TWO SIGMA SECURITIES
MEMBER OF FINRA

Two Sigma Securities, LLC
100 Avenue of the Americas
New York, NY 10013

T +1 212 625 5700
F +1 212 625 5800
www.twosigmasecurities.com

March 31, 2023

VIA ELECTRONIC DELIVERY

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

Re: Order Competition Rule Proposal – Release No. 34-96495; File No. S7-31-22

Dear Ms. Countryman:

Two Sigma Securities, LLC ("TSS" or the "Firm")[1] respectfully submits this letter in response to the above-referenced rule proposal ("Order Competition Proposal" or "Proposal")[2] from the U.S. Securities and Exchange Commission ("SEC" or "Commission"). TSS is an active participant in the U.S. equity markets, and through our wholesale market making business, we work with broker-dealers receiving orders from retail investors to deliver best execution for those clients. Retail investor participation in the stock market is at an all-time high; retail investors receive strong and certain executions at low/no cost, and there are more retail-oriented products and services available than ever before in the history of the U.S. financial markets. These benefits have been made possible by our current market structure and the role that wholesale market makers, such as TSS, play in this structure.

We are deeply concerned that the Proposal would significantly harm the very retail investors it intends to help by materially transforming today's market structure in a way that leads to worse outcomes for retail orders. More specifically, the Proposal would force most retail orders to unworkable "qualified auctions," run by a small handful of exchanges and alternative trading systems ("ATSs"), that, for reasons discussed herein, could result in worse executions than retail investors currently receive—as the Commission expressly acknowledges in the Proposal and some of those very exchanges are noting.[3] In so doing, the Proposal would reduce the number of orders executed by firms, such as TSS, which provide faster and better executions for retail investors at prices better than the National Best Bid/Offer ("NBBO").

When read in conjunction with proposed Regulation Best Execution, the Order Competition Proposal would reduce the internalization of retail orders by wholesalers, prioritize exchange-based trading, and upend a market structure that provides many benefits to today's retail investors. To make matters worse, the SEC seeks to justify these sweeping and unduly complex

[1] TSS is a registered market maker focused on providing liquidity through systematic trading strategies across asset classes. TSS has a strong vested interest in making sure our financial markets are efficient and competitive. Accordingly, TSS is an active member of the Securities Industry and Financial Markets Association ("SIFMA") and the Committee on Capital Markets Regulation ("CCMR"), and we support their letters addressing the full scope of the SEC's four market structure proposals.
[2] Order Competition Rule, 88 Fed. Reg. 128 (Jan. 3, 2023) ("Proposal" or "Proposing Release").
[3] *See* Letter from Hope M. Jarkowski, General Counsel, NYSE, to Vanessa Countryman, Secretary, SEC (Mar. 13, 2023) (the "Jarkowski Letter") at 178, *available at* https://www.sec.gov/comments/s7-31-22/s73122-20159564-327572.pdf.

changes with the promise of benefits to retail investors that are highly speculative and the result of insufficient economic analysis that relies on flawed metrics. Consequently, the SEC significantly overstates the potential benefits of its Proposal to investors while giving only cursory consideration to what it will cost them. Not only will the Proposal harm retail investors by making the U.S. markets more expensive and less efficient, the SEC has failed to satisfy the fundamental economic analysis requirement that it must conduct whenever it engages in rulemaking. If the possible harms to retail investors discussed herein become a reality because of these proposals, retail investors will be disadvantaged for years to come without the possibility of redress as there will be no way to return to the current market structure that benefits them. For these reasons, the Commission should not adopt its Order Competition Proposal.

We discuss in more detail below:

- How wholesalers deliver consistently strong results for retail investors today;
- How the Proposal is replete with unaddressed operational issues that render it unworkable;
- How the Proposal's auction model will disadvantage retail investors in favor of more sophisticated market participants; and
- How the SEC has failed to conduct a sufficiently rigorous cost-benefit analysis for such a significant overhaul of equity market structure.

I. Retail Investors Receive Superior Executions Today Due to the Current Market Structure and the Critical Role that Wholesalers Play.

TSS operates a wholesale market making business, regularly committing capital to execute retail orders consistently and efficiently. As a "wholesaler," TSS receives and executes retail investor orders routed to it from other broker-dealers. TSS seeks to execute those orders on the best terms reasonably available by "internalizing" them (i.e., acting as principal), routing them for execution to other venues, or a combination of the two. TSS leverages its willingness to commit capital as well as its sophisticated order routing logic and low-latency connections to numerous market centers to achieve quality executions for customer orders. Notably, TSS provides high-quality executions that *frequently have prices and overall execution quality superior* to those obtained by the very trading venues to which the Proposal will force retail orders to go—exchanges and ATSs.

