May 26, 2020

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

Re: Proposed Rule on Market Data Infrastructure, Release No. 34-88216; File No. S7-03-20

Dear Ms. Countryman:

AHSAT is a computer-automated proprietary trading firm that I founded over a decade ago. I strongly support the Commission's intent to change and modernize market data infrastructure, including its pricing and governance, and the philosophy of introducing more competition into the space. In terms of content and latency, the proposal's reforms go a long way. I will focus my comments on two points to improve further: pricing of consolidated data and differing definitions of round lots and protected quotes.

I. Pricing

As a reminder, before Reg NMS in the late 1990s, the NYSE specialist had a near monopoly over the liquidity of a given stock, and regional exchanges were largely ignored, because they could be. Reg NMS, with its Order Protection Rule and best execution obligations, made other exchanges relevant, brought competition, and has been an enormous boon to liquidity, and in turn, US equity markets. The Order Protection Rule, however, awards by regulation a privilege to SRO orders and requires all market participants, or at least their intermediaries, to view all protected orders to comply and not trade through. Yet currently, SROs, who are not even the trading customer who generated the order, can name their price for the legally-required entitlement to view these orders as market data, including collectively in the present SIPs.

I would contrast this structure to buying a used TV on eBay or Craigslist; as a potential purchaser of goods on these marketplaces, I do not pay to access their listings or prices. In fact, these marketplaces pay advertisers like Google to put that data in front of me, partly to make up for the lack of order protection there. Likewise, we see this structure in event ticket resales such as StubHub or in travel booking sites. But somehow in US equities, this is flipped; the party seeking product pays marketplaces to see ads, meaning prices. Why? They are required to by regulation, and further to pay for the technology infrastructure to process those billions of prices, in order to comply with SEC mandate. And with this special status available, is it any wonder we see so many SROs, especially under the same parent companies, despite some having miniscule market share and presenting little marginal innovation? They're lining up for another share of the oligopoly.

As a bit of empirical validation to the above theory, market data costs spiked in Europe following MiFID II's introduction of similar protections. Yet, based on an informal review of market data license costs posted online, my firm would still pay less for equivalent proprietary data feeds there than it does in the US, or would pay a roughly similar amount to what it would pay for inferior consolidated US SIP data, perhaps due to the longer period of time for which US SROs have enjoyed their pricing leverage. FX ECNs and futures seemed similar or lower in pricing to European equities, meaning US equity data is not cheap.

While admittedly such a review does not control for other differences, this is suggestive that the privilege awarded by the regulators is upwardly affecting market data prices, when the fair result, that compensates non-SROs for the obligations to SROs, would be for it to downwardly affect prices.

To be clear, I think the Order Protection Rule and most of Reg NMS have been very positive, due to the aforementioned liquidity benefits. But I'm not so sanguine about the market data pricing leverage it and best execution rules have given SROs. Thus, it is my strong opinion that the regulated privilege of order protection be accompanied by a requirement to openly disseminate information regarding those orders at no revenue to the SRO or liquidity provider. If this ultimately means higher net transaction fees or even order placement fees, which in either case would be borne by those benefitting from the order protection rule, as opposed to costs being unfairly externalized to market participants broadly and regardless of their activity levels, then so be it. It is also apparent that competitive forces are working better with respect to net transaction fees than market data fees.

The next best option after that is for each competing consolidator to pay an SRO its marginal cost to disseminate the data to that competing consolidator. However, marginal cost may be difficult to calculate or define, and any cost measure is subject to manipulation by the SRO. These difficulties should not prevent the Commission from using cost as an upper bound in the absence of better solutions though. When considered marginally to proprietary data products and other competing consolidators, the marginal cost is likely to strictly focus on the modest computer networking costs of an additional multicast recipient and to exclude SRO software development or broader marketplace costs.

Rather, as I understand the current proposal, the NMS Plan via its new governance structure would set prices for end user entitlements to consolidated data, which would constitute a revenue pool shared by the SROs, much like today, and competing consolidators would set prices for their aggregation technology services. Competing consolidators would also pay exchanges for connectivity and data, whether that data is new feeds designed for this purpose or existing proprietary data products; in this sense exchanges would be getting paid twice for the same data. This double dipping strikes me as unfair, and I would propose that competing consolidators be reimbursed from the charging SRO's SIP revenue share. Double dipping also gives exchange-owned competing consolidators an unfair advantage because they do not *net* bear those costs when sourcing their own data.

