt to create lock-in for ATS) could possibly be a form of price discrimination. Whether it is permissible or allegedly illicit under the federal price discrimination statutes (including the Robinson-Patman Act[37] that the "harmed" party may sue the seller and sometimes the favored customer), the SEC should work with the Department of Justice (DOJ)/ Federal Trade Commission (FTC) to conduct an assessment.

Business practices that **threaten to undermine the competitive processes** in an affected market and otherwise meet the specific criteria (i.e., the simultaneous, ongoing sale of the same or similar products to commercial customers at different prices in transactions that implicate interstate commerce) should be examined. The presence of the following circumstances may constitute as substantial facts proving the occurrence of **"harm" under the federal price-discrimination statutes**:[38]

(1) The seller makes sales of goods in interstate commerce to commercial customers;

(2) The seller sells the same goods in the same quantities at around the same times to different commercial customers, offering lower prices only to one or some of these customers;

[35] https://www.opalesque.com/industry-updates/2933/greenwich-associates-survey-shows-institutional-investors-remain-frustrated.html

[36] https://www.esma.europa.eu/sites/default/files/library/esma70-156-2013_consultation_paper_on_the_functioning_of_organised_trading_facilities.pdf

[37] https://www.morganlewis.com/-/media/files/publication/morgan-lewis-title/white-paper/busguidetorobinson-patmanact_edwards_2010.ashx

[38] www.markhamlawfirm.com/law-articles/unlawful-price-discrimination-an-obscure-antitrust-offense-by-william-markham-2013/

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(3) This price discrimination is significant in amount or persists over a substantial period; and

(4) The seller uses the discriminatory pricing to undermine its own competitors (but subject to highly restrictive doctrines on proving predatory pricing); or the seller's discriminatory pricing affords a competitive advantage to at least one favored customer, allowing it or its own customer to take sales from a disfavored customer or disfavored customer's customer.

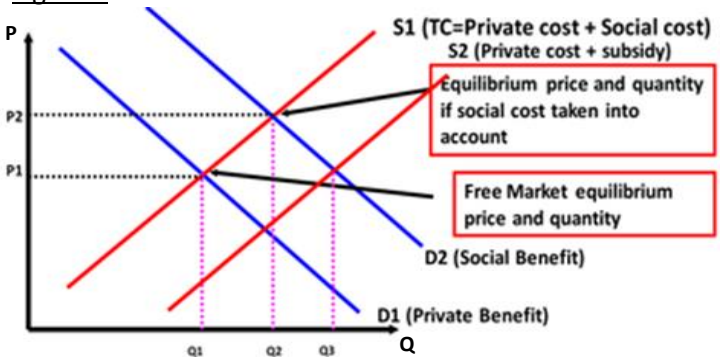
G. Is the proposed collection of information necessary for the proper performance of the Commission's functions, including whether the information shall have practical utility? Would bringing fixed income and other asset classes to be in synch with NMS stocks ATSs and rescinding exemptions yield the desire benefits of: (a) Enhancement of Regulatory Oversight and Investor Protection; (b) Reduction of Trading Costs and Improvements to Execution Quality; and (c) Enhancement of Price Discovery and Liquidity?

The proposed collection of information is **NOT necessary**. It is a "nice to have" rather than having practical utility. The Commission grossly underestimated the burden of the proposed collection of information.

We have no disagreement with the Commission's descriptions of the three common types of protocols, RFQ, stream axes, and conditional order protocols. We **strongly oppose** the proposal to extend Reg. ATS to include systems that offer the use of non-firm trading interest and provide protocols to bring together buyers and sellers for trading any type of security, and forcing CPS to either register as exchanges or register as broker-dealers and comply with Regulation ATS. We **oppose** extending recordkeeping requirements to tech vendors beyond FINRA registered firms. It would give the government regulatory agency an overly invasive power over private information.

The Commission's economic analysis **lacks an assessment about externalities**.[39] Per this empirical economic study,[40] *"the divergence between **private and social cost** equals the Adjusted Marginal Social Effects minus the Marginal Private Input Cost".* The proposal failed to account for and quantify these factors. The Commission failed to clearly explain why higher compliance costs would not have a significant **adverse effect on overall competition** in the market for trading services. The proposed heightening of Regulation ATS requirements would **increase costs** to operate an ATS and **deter new entrants** into the ATS space.

Figure 3



The Commission's cited benefits *"including enhanced regulatory oversight and protection for investors, a reduction in trading costs and improvement in execution quality, and enhancement of price discovery and liquidity"* **are vague and would not be realized**. Transparency does not always help advance the goals of the Commission. The larger firms may have wider "shoulders" to bear the burden through big law / consulting firms which smaller players cannot afford, yet this does not mean smaller firms have higher risk than their larger counterparts. Heighten disclosures in the beautified name of "improve transparency" may indeed be bad policies for an **uneven playing field hurting the smaller players and reducing competition and choice**. The proposal failed to account for effects that are detrimental to the delineation of rights and obligations. We therefore **disagree with the Commission's characterization of the relevant baseline** against which it considered the effects of the proposed amendments.