Internalization is a key component of TSS's ability to deliver benefits to retail investors. Due to its ability to internalize orders and commit its own capital, TSS provides the following benefits to retail investors that an exchange auction cannot:

- Consistent price improvement;
- Consistent size improvement;
- Rapid execution of orders;
- Consistent execution of orders for both liquid and illiquid securities; and

- Service models that provide expedient issue resolution if an order is erroneously entered or there is a trading error.

TSS frequently provides "price improvement" to marketable retail orders by internalizing them at prices better than the NBBO—this means that a retail investor receives a better price than the NBBO at the time they submitted the order. On average, TSS provides more price improvement more often than exchanges, as evidenced by the below table which shows that TSS's price improvement percentage is better than all identified exchanges by many multiples and more than ten times better than most major exchanges. TSS's effective/quoted percentage is also significantly better than the exchanges. The lower the effective/quoted percentage, the better the execution quality and, as a result, effective/quoted percentage is often used by regulatory agencies to assess best execution in the context of both examinations and enforcement actions.

Quality of Execution Statistics (Market Orders and Marketable Limit Orders)
(April-December 2022)[4]

Market Center	Improved %	Effective / Quoted %
NYSE AMERICAN	2.96	105.27
NYSE ARCA	3.74	101.93
NYSE	4.31	98.51
NASDAQ	5.59	97.44
BATS	9.88	91.91
IEX	11.58	88.64
TWO SIGMA SECURITIES	**61.54**	**69.69**

In addition, TSS frequently provides "size improvement" by internalizing orders at a share quantity that is greater than the size displayed at the NBBO. This results in the retail investor getting an overall better price for their order than they otherwise may receive by routing directly to another market center that may be executing through several price levels of quotes.

Beyond that, by internalizing orders, TSS can provide consistently faster executions than other market centers. For example, from April through December 2022, TSS had an average order time to execution of 7.8 milliseconds for market and marketable limit orders sized from 1-9,999 shares in the S&P 500 Index. Because TSS can internalize orders, and because of our robust technological infrastructure, TSS is able to provide executions for orders routed to it, often with fill rates superior to many other market centers.

Notably, the Commission admits in the Proposing Release that wholesalers perform better than exchanges in all metrics that the industry uses to measure execution quality for retail orders:

> In particular, marketable orders routed to wholesalers appear to have higher fill rates, lower effective spreads, and lower E/Q ratios. These orders are also more likely to receive price improvement, and conditional on receiving price

[4] Figures in the table were calculated based on data from publicly available Rule 605 reports and reflect the volume-weighted averages across all reported Rule 605 order size categories.

improvement, receive greater price improvement when routed to wholesalers as compared to exchanges.[5]

Since wholesalers provide retail customers with better executions than exchanges (as the SEC notes several times within the Proposal), it is inconsistent with the SEC's investor protection mandate to upend the current structure and force those orders on to exchanges, where they could receive worse executions. This begs an important question: Why is the SEC proposing a rule that could significantly diminish the benefits that wholesalers provide to retail investors today? The Proposing Release explains that a key reason for taking this dramatic, anti-competitive step is to "promote competition" because there is not enough competition for retail order flow. But this explanation lacks merit. First, the SEC cannot, consistent with its mandate, justify taking anti-competitive actions that will make investors worse off in the name of "increasing competition." Second, the SEC's premise that there is a lack of "contemporaneous competition among wholesalers" is simply flawed.[6] A key reason that wholesalers provide superior execution quality today is that *there is fierce market competition for retail order flow* and there has been for years. Indeed, one of the reasons that the number of active wholesalers has not changed significantly over time is that the competition for order flow is such that new wholesalers have difficulty carving out enough market share to remain viable.