Further per the current proposal, exchanges would be obligated to sell these services to competing consolidators at terms -- latency and prices -- no worse than offered to other market participants. Current data pricing structures attempt loosely to target usage, so different entities have different bills. For instance, some pay Non-Display Use or Redistribution fees whereas others do not. The Commission should take care that SROs do not design their fee structures to unduly target competing consolidators in practice, especially when SROs are likely to operate their own competing consolidators. While the same rule might apply to everyone in theory, in practice such rules can be designed so that only a narrow set of entities might qualify. In this way profit-motivated SROs that are allowed to charge competing consolidators might find ways to make them uneconomic, thereby diminishing the competitiveness presented by the new consolidated data feeds.

I have seen it argued that lit markets provide price discovery to free-riding dark liquidity. Lit markets already receive the valuable privileges of order protection and mandated data customers in offset to any potential free riding. But to the extent this free-riding argument holds weight, there are better ways to target that usage. For instance, non-SRO TRF trades could be charged a fee, netted with sharing in SIP

revenue, and which would better reflect benefit received than a fixed dollars per time data fee. In that case the economic debate is between the dark and lit exchanges, and the rest of us can be left out of it, i.e. not pay. Another approach might be a trade-at rule. Either way it is clear that any free riding is not enjoyed equally across all potential SIP customers.

It has also been argued that the proposals at issue make a difference for a relatively small set of market participants by number, which are latency sensitive. Even if the effect were small, it is still favorable. And with the existing SIPs likely to continue and with equivalent products, most participants (by number) who do not want to change need not do so. Moreover, I would argue that the participants most at issue are responsible for an outsized portion of market volume. HFTs tend to act as the base of the ecosystem of liquidity provision, lowering trading costs for larger, slower-moving institutions. Consequently, lowering their costs and democratizing their access can have positive effects of lower costs and a more diverse, resilient liquidity base for all.

Regarding the qualifications and thereby costs of being a self aggregator, I do not believe that self aggregators should be required to be broker dealers, partly in reference to questions 127 and 132. The primary ability needed to act as a self aggregator is technical skill, whereas the qualifications of a broker dealer are primarily financial, regulatory, and legal. There is little correspondence. Meanwhile there is a significant cost to maintaining broker dealer status, which will artificially narrow the set of market participants able to act as self aggregators. As an example, my firm is not a broker dealer, but does possess the technical ability to act as a self aggregator. Rephrased, for a market participant for whom the proposed NMS market data content is sufficient, that participant will have to choose the least of three evils: 1) the cost of broker dealer status, 2) the cost of added latency of data hopping through a competing consolidator, and 3) the marginal cost of proprietary data feeds over consolidated data costs paid by a self aggregator. Whereas it is likely the Commission desires that market forces reduce #3, this aim would be served by eliminating #1, the requirement that a self aggregator be a broker dealer. To questions 129 and 131, the less cost and hurdle imposed on qualifying as a self aggregator, or the more permissive their use, the more effective the overall rule at promoting competitive forces. Since self aggregated data is for internal use only by definition, relaxed qualifications present little downside or repercussions to the market, though a competing consolidator should be held to higher standards.

In short, with a bit of care in implementation, I support the current proposal in its ability to 'level the playing field' between consolidated and proprietary data, and thereby to apply competitive market pressure on the relative pricing of proprietary data. However, the Commission should also take care that adequate, functional mechanisms exist to ensure the absolute pricing of consolidated data is fair, reasonable, supportive of competition among a diverse set of data users, and not controlled or manipulated by the SROs either individually or collectively.

II. Round Lots

The distinction between **round lots** with a price-dependent number of shares and **protected quotes** of 100 shares or more introduces unnecessary complication. I would propose to designate all newly defined round lots as protected quotes -- **eliminate the distinction**. While I agree with the concept of a de minimus quantity to prevent frivolous orders, market manipulation, and potentially reduce excess data (contrasted with the loss of information and continuation of the present odd lot problem when the threshold is set too high), if an order can affect the NBBO and all of its derivative uses, then it can also be

protected. This will make the practice of the proposed rule simpler and more straightforward for market participants, reducing implementation costs and confusion. Currently, in separating the concepts of round lot and protected quote, the rule needs to go through each use of such and say which concept it intends; it is much easier to use one concept, that has the new definition. Separating the concepts per the proposal also risks less scrupulous market participants finding abusive ways to profit from the distinction, which is likely not the Commission's intent.