[39] https://ecampusontario.pressbooks.pub/uvicmicroeconomics/chapter/5-1-externalities/

[40] https://iea.org.uk/wp-content/uploads/2016/07/THE%20MYTH%20OF%20SOCIAL%20COST.pdf

Former SEC Deputy General Counsel Mr. Andrew N. Vollmer's comment[26] that *"the SEC would need to find a market failure or serious public harm from the currently unregulated actions plus a net market benefit from enlarging coverage of the regulations, such as making prices public or lowering costs for investors."* We reviewed a recent settlement case between FINRA and Deutsche Bank Securities Inc. (DBSI)[41] to see whether regulators have or not have sufficient basis to act or impose governmental costs at this time.

The case matter involves "*DBSI's failure to comply with its best execution obligations in connection with customer electronic equity orders. From January 2014 through May 2019, DBSI owned and operated an ATS, known as 'SuperX'. When routing customer orders to exchanges, DBSI routed marketable orders first to SuperX prior to routing any part of the order to an exchange, unless customers opted out of this routing preference … DBSI routed more orders to SuperX than any other dark pool during some of the relevant period. The firm failed to consider alternate routing arrangements even though, according to the firm's own ranking model, other dark pools consistently ranked higher than SuperX for execution quality … DBSI also failed to establish and maintain a supervisory system, including written supervisory procedures … Finally, DBSI failed to disclose material aspects of its relationship with the markets to which it routed orders in its quarterly reports filed under Rule 606 of Regulation NMS …"*

Like many settlement cases, the respondent in this case accepts and consents to the findings without admitting or denying them. The stated facts, such as *"During the relevant period, execution quality reports reviewed by the firm's best execution committee showed that fill rates in SuperX for orders routed by the SOR* (smart order router) *ranged from approximately 12 percent to 32 percent. The same reports showed that orders routed to exchanges, by contrast, had fill rates above 90 percent. In addition, in approximately March 2016, the firm's best execution committee received a memorandum indicating orders subject to the SuperX ping had lower fill rates compared to orders that were not subject to the SuperX ping due to potential latency…"*, are **general statistics** tracked by the firms rather than **substantial evidence** for a **felony** or **misdemeanor** charge that constitute as "**serious public harm**".

DBSI did offer SuperX clients way to "opt out" of default routing practice. Prosecutors are required to consider if available evidence will lead to a conviction by the "**beyond-a-reasonable-doubt**" standard. The prosecutors' argument in this particular incident is a moot point. Prosecuting from a prejudicial standpoint that alleged wrong doing is **"tending to" impair other** in a manner of **conflict of interest** requires in-depth analysis of **market timing**, how orders are routed, **consistency of patterns**, and digging into other details.

Regulation ATS and other heightening of disclosures requirements largely focus on written standards and provided some scenarios that likely to implicate a material change to ATS's manner of operations (see Section J). Market operators or investment firms that run ATSs, MTFs, OTFs, or SIs do the best they can to figure out what to write (mostly through the supports of big law and consulting firms) and then certify in various form filings that 'they are not doing anything wrong'. Then regulators can decide whether or not they agree with these "well-articulated" form filings and written policies and procedures. The regulatory requirements have **nothing with regards to monitoring** the **market timing** and **consistency of trades** to detect which prohibited activities or **conflict of interest** acts.

The 2008 Société Générale (SocGen) $7.2 billion loss[42] is a classic example. During a testimony, rogue trader Jérôme Kerviel scorned at Daniel Bouton's lip service[43] about SocGen's internal control strengths, stating: "*The techniques I*

[41] https://www.finra.org/sites/default/files/2022-03/deutsche-bank-awc-030722.pdf
[42] http://www.businessinsider.com/how-jerome-kerviel-lost-72-billion-2016-5
[43] http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/5241263/Societe-Generale-chairman-Daniel-Bouton-to-step-down.html

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used aren't at all sophisticated and any control that's properly carried out should have caught it." Written policies and procedures have proven to be unreliable to curb conflicts of interest or other misbehaviors. Yet, many worry about **malicious targeting and selective enforcement** if they do not "pay" enough to big law or consulting firms. The "revolving door and the SEC's enforcement outcomes"[44] have shown disturbing evidence of **rent seeking**. Why would anyone do anything concrete with real-time risk controls when one can "buy" a get-out-of-jail card?

The **lack of objective basis** to delineate rights and obligations in establishing clear boundaries of what are prohibited versus permissible are slippery slopes. Autocratic rulers may **subjectively impose fines or other punishment** terms if they do not like or agree with a particular person or entity. Again, the responsibilities to conduct evaluations of potential conflicts of interest remain with the regulators. Shifting this burden to market participants indeed implies that ATSs are more akin to broker-dealer functions (see earlier Section C).

Unless regulators are able to drill down the details in **real-time**, for example by reinvigorating a strong Volcker Rule, supervisory oversights may be dodged. *"A system of internal controls reasonably designed to monitor compliance with and to prevent the occurrence of activities or investments prohibited by the regulations"* as required by Volcker Rule require **control mechanism similar to an email spam filter** to distinguish prohibited proprietary trades from the permitted hedging, market making, liquidity management and underwriting activities.[45] The Volcker rule has specified that it is not how the revenue are actually generated, but how the activities are *"designed to generate revenues primarily from fees …"* Therefore, a true Volcker rule compliance solution encompassing demand forecast and filtering algorithms cannot go without the advance analytics and patterns recognition in **real-time**.