TSS competes vigorously against other market participants for the retail investor order flow we receive from routing broker-dealers. Routing broker-dealers, like wholesalers, are charged with a duty of best execution for their retail customer orders. As a result, the execution quality that TSS delivers to retail customer orders is regularly and rigorously evaluated both by TSS and these routing broker-dealers. To comply with their individual duties of best execution, the routing broker-dealers pit wholesalers against each other to foment this competition as wholesalers strive to fulfill the order routing firms' expectations of best execution for their customers' orders. Those broker-dealers use execution quality information when updating their order handling and routing tables, routing orders where they achieve prices that are "as favorable as possible under prevailing market conditions."[7] Wholesalers that do not provide competitive execution quality receive reduced order flow or may lose it entirely. As an illustration of this competitive landscape, large retail broker-dealers generally spread their order flow around to multiple market centers, including multiple wholesalers.[8]

TSS leverages execution quality information and customer feedback to improve its handling of retail orders so that it can remain competitive among other wholesalers in this exceptionally competitive market environment. One important way in which TSS competes is by providing retail brokers with consistent execution quality across all their order flow. Retail orders in less liquid or thinly traded stocks also receive high quality executions, as wholesalers do not pick and choose which stocks they will and will not accept from retail brokers and instead accept and execute all order flow. For example, from April through December 2022, TSS provided an

[5] Proposing Release at 186.
[6] *Id*. at 130.
[7] *See* FINRA Rule 5310(a)(1).
[8] *See, e.g.*, Tradestation Securities, Inc., *Held NMS Stocks and Options Order Routing Public Report* (Q4 2022) (routing equities to 10 different market centers, including 6 OTC market makers); Raymond James & Associates, Inc., *Held NMS Stocks and Options Order Routing Public Report* (Q4 2022) (routing equities to 10 different market centers, including 9 OTC market makers).

average effective-over-quoted percentage of 69 for market and marketable limit orders from 1 to 9,999 shares in non-S&P 500 Index stocks (as compared to 55.8 for stocks in the S&P 500 Index)— indicative of strong execution quality that is, on average, better than the execution quality provided by exchanges. These illiquid securities might otherwise struggle to find executions from other market centers. As a result of the robust competition between wholesalers, retail investors currently receive execution quality far superior to what would be received if orders were routed for execution in full directly to an exchange or ATS.

Finally, the bilateral relationship between wholesalers and retail brokers is such that wholesalers provide additional valuable services to the retail brokers from which they receive order flow that retail brokers do not get from other market centers. Wholesalers generally step in to address technical issues or market aberrations at market centers if they negatively impacted the order execution experience for retail investors. This is particularly important given that such market centers typically have rules limiting their liability and the recourse available to impacted participants when outages or other technical issues occur. TSS regularly engages with its routing partners to ensure that it provides consistently strong executions for orders routed to it and stands at the ready to remedy issues that may arise with any orders. TSS strives to provide the highest level of service when working with customers regarding any disruptions and provides accommodations to retail investors for erroneous orders. These benefits are not provided by exchanges—which are the venues that a significant portion of retail orders will be forced to if the Proposal is adopted.

In sum, today's equity market structure, supported in large part by wholesaler order handling and internalization, delivers the best execution quality—in terms of price, speed, certainty, and consistency at the lowest costs to the retail investor community. The Proposal would drastically change existing equity market structure and negatively impact retail investors.

II. The Proposal's Mandated Order-by-Order Auctions Will Harm, Not Enhance, Execution Quality Received by Retail Investors.

While the SEC acknowledges that the executions by wholesalers are "at better prices than those generally available on national securities exchanges,"[9] the SEC has concluded that the significant price improvement, afforded to retail investors is "suboptimal."[10] In an effort to alleviate what it characterizes as "forgone price improvement," the SEC proposes to mandate the creation and use of a "competitive" auction-based model for the vast majority of retail customer order flow (those that fall within the definition of "segmented orders").[11] The SEC speculates that "opening up individual investor orders to order-by-order competition [in this way] would lead to significantly better prices for those investors," an estimated additional $1.5 billion annually—or a theoretical one penny in price improvement for orders more than $100. Stated differently, the SEC

[9] Proposing Release at 129.
[10] *Id*. at 178.
[11] *Id*. at 130.

is willing to upend current equity market structure and create worse executions for many retail customers in return for a theoretical one penny of price improvement for certain orders.

Critically, this potential incremental price improvement benefit is just that—a *potential* incremental benefit. It is far from certain. A retail marketable order that would currently be routed to a wholesaler where it would receive a rapid price-improved execution would, under the Proposal, be routed to a qualified auction in full and remain unexecuted for somewhere between 100 and 300 milliseconds, or even longer if the retail order does not receive an execution in full through the qualified auction. By eliminating the speed and certainty of execution that wholesalers afford to retail orders, the Proposal increases the risk of slippage and price disimprovement during the now latency-embedded life of the retail order.

