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Competing Decentralized Consolidation Model is Impractical

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The SEC put in a **spectacular effort** with its new proposed rule 614. They expected that Competing Consolidators (CCs) under a Decentralized Consolidation Model (DCM) would "permit the **market data infrastructure** to more readily adapt to changes in technology to better fit the needs of market participants…" As much as we wanted to be a contender, we raised **15 rebuttals** and think that the proposal may be **impractical** (see *Table 1* of our 97-page submitted comments).

Many welcomed the proposal to expand contents of core data (including depth-of-book, auction information, and more), while large Exchange groups seem less than enthusiastic. The latest court ruling overturns the SEC's decision to reject fee-increases for Exchanges data feeds, is an example of the exchanges 'power-play' where the SEC does not necessary has the upper hand. We at Data Boiler firmly think closing the latency gap should have a higher priority than including every wish list in the data contents. The proposal of "same manner and methods" is merely a standard price list offered by Exchanges. Neither is it equivalent to Latency Equalization, nor can it achieve the same results as Market data available Securely in Synchronized time. "Same format" hurts average investors and gives High Frequency Trading firms (HFTs) a permanent advantage. One can only attempt to match faster connectivity by altering data format and compression methods. It is a shame if our equity market adopts a lower standard than on-line gaming industry. **17 CFR §242.603 ought to be updated for a synch start-line**.

Consider that the SEC's proposal is based on 10G connectivity while NYSE launched 100G colocation service since April 2020. The 10 times difference could soon become 40, 80, or even 160 times soon. The cost incurred to manage big data is like stacking blocks, each step up costs much higher than the last. Technology development costs usually amortize in 10 years. Why would CCs compete in a "drag race", using microwave, laser, or quantum techs, in which the investments could burn out every 2 years?! That being said, Bloomberg and Refinitiv are the two dominate players that stand to gain if DCM preserves their near oligopoly power. They have almost no incremental cost to become CCs, while revenue upside depends on how hard the SEC, FCA, and industry beat up the Exchanges on their behalf. For existing aggregators, maximize life of aged techs is probably in their best self-interest. The SEC should **require Exchanges to maintain a maximum connectivity disparity ratio (e.g. of 2.5 times)** to ensure "core data evolves along with the broader ecosystem".

Building a rival to Securities Information Processor (SIP) cost is substantial. Publishing and storing the consolidated data, with the expanded contents, is potentially comparable to (though a bit smaller than) the Consolidated Audit Trail (CAT) project. Imagine the multi-billion dollars cost for CAT times the twelve CCs that the Commission has estimated per the proposal's footnote 510, the **market simply cannot afford** it (**CC** is indeed an **intermediary** between suppliers and users adding a **layer of cost** to the overall system). Asking CCs to be backup disaster recovery sites for the SIP to avoid single point of failure is a false-sense of security. Each time data is in-motion or stored at an additional site, the more vulnerable to security treat. Academia concurs that cybersecurity of real-time market data must be protected. The use of **time-lock cryptography** (TLC) can guard against premature decryption, and it helps **eliminate the "extra hop" latency** difference between Self Aggregators (SAs) and other participants.

Our concern is that the proposed DCM would exacerbate market fragmentation and have other adverse consequences. Empirical research shown that "Exchanges may optimally restrict access to price information for rent seeking behaviors". **Fees for Proprietary Products** (PP) **would likely go up rather than go down because demand is inelastic**. Exchanges may

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widen the latency gap with overly frequent upgrades and exploit any residual data disparity (level 2 depth-of-book, OTC, non-equity data, etc.) in attempts to recover any loss from core data business. **SAs**, including ATSs and Smart Order Routers (SORs) would be most happy about it because market fragmentation means more opportunities (e.g. benchmark reference price arbitrage due to multi-NBBOs) for them to profit. Transaction Cost Analyzers (TCA) and other Best Execution (BestEx) **tools are indeed added layers of costs and/or entry barriers** for average market participants. Market inefficiency not only will wipe out any hypothetical benefits from the proposed DCM, but the resulting effects may be worse than status quo.

In our opinion, there has to be a **shared vision**, so that various constituents would **create proper interdependency** on each other to "**grow the pie**". The underlying issue is like Animal Farm, arguing fairness of access fee rebates, plateauing of cost reduction, and other adverse consequences caused by the old National Market System (NMS) that over emphasized speed as a key to trading success. In order to grow the market with more market participants, we think policy makers must first give all participants a fair chance to compete. By that, we are advocating for **democratization of techs** to bring back those who previously fled the market, as well as equipping average investors to trade like the Pros.

A viable **Single SIP Alternative** would look like the followings:

1. Secure synch availability of market data at lower cost + a 2.5 times maximum connectivity disparity ratio, or else the SEC may ask for a mandatory split of Exchanges' data business to curb potential exploitation on economy of scope.
2. We will then consider offering a 'community version' of our patented invention at minimal cost or FREE, so average investors can also do pattern recognition and compete without the fastest access.
3. We favor distribution of this new SaaS trading terminal via collaborative efforts with large retail/ online broker-dealers (BDs) in order to reach critical mass quickly and break the alleged oligopoly of dominate aggregators.
4. The new competition would be based on who are able to discover new trade patterns that promote financial safety and soundness or unknown unknowns pertaining to crashes.
5. Anyone, other than the SEC/ FINRA/ Exchanges, wanting to use these patterns would have to pay a fee. There will also be charge for other value-added functions which can help BDs save time and/or costs.
6. Value added functions may also include automated surveillance and other ways to ease CAT burdens. In turn, the SEC and FINRA may focus their exams/ investigations resources on 'high risk' trade irregularities.
7. Lit venues would benefit from increase trading activities from diversified players, and institutional traders would save costs by relying less on SAs to source liquidity and excel on their performance via our more advanced tools.

Given **SAs business would grow at the expense of any market ineffectiveness and inefficiency**, so SAs' performance is indeed the best metric/ reverse indicator to gauge if a market reform is ultimately successful or not. That being said, **nothing may be able to move forward** because who knows how the NASDAQ motion for stay of NMS Governance Order would entail. Possible modification or repeal of the Order Protection Rule 611 has been the subject of much debate, and the Commission has stated that they are not persuaded by concerns about the introduction of multiple NBBOs given it is non-novel or insurmountable. However, let's be warned that **eroding NBBO de facto status** is like a foreign currency pegged to the US dollar versus a basket of other asset or the transition from LIBOR to SOFR.

We think NMS's goal should be having diversified trading venues **working collectively as one** to best serve the market needs in an effective, fair, and non-discriminatory way to delineate securities ownership rights in the most efficient way at the lowest possible cost. There may be opportunity to use our patented propagation approach to **let BDs *NOT* connect with all trading venues and still achieving "BestEx"** technically. But it is all up to the Exchanges to decide how they would best handle Intermarket Sweep Orders. Getting them into a **consensus is the biggest challenge**.