Anyway, back to the DBSI case, the transactions were between 2014 and 2019, whilst the firm closed the ATS – SuperX on September 24, 2021. The enforcement actions or disclosures **neither prevent alleged wrongdoing, nor avoid a market failure**. If there were ever any serious public harm, after-the-facts investigation would take years to conduct. Although there is a settlement, the $37 million fine is divided evenly between the SEC and the New York Attorney General. There seems to be **not a single dollar allocated to any victim**. When victims are not identified or they cannot count on timely salvages of losses, how can rules such as Regulation ATS and other disclosure requirements under the proposed amendments enhance investor protection?!

The successful prosecutions of the Madoff scandal[46] and the Martha Stewart insider trading case[47] were over decade ago. The Madoff case is indeed a big embarrassment for the regulators. Such a big-scale Ponzi scheme was **tolerated for many years and supervisory oversights were dodged multiple times**. Sadly, when regulators may use the Volcker Rule and other alternate means to target potential wrongdoers but choose instead to water down rules in **favor of TBTF elites**, the public loses confidence. There is **so much that regulators can do**, such as **scrutinize price discrimination**, **antitrust investigation**, **mandates SROs to improve standards of conduct with regards to ATS members**, plus the additional recommendations we suggested in Section I**).** There are viable alternatives to regulate trading venues and additional works the SEC can be done right now without changing the rules. We think the Commission lacks sufficient basis to act on the proposed amendments or impose governmental costs at this time.

[44] https://www0.gsb.columbia.edu/mygsb/faculty/research/pubfiles/13981/DKKR%20july20_text.pdf
[45] https://www.linkedin.com/pulse/spam-filtering-prohibited-kelvin-to/
[46] https://en.wikipedia.org/wiki/Madoff_investment_scandal
[47] Jeanne L. Schroeder, Envy and Outsider Trading: The Case of Martha Stewart, 26 Cardozo Law Review 2023 (2005). Available at: https://larc.cardozo.yu.edu/faculty-articles/177

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H. Should only certain provisions of Regulation SCI apply to Government Securities ATSs that meet the proposed definition of SCI ATS? Should the systems of Government Securities ATSs that meet the proposed definition of SCI ATS be defined as "critical SCI systems"?

We have a high regard of Reg. SCI. We support that both Lit and non-lit venues should adopt **Reg. SCI to improve resiliency**. For practical consideration and to ensure that Reg. SCI would not become a barrier to entry, a **grace period for** compliance should be given to **new entrants** and all operators with **market share below a certain threshold**. However, SCI is SCI, why create different tiers of SCI? Recalibrate SCI if the Commission thinks it is necessary, but not convolute the market with SCI "sub-segments". Like G-SIBs for banks, same exclusivity goes with "critical SCI systems". It is **both a privilege and great responsibility to be designated as a SCI entity** and "critical SCI systems".

Everything "critical" indeed means "nothing critical". If the goal is to protect a majority of the investors, then it may be a skewed rule bias toward the biggest players in the guise for "financial stability". Whatever it takes to preserve the FRAND principles and Market Integrity in our capitalistic system to be **free from autocratic judgement is the most prominent factor to be defined as "critical"**.

I. Should the Commission allow or require ATSs to use sources of market data other than published data provided by the SRO to which trades are reported? If yes, which data sources? Are there viable alternatives to the proposed amendments?

We are glad that the Commission is bringing up the market data issue when considering ATS reforms. Economically, an ATS may not be able to afford subscribing to all Exchanges' proprietary feeds. ATSs use a mix of SIP feed, selected choice of proprietary feed(s), and vendor solutions to navigate the market in finding suitable liquidity for their clients. Sadly, the SEC believes that the multi-NBBOs situation is non-novel or insurmountable. Mandating ATSs to source market data other than the published data provided by the SROs **seems contradictory** to the Commission's prior belief.

As mention in Section C and Section D, given that ATS must register as a broker-dealer and become a member of an SRO, the SEC can **mandate the SROs to set better standards of conduct** for its members and administer examinations for compliance with these standards. SROs can also **exert authorities through commercial contracts** with any party, including CPSs subscribed to their market data. One does not trade alone in the market, for those who are neither broker-dealers nor subscribers of Exchanges' market data feed, SROs may **recognize their trade flows as toxic**, hence players may avoid or boycott certain misbehaviors with precision targets against "rogue traders". There is **no necessity for the SEC to directly manage these ATSs or CPSs when SROs have substantially more resources**, including surveillance systems and other tools to guard against misbehaviors.