Furthermore, the realization of the incremental price improvement obtainable via a qualified auction is predicated on auction liquidity that, as discussed herein, is not guaranteed to materialize in the ways the SEC is predicting, particularly with respect to illiquid securities. The Proposal would also negatively impact retail orders in other ways—including by reducing wholesaler incentives to engage in the market and thus to provide high quality executions across all of a retail broker's order flow on a consistent basis. The auction would also broadly expose the full order size to the market for a significant period before it is eligible for execution, resulting in significant information leakage. We discuss these concerns more fully below.

A. The Proposal will harm retail investors by eliminating speed and certainty of execution, which in turn, will result in worse pricing.

If the Proposal is implemented, most retail orders received by wholesalers will be required to be routed to qualified auctions (through either an exchange or qualified ATS). This, in turn, will mean that orders will not be promptly and immediately executed like they are today. The longer the delay in executing orders means the greater the odds that the market will move away from the retail investor, and they will experience price disimprovement or slippage. The proposed auction model would at minimum lengthen the average retail order execution time multifold and increase the risk of price disimprovement.

More specifically, the Proposal would mandate that qualified auctions last between 100 and 300 milliseconds. For comparison, as noted above, from April through December 2022, TSS had an average order time to execution of 7.8 milliseconds for market and marketable limit orders sized from 1-9,999 shares in the S&P 500 Index. The lengthy duration of qualified auctions could result in worse executions for retail investors because the longer a customer's order remains unexecuted, the greater the likelihood that prices will change (for the worse) while a customer's order remains unexecuted. This means that retail orders will be filled at worse prices as the markets move against them. This is a concern for both liquid and illiquid securities. This harm that the Proposal will inflict on retail investors is a fact that has been acknowledged by the very exchanges that would run the auctions the SEC seeks to create.[12]

---

[12] *See* the Jarkowski Letter (noting that retail orders could be disadvantaged and that the auction length could present arbitrage opportunities that causes the NBBO to move while the auction is in progress).

In addition to depriving retail investors of fast and efficient executions, the proposed qualified auction mandate will harm retail investors by taking away the certainty of receiving an execution at or better than the NBBO at the time they place their orders, a benefit that wholesalers currently provide. Indeed, and as noted above, the SEC acknowledges that wholesalers provide consistent, quality, and cost-effective executions that are not available from exchanges and appear to have higher fill rates, lower effective spreads, and lower E/Q ratios.[13]

The SEC also acknowledges that if its Proposal is adopted, the certain executions at superior prices that wholesalers provide to retail investors today would *no longer be provided in qualified auctions*: "Given the absence of a 'reserve price' or 'backstop' requirement, a [retail] order would not have certainty of an execution in a qualified auction at a price equal to the NBBO or better."[14]

While it acknowledges significant flaws with the proposed qualified auctions, the Proposing Release downplays the significance of the risk of price disimprovement, asserting that there is a "low probability that the NBBO will move away from individual investor orders in the very short time period of a qualified auction."[15] We disagree. The SEC seeks to draw support for its assertion by reference to low slippage rates incurred by orders handled by wholesalers, which as noted above internalize a significant portion of the flow and have average execution speeds much faster than 100 milliseconds, even for orders of significant size (5,000 to 9,999 shares). The SEC's comparison is inapposite; in reality, retail investors would face a significantly increased risk of slippage as compared to executions obtained from the current market structure.

In sum, the Proposal would deprive retail investors of speedy and certain executions at or better than the NBBO when they place their orders, which is a service that wholesalers provide today.

B. The Proposal will send retail investors' orders to market participants that do not owe them a duty of best execution and may take advantage of them.

Under the Proposal, sophisticated trading firms will receive important information about unexecuted retail orders, including information about the security, size of the order, side (buy, sell, or sell short), price, and originating broker via auction announcements. The SEC states that "the full range of market participants with the technological capability of responding to a fast (sub-second) auction, such as exchange market makers . . . would have an opportunity to compete to provide the best price for the segmented order by submitting auction responses."[16]

At the same time, these market participants will have no obligation to the originating broker and no obligation to interact with their segmented orders or provide any execution at all, as the SEC expressly acknowledges.[17] Nothing prevents these sophisticated trading firms from using information about retail investor orders to the detriment of those investors. For example, these firms may use retail order information as a data point to guide their trading activity and take

[13] Proposing Release at 186.
[14] *Id*. at 147.
[15] *Id*.
[16] Proposing Release at 72.
[17] Proposing Release at 147.

advantage of potential latency advantages they possess over other market participants or the qualified auctions themselves. In the time set aside for the auction process (100 to 300 milliseconds), such firms could easily alter their market activity in ways designed to benefit themselves at the expense of the retail investors the Proposal is intended to benefit. As a result, the Proposal will create a trading landscape in which retail orders effectively operate as unprotected "flash orders" and sophisticated market participants will swiftly take advantage of that information to the detriment of retail investors.