Some have alleged to me that the reason for the distinction was to test relaxing the Order Protection Rule, as the proposal introduces round lots that are not protected. As stated above, I favor the Order Protection Rule and view it as key to Reg NMS's success at making competing marketplaces into a cohesive system. That said, if there is a desire to test this empirically, the proposed rule is a poor experimental design, chiefly because it will only affect high-priced stocks, which is a confounding factor for any observed differences versus (low-priced) stocks that do not exhibit a distinction between round lots and protected orders. The proposal is expansive and complex enough without adding this issue to its scope. So I would rather the Commission dealt with the issues explicitly at hand and eliminated the distinction. And if the Commission subsequently wishes to test the Order Protection Rule, then do so separately, with a well-designed, controlled, randomized experiment.

Nevertheless, if the Commission feels strongly that there should be two different standards for round lots and order protection, the latter being a higher threshold, then I would suggest making a second sliding scale of price versus shares for order protection. It makes no sense that the thresholds to receive protection in a $10 stock should be so different for a $2000 stock as they are now.

Furthermore, rather than needing to reference prices from last month to determine the relevant round lot size, I would propose to make the referenced price that of the order itself (so each price level has a corresponding round lot size, and a given stock may have multiple round lot sizes at once). In doing so it would be possible to go further, and simply define a round lot as a certain dollar size instead of a share quantity, such as $1000, $2000, or $5000 – pick one of the three thresholds embedded in the Commission's proposed round lot definition, at or above which the order counts for BBO and protection purposes. For example, at a $2000 round-lot size, the smallest qualifying $10.01-per-share order size is 200 shares. There is only one threshold and no table. Next, I would suggest that each SRO aggregate all orders at a given price *or better* in reaching the round-lot threshold. And finally, I would encourage the Commission to ensure the concept of a round lot (or protected quote) is binary -- anything over a minimum threshold qualifies, so there is no such thing in the regulations as a mixed lot or whole multiple of round lots. Most of these details would make the rule as straightforward as possible post transition.

The Commission should also consider whether 5 cents is a sufficiently wide band of data for a $2000 stock. Short of variable or percentage tick sizes, perhaps the range of the core depth of book data should be defined in percentage terms, or as the greater of cents and a percentage band, or a scaled band such as 10 levels for stocks above $100 per share. I do note that it is helpful that the Commission is proposing "to define the depth of book price levels as the first five levels 'at which there is a bid or offer,' rather than alternatives such as a fixed $0.05 band..." Since a narrower effective band increases the relative value of unbanded proprietary data products compared to banded consolidated data, failure to address the question of wider bands for high-priced shares could mute the effect of the new rule's inclusion of depth data. It incidentally could lead to new incentives for SROs to promote higher per-share prices (admittedly

caveat the existing transaction fee incentives), for instance by discouraging splits by their issuers, to the detriment of retail investors who cannot as easily trade $2000 shares.

I have read a concern that lowering the standard for round lots will cause larger executions to be benchmarked against a smaller NBBO. But this is already the case, just for a smaller portion of orders, and there is widespread recognition in the market that orders that outsize the NBBO are likely to cost more to execute. Meanwhile, accuracy of best-ex analysis will increase for sub-100-share orders where it may not have been clear previously whether liquidity existed at prices better than the NBBO. Furthermore, much execution analysis is used comparatively across brokers or venues; the absolute performance will shift for everyone but the relative performance will remain accurate. In short, I don't see a smaller NBBO as a legitimate concern for the sizes contemplated, especially as compared to the current downsides of disregarded orders or lost information in odd lots.

Of course, much of the discussion regarding round lots stems from a trend towards issuers not splitting their share prices, which begs a much more direct solution: make them split. That seems out of scope though. I thank the Commission for its proposals and this opportunity to comment on them.

Sincerely,

Alec Hanson

Founder of AHSAT LLC