The Commission may consider **extending the new Market Data Infrastructure Rule**[48] **to ATSs and Self-Aggregators**. Trading venues should be prohibited from making market data available to any person on a more timely basis. The concept incorporates the requirements of latency neutralization. To achieve this requirement we advocate for the use of **time-lock encryption**[49] to make **market data available securely in synchronized time**. Be assured this is not another speed bump; time-lock would ensure no premature decryption of data. Per our whitepaper – "Values of composing trades"[50], and instead of having over-prescriptive rule(s) over order types, we think market data transmissions should be classified according to whether they are:

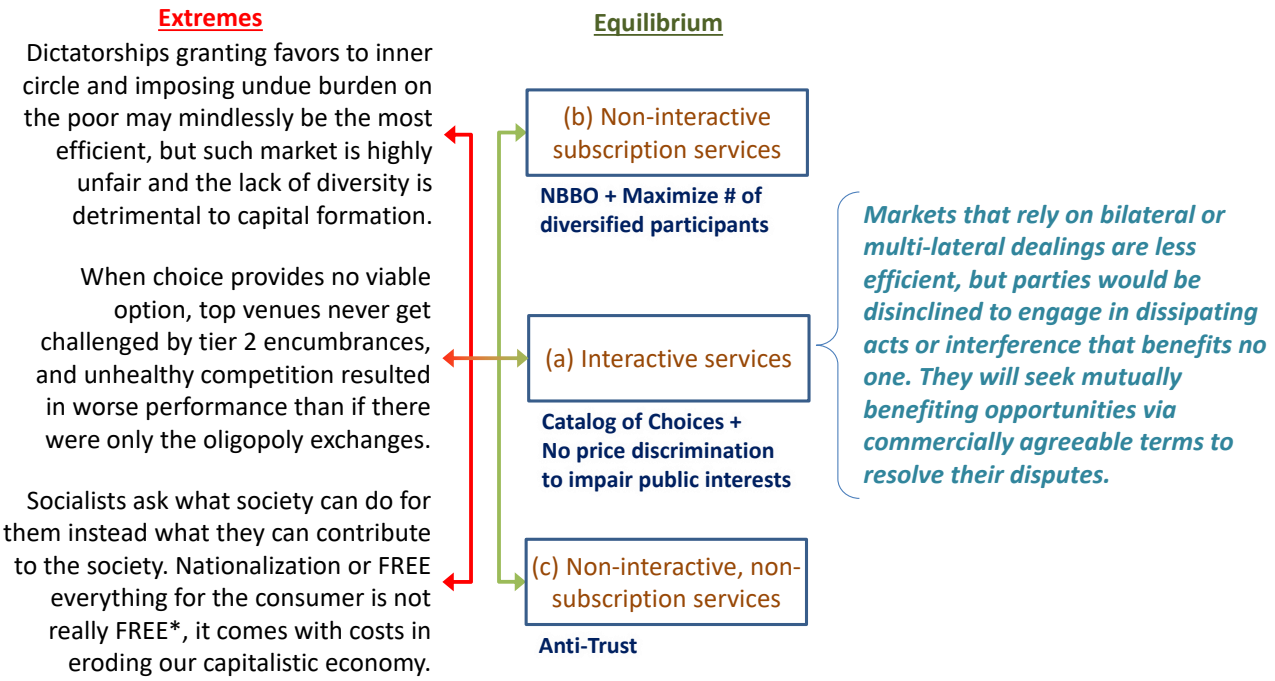
[48] https://www.sec.gov/rules/final/2020/34-90610.pdf
[49] https://www.linkedin.com/pulse/market-data-available-securely-synchronized-time-kelvin-to/
[50] https://www.databoiler.com/index_htm_files/DataBoiler%20Copyright%20Licensing.pdf

a) **Interactive services** - transmit digital trade strategy recordings at a user's request (dark pools, internalizers and other non-lit venues where members of such trading and investment communities may choose to interact with whose order flows through OMS, EMS, smart order router, and other order entry methods). These services are within the voluntary licensing tier; they do not qualify for the equivalent of §114 statutory license[51] that is applicable to the capital markets.

b) **Non-interactive subscription services** - transmit electronic market data or trade strategy recordings through streaming the market data, but for a fee (Exchanges, ECNs, other market data aggregators/ consolidated tape distributors indicating BBO and NBBO distribution). These non-interactive, subscription transmissions are subject to a statutory (compulsory) licensing fee.

c) **Non-interactive, non-subscription services** - Market data transmissions often delivered via streaming that should be free to the consumer and the transmitting entity (e.g. traditional over-the-air radio and TV broadcasts and any bona fide news story; "on-hold" internal transmissions; and statutorily exempt performance).

The above 3-pronged-approach is modeled after the music industry. The thought logic and rationale of this "**should be**" model is illustrated in below diagram:



We oppose the re-definition of "Exchange" and recommend using interactive versus non-interactive subscription services to differentiate between dark and lit venues. All streaming platforms, including CPSs would have to **bear royalties payments and earn appropriate subscription fees to cover their cost**. Hence, there will **no longer be the issues of regulatory arbitrage** or ATSs at competitive disadvantage compared to other interactives streaming platforms, such as SIs and CPSs.

SRO Exchanges together with the consolidated tape distributors should be charged with the responsibility to **indicate BBO and NBBO**. The anchoring reference price is essential for price discovery. The number of FINRA registered firms

[51] https://www.law.cornell.edu/uscode/text/17/114

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has dropped from 4,000+ in 2014 to 3,435 at 2020-year end. A healthy market needs better diversity and improved liquidity in the market. Evaluation of SROs' performance and consider renewal of Exchange license(s) should include factors, such as abilities to **deliver net growth in number of registered firms in the market**.

Whereas for ATSs, we think that as long as they provide a catalog of choices on whose order flows their clients want to interact with, then certain discretions preserved by ATS operators would give non-lit venues sufficient nimbleness to reach market segments that would otherwise not be reachable by open Exchanges. Lit venues do not and should not have such catalogs. It is essential to differentiate between "interactive" and "non-interactive" subscription services because **one size does not fit all**.

Under our recommended scheme, order flow would be like "songs" streaming on different platforms. Broker-dealers would earn **royalties** on top of their trading revenue. Additionally, algo wheels that are no longer in use may be able to earn a "**second profit**". These royalties may be a small amount per "song", but it will be substantial for a hit song that is played many times. More importantly, picture the cost structure of a broker-dealer where **traders and algorithm developers** usually attributed to a significant portion of all costs. What if some or all of these "**featured artists**" costs may be off-loaded and paid for directly by the copyright licensing royalty scheme?

In turn, the definition of **"professional" versus "non-professional"** would be better delineated as – those who are able to compose a full song versus those who play only a few single notes. For the "featured artists" wanting to earn the royalties, they will identify themselves and bear their **fair share of responsibilities** (profit/ liabilities). Imagine how much easier it would be to identify the bad actor if the composed trades end up causing market chaos/ manipulation.

Each streaming platform, regardless of "interactive" or "non-interactive" subscription services and including CPSs, would craft their own space according to segment(s) or niche(s) they served. Some broker-dealers may want their order flows to be exclusively played on an interactive platform. Others may want to trade cross-asset classes and/or cross-regions. **Trading platforms would be based on who they want to serve, how many subscriptions they are going to get and determine whether to carry a broader or narrower "catalog"**.

The broader the "catalog", the platform would **pay a wider range of broker-dealers**, featured traders, algo developers in royalties. Using **Disney+** as an **analogy** for an established Bulge Bracket that also owns an ATS; they have their own Disney, Pixar, Marvel, Star Wars, and National Geographic contents for interactive streaming. Using **Showtime** as **another analogy**, they are a competitive interactive streaming platform. Their crafted niche is different compared to Disney+. Equity securities that are not NMS stocks, corporate bonds, or municipal securities may just need specialized streaming platform(s) like Showtime.

For a **third analogy**, there are the "non-interactive" platforms such as **online radios or cable TVs**, which we refer to them as the "Exchanges". In contrast to Disney+ and Showtime which are interactive, they serve the broadest audience while not having a "catalog". They **may pay a substantial portion of all royalties, yet they represent the biggest liquidity pool in all markets**. Participants would not see "cyberpunk" or any "obscene, indecent and profane" content given these non-interactive platforms are intensely regulated. Their contents include "timeless classics" rather than new first run blockbusters; they continue to be profitable.

Besides, Viacom CBS does have MTV, Comedy Central, Paramount Network and other interactive platforms under their group. This **crossover of "non-interactive" with interactive" approach**, or the earlier mentioned analogies have illustrated that existing vested interests, other encumbrances, and new entrants **can all flourish** under our

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recommended scheme. **Viewers (investors) get more choices and better contents**. This is a **Pareto Improvements**[39] (someone better off without anybody worst off or win-win for all)!

Learning from the music industry, record labels were initially opposed to MP3, Napster, and other streaming platforms. Although we would not say today's copyright licensing system for the music industry is perfect, at least it achieved a healthy equilibrium. Music has **reached more people through streaming, and it grows the overall pie**, and every contributing practitioner is enjoying a bigger piece. In terms of what is driving growth of the overall pie for our capital markets, it is about leveraging the "crowd" to help **reduce the amount of "unknown unknowns"**[52] in the market. We envisage creating a "sound library". Unlike deep learning and sophisticated models, which are expensive and hard-to-learn tools, it would enable anyone to derive new algorithms and discover alpha, toxic risks, potential flash crash, etc.

Regulators should also welcome this innovation because it enables market monitoring to be done via a **clean sweep**. To effectively monitor markets in the 21st century, internal recordkeeping may not be as useful as the **intelligence drawn from the crowd** in the field through a whistleblower program and "**catalogs**" of ATSs that showcase order flow interactions and market dynamics. Regulators do not and should not be invasive to gather all data of every market participant and their affiliated tech vendors or CPSs. Gathering everyone's data in a centralized "vault" could be vulnerable to cyberattacks, internal compromises, and/or foreign adversary threats. Pro-active risk controls in real-time is better than after-the-fact salvages of loss or finding a needle in a haystack in the Consolidated Audit Trail (CAT).

Finally, we think information about the "types of subscribers" should be included as part of the "catalog" instead of the static Form ATS-N. Requiring ATS-R filings on a more frequent basis would definitely be burdensome. That is why we recommend the "catalog" approach. To create a catalog, one does not need to reveal its trade strategies in full. Instead, it could use a high-level description of the algorithm (just like a movie trailer preview), or a brief sample where one tested out an algo-wheel. The enabling technology is Data Boiler's patented invention to transform trades into music. Appropriate **obfuscation to preserve confidentiality of trade strategies** are ensured (**Regulation ATS – Rule 301(b)(10)(i) compliance**), while rights to claim ownership of data by broker-dealers can be asserted.

J. Other Remarks - scenarios particularly likely to implicate a material change to ATS's manner of operations - a broker-dealer operator or its affiliates beginning to trade on the Covered ATS

#	Scenario	Our comments
1	A change to the broker-dealer operator's policies and procedures governing the written safeguards and written procedures to protect the confidential trading information of subscribers pursuant to Rule 301(b)(10)(i) of Regulation ATS, including types of persons that have access to confidential trading information	"Reasonable written standards" only benefits the big law and/or consulting firms. See Section I for counter suggestion.
2	Eligibility to participate in the ATS	See Section B
3	The introduction or removal of, or change to, an order type or type of message that subscribers can receive or send	In view of LME's recent halt and cancel trade decisions, who may be exerting influence, does it

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

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4	The introduction of, or change to, requirements, conditions, or restrictions to send, receive, or view trading interest	involve Too Big To Fail, would it weaken market integrity – are legitimate concerns applicable to all venues, see Section E
5	A change to the interaction of trading interest (including, for example, procedures related to how participants send, receive, respond to, counter, and firm-up trading interest) and priority procedures	See Section E about "trading interest"
6	Any change to ATS functionalities or procedures that affect pricing of trading interest	"Harm" is what counted, see Section F
7	A change that would impact a subscriber's ability to send or interact with trading interest, including a change to the segmentation of orders and participants	Segmentation versus mass customization, discretion is a right to the owner of such right, see Section B
8	A change to the manner in which the Covered ATS displays or makes known trading interest, including to limit or expand the trading interest that subscribers can view or interact with	"Catalog" is a better approach than filing static Forms, see Section I
9	A change of a service provider to the operations of the Covered ATS that has access to subscribers' confidential trading information	See Section B and Section I
10	A change to introduce or stop routing or sending away trading interest	See Section D

ATSs, MTFs, OTFs, and SIs are core components of the 21st century capital market infrastructure. They cannot be viewed in silos, and none can be excluded, when considering a major market reform. Per our 2018 comment letter to the SEC,[53] we stated that *"SROs, ATSs, and SIs are all in group 2 with market integrity responsibilities … the proliferation of approaches by Exchanges, ATSs, and SIs to redirect order flow (both legitimately and via alleged exploitations) is indeed a fairness issue over market division. There may not be good or bad guys …, but people jockey around trying to make money. Among them there could be formal or informal alliances, as well as possible collusion … there will be complaints about rules being skewed in favor of particular entities, as well as new way(s) to exploit or circumvent the rule."*[54] We suggest the SEC to scrutinize those who operate close to the edge (grey areas).

Exchanges are required to provide equal access to all and do operate under certain boundaries. These boundaries may also cover their data business, as well as ensuring their activities would not result in any conflicts of interest, potential impairment/ interference of other people's rights, and/or detriment to market integrity/ FRAND principles. Therefore, **Exchanges are considered "non-interactive" streaming service** (like Pandora, iHeart Radio). In other words, they should NOT have discretion on choosing who they want to interact with – that is the "manner of execution" as required by rules for an Exchange.

Whereas for **Dark venues** (including ATSs and Systemic Internalizers), they **should be like an interactive streaming service** (Spotify, Apple, and YouTube – i.e., **"on-demand" streaming services with variety of choices disclosed in their catalogs**). How much discretion (e.g. sub-penny trading[55], eligibility to participate, etc.) should policy makers allow ATSs, MTFs, OTFs, and SIs to have? What should these trading platforms do to earn such discretions, how to ensure

[53] https://www.sec.gov/comments/s7-05-18//s70518-3631338-162376.pdf
[54] https://www.bloomberg.com/news/articles/2018-05-02/stock-exchanges-get-warning-shot-from-sec-over-data-profits
[55] https://www.nasdaq.com/articles/a-deeper-dive-into-dark-trades

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they would not abuse their discretions, or collude in bilateral or multilateral deals to harm the general investors? Please see Section I and the "sushi or sashimi, diabetic discrimination" case[12] in Section B for relevant discussions regarding these big questions.

Form ATS is a notice to the Commission, not an application and the Commission does not approve an ATS before it begins operation. ATS may voluntarily disclose Form ATS to the public. Yet, the Commission has no right to make it public. **Free enterprise providing a notice to a government agency is a private matter**. Also, Form ATS-R includes a list of persons granted, denied and limited access to the ATS. The ATS's customer list, list of declined/ limited eligibility and other private and confidential information should be properly protected. The Commission **should NOT amend Rule 301(b)(2)(vii) to make Form ATS or Form ATS-R public**.

Whereas Form ATS-N is a public reporting form that is designed to provide market participants and the Commission with information about the operations of the NMS Stock ATS and the ATS-related activities of its Broker-Dealer Operator and its Affiliates. Among other things, an NMS Stock ATS must file Form ATS-N to be exempt from the definition of "exchange" pursuant to Exchange Act Rule 3a1-1(a)(2). If an NMS Stock ATS is currently operating pursuant to a Form ATS it must indicate such on the Form ATS-N. If the NMS Stock ATS is operating pursuant to a previously filed initial operation report on Form ATS as of January 7, 2019, such NMS Stock ATS shall file with the Commission a Form ATS-N no earlier than January 7, 2019, and no later than February 8, 2019. The two forms serve different purposes. Hence, regardless of currently or as proposed, the **questions in Part III of Form ATS-N do not have to be in synch with Form ATS**.

Again, heighten disclosures in the beautified name of "improve transparency" may indeed be bad policies for an uneven playing field hurting the smaller players and reducing competition and choice. Disclosing the entirety to public may indeed attract hackers to attack. Privacy rights over commercial transactions should be respected. The proposed adding of **disclosure on Form ATS-N** about specific trade volume data for its trading with business units of the broker-dealer operator or its affiliates **would not make it comparable to real-time dynamic information** describing the impending behaviors or actions of an ATS. ATSs, MTFs, OTFs, and SIs should be like an **interactive streaming service** (Spotify, Apple, and YouTube – i.e., "on-demand" streaming services with variety of choices disclosed in "catalogs").

We do not want to create any more market sub-segments by different asset classes – Government Securities, NMS stocks, fixed income, different type of digital assets, etc. If possible, we would **prefer policy makers to use principle-based rules across asset classes**. Regarding the definition of "emerging market" for non-US corporate debt securities, the Commission may follow the definition of the IMF,[56] but it seems like overkill. We think if the Commission is going to use the information as a general "ballpark figure" for market monitoring and promise there would not be action against any misdemeanor misfiling, then the market may cooperate to voluntarily provide the information according to any commonly use industry's definition(s) of "emerging markets". The most crucial and vitally important principle to **differentiate different trading venues and distinguishing their corresponding rights and obligations is** indeed "**interactive**" versus "**non-interactive**" subscription services.

We do understand every sovereign country tends to have patriotic ("America First")[57] policies to prioritize National interests (liquidity in the U.S. Treasury market has been an ongoing issue)[58] over others. If there needs to be separate treatments, carve out Government Securities and Repos as a separate sub-part. The proposed definitions of U.S.

[56] https://www.imf.org/external/pubs/ft/wp/2004/wp04177.pdf
[57] https://en.wikipedia.org/wiki/America_First_(policy)
[58] https://www.reuters.com/business/us-treasury-market-pain-amplifies-worry-about-liquidity-2022-03-24/

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Treasury Securities and Agency Securities **should include repos**. Per the IAWG Treasury Report[59] on Nov 8, 2021, *"…strains in intermediation in repo markets were cited as one of the drivers that resulted in upward pressures in funding markets, a condition that was even more pronounced in September 2019. These episodes have occurred against the backdrop of the increasing amount of Treasury debt outstanding over recent years, which has outpaced the growth of dealer balance sheets and capital generally committed to Treasury market making. These dynamics make elastic intermediation even more critical to the smooth functioning of the Treasury market."*

The inclusion of repos will **allow for consistency** in related rules, such as the Dodd-Frank **Volcker Rule**. The definition of "**affiliate**" should be consistent with other SEC rules, such as the Dodd-Frank – Volcker Rule. We **agree** with the proposals in **rescinding the Exemption from Regulation ATS for Activities Limited to Government Securities**. This presentation[60] may provide helpful information regarding the processes and procedures around Treasury auctions.

Market dynamics and interaction with related markets affect the sourcing of liquidity for government securities. Lately, the market is more affected by **geopolitical events**, and we believe this trend will continue. It may **drain liquidity out** of the market if the Commission shines more light on dark venues at this time. **No fish would be able to survive in the pond when the water is overly clear**.

If the rule-makers are like overprotective parents being obsessed with their children, then the market will never experience growth. The proposed amendments may have inadvertent consequences, despite what looks like bringing fixed income and other asset classes to be in synch with the 2018 final rule regarding regulation of NMS Stock ATSs. A **credible market** should not require its participants to read all the "small print" to **self-discern** whether they may get scammed or not. Otherwise, investors may turn their interest to **non-regulated crypto markets**.

To revitalize the industry value chain smile curve[8], there needs appropriate delineation of rights and obligations among trading venues and market participants. Policy makers should consider optimal choice for trade platforms and minimize resources wastage to booster market efficiency. Again, we have **more than enough markets and not enough farmers and diversity to work in the field to bear fruits**. When there is an overlap in sub-market segments that multiple trade platforms are competing for, how would competitors be **disinclined to engage in dissipating acts** or **interference that benefits no one**? What would encourage players to seek mutually benefiting opportunities via commercially agreeable terms to **resolve** their **disputes** (speed bump, auction process, or any special privilege)? When cooperative agreements cannot be made, do they afford the opportunity to pursue **mergers and acquisitions**?

For the sake of fairness, the different degree of "regulatory burdens" or "**obligations**" that one has to fulfill and/or comply in order to earn respective "**rights**", have certain "discretions", or "authorizations" over the use certain asset or operate a licensed business with certain privileges should be an "**equivalent exchange**".[61]

At Data Boiler, we are always interested in **growing the overall pie** and **Pareto improvements** (someone better off without anybody worst off).[39] In our opinion, equity securities that are not NMS stocks, corporate bonds, or municipal securities may see improvement in liquidity **if there is an Exchange and designated market-makers willing to stand ready to make continuous quotes** at reasonable spreads in both good and bad times. Without such, markets may operate more efficiently through the ATSs and other Broker Crossing Networks with essential discretions. There needs to be **appropriate risks and rewards**. By granting suitable discretions to the right parties, they would have the

[59] https://home.treasury.gov/system/files/136/IAWG-Treasury-Report.pdf
[60] https://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Documents/August2015TBACCharge1.pdf
[61] https://www.urbandictionary.com/define.php?term=equivalent%20exchange

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nimbleness to reach market segments that would otherwise not be reachable by Warlords dominant players.[4] Investors will no longer suffer from undue burdens caused by market-convoluting initiatives or countermeasures.

Both the Commission's proposal regarding CPSs in the US or the ESMA's trading venue perimeter in the EU, are not well received by the tech community.[62] We think technology in itself is neutral. Back in the days when plane was first design to fulfill the human dream of flying. Plane designers worked tenaciously to improve the aerodynamics in making lighter and faster planes with honorable intents. However would the designers ever know their well-designed planes would turn into fighter jets during the World War II? We think the "right" technology innovation will spur economic opportunities while promote market integrity, improve liquidity, and allow better diversity to foster healthy growth of the market. For that, we propose a **Copyright Licensing Mechanism**[50] to regulate all "streamers" (Lit and Dark venues, self-aggregators, competing consolidators) once and for all.

K. Conclusions

The following is a summary highlighting our propositions with key amendments:

- *Data Boiler strongly opposes the redefinition of "Exchange". Data Boiler disagrees with the Commission's focus on the "expectations of the participants". Mixing up the concept may result in countless disputes similar to the "sushi or sashimi, diabetic discrimination" case[12]. It is unwise to change the time-tested and most prominent language in Exchange Act Rule 3b-16(a)(2).*
- *Data Boiler strongly opposes the proposal to extend Reg. ATS to include systems that offer the use of non-firm trading interest and provide protocols to bring together buyers and sellers for trading any type of security, and forcing CPS to either register as exchanges or register as broker-dealers and comply with Regulation ATS. Data Boiler opposes extending recordkeeping requirements to tech vendors beyond FINRA registered firms. It would give the government regulatory agency an overly invasive power over private information.*
- *Data Boiler believes certain discretions preserved by ATS operators without significant volume would benefit the overall markets with improved liquidity because they would disincline to engage in dissipating acts or interference that benefits no one. They will seek mutually benefiting opportunities via commercially agreeable terms to resolve their disputes. Alternatively, we suggest regulatory scrutiny over potential price discrimination practices.*
- *Data Boiler prefers policy makers use principle-based rules across asset classes, while okay with the proposals to prioritize the US national interests in rescinding the Exemption from Regulation ATS for Activities Limited to Government Securities, as well as the requirements for Government Securities ATSs to File Form ATS-G.*
- *Data Boiler supports applying Reg. SCI to Government Securities ATSs that meet the specified volume threshold.*
- *Data Boiler understands the nature of bringing ATSs for other types of securities to be in synch with ATSs that trade NMS stocks, yet Data Boiler opposes the requirements about "reasonable written standards for granting, limiting, and denying access to ATS services that must be established, and applied, and among other things, justify why each standard is fair and not unreasonably discriminatory" that only benefits the big law or consulting firms.*
- *Data Boiler counter suggests that ATSs and SIs should be considered "interactive subscription services", i.e. "on-demand" streaming services with variety of choices disclosed in their "catalogs". Whereas Exchanges should be considered "non-interactive subscription services" given they represent the open markets and SROs status. We*

[62] https://youtu.be/XmA-0QPYRGM ; https://www.waterstechnology.com/regulation/7939956/eu-trading-venue-definition-could-crush-innovation-say-bank-execs

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*propose a **Copyright Licensing Mechanism**[50] to better delineate rights and obligations among trading venues and market participants along the industry value chain smile curve[8].*

Our final thought of encouragement for everyone:

> The capital markets never lack competition. Indeed, we have more than enough markets but insufficient "Farmers" (see Figure 1 value chain smile curve[8]) and diversity to work in the field to bear fruits. Healthy markets need both "Hunters" (Performance Optimizers and Asset Gathering) and "Farmers" (Asset Maximizers and Customer Service); don't shoot the messengers[13] (PTFs). Market operators make more money selling "opioids" (tools to fabricate fragmented markets are like addictive drugs) than "fruits". It is the Rulers' job to draw the line between permissible and prohibited activities. People may as well self-govern if they are left to read the small print and take their own risks of being scammed in the markets. Rulers should refrain from playing the role of field supervisors to micromanage others. Instead mandate the proper Police enforcement (SROs) to guard against misbehaviors. No presence or use of authorities by the police unless there are illicit or suspicious activities. Being nosey may create resentments, discomfort feelings, and civic concerns about massive government surveillance[6]. Orderly function of a market is when hunters and farmers got pay for the food they brought to the markets via "equivalent exchange".[61] Market operators should earn more by attracting more people to shop comfortably at their markets. Not everyone can be a market, externalities and Pareto improvements[39] are keys to drive sustainable market growths.
>
> Please also see our related response to the ESMA at:
> https://www.DataBoiler.com/index_htm_files/DataBoiler%20ESMA%20Trading%20Venues%20202204.pdf

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

Sincerely,

Kelvin To

Founder and President

Data Boiler Technologies, LLC

CC: The Honorable Gary Gensler, Chairman
The Honorable Hester M. Peirce, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline A. Crenshaw, Commissioner
Mr. Haoxiang Zhu, Director, Division of Trading and Markets

This letter is also available at:
https://www.DataBoiler.com/index_htm_files/DataBoiler%20SEC%20ATS%2020220418.pdf

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Appendix 1: Flow Charting of ESMA's consultation paper on TRADING VENUE PERIMETER by Data Boiler