When the SEC proposed a ban on flash orders in 2009, then-SEC Chair Mary L. Schapiro said, "[f]lash orders may create a two-tiered market by allowing only selected participants to access information about the best available prices for listed securities . . .. These flash orders provide a momentary head-start in the trading arena that can produce inequities in the markets and create disincentives to display quotes."[18] The SEC elaborated on its concerns by stating:

> Finally, the flashing of orders to many market participants creates a risk that recipients of the information could act in ways that disadvantage the flashed order. With today's sophisticated order handling and execution systems, those market participants with the fastest systems are able to react to information in a shorter time frame than the length of the flash order exposures.
>
> As a result, such a participant would be capable of receiving a flashed order and reacting to it before the flashed order, if it did not receive a fill in the flash process, could be executed elsewhere. For example, a recipient of a flash order that was quoting on another exchange would be capable of adjusting its quotes to avoid being hit by the flash order if it subsequently were routed to that exchange. Alternatively, a recipient would be capable of rapidly transmitting orders that would take out trading interest at other exchanges before an unfilled flash order could be routed to those exchanges. In both cases, a flashed order that did not receive an execution in the flash process would also be less likely to receive a quality execution elsewhere.[19]

These concerns, expressed by the SEC in 2009, apply equally if not more so to this Proposal. Here, a retail investors' order is the equivalent of a flash order. The proposed auctions would allow sophisticated investors to observe retail order flow with no obligation to interact with that flow and to use the retail investor's order information—which could include for the first time the identity of the retail broker—to their advantage, much like they might have with flash orders. This could result in wider spreads both during and outside the auction process, which would negatively impact the execution quality obtained by the retail order and the market at-large.

In sum, it is baffling why the SEC would want to upend an equity market structure that has produced very real and meaningful benefits for retail investors. In its place, the Commission would create a framework that will produce worse executions for retail investors' orders and require retail orders to be presented to the market in a way it proposed to ban in 2009. Indeed, the Commission

---

[18] SEC, Press Release, *SEC Proposes Flash Order Ban* (Sept. 17, 2009), https://www.sec.gov/news/press/2009/2009-201.htm.

[19] Elimination of Flash Order Exception from Rule 602 of Regulation NMS, 74 Fed. Reg. 48631 (July 9, 2010).

acknowledges that the proposed auction-based system may not deliver on its promised improvements, admitting: "there is substantial uncertainty in the eventual outcome" of these proposed changes.[20] This uncertainty of outcome is heightened by the Commission's use of data collected under our existing market structure where retail orders are not flashed to the entire market in its attempts to justify the Proposal. The Commission attempts to draw comparisons between the current state of market structure and its proposed end state by relying on assumptions that would no longer be true and broadly speculating about the Proposal's potential effects.

C. The Proposal fails to address the operational issues that will likely be faced in the implementation of qualified auctions.

One of the Proposal's most glaring flaws is that it fails to account for many of the practical realities that impact the functioning of today's markets. These unaddressed realities are likely to present significant if not insurmountable operational issues that will frustrate the SEC's stated objectives in issuing the Proposal. Market structure is extremely complex, consisting of many interconnected and rapidly moving parts. As such, it is surprising that the SEC would propose such a significant shift in market structure without considering some of the more glaring hurdles. Notable in its absence from the Proposal is any mention of the relatively lengthy duration of the proposed qualified auctions relative to speed of execution offered by wholesalers today and the rates at which quotes change for some of the most actively traded securities, and the impact of these factors on the quality of the execution likely to be received by retail investors whose orders are exposed to qualified auctions. For example, Tesla, one of the top 10 most actively traded stocks among retail investors in 2022, had on March 8, 2023, during regular trading hours, a mean of 13.48 price changes during any given 300 millisecond window with a maximum number of 462 price changes during that same window.[21] The Proposal, which would subject orders to a 100-300 millisecond auction, includes no explanation as to how exchanges and ATSs are expected to overcome the practical difficulties of conducting qualified auctions for liquid securities with quotes changing on average over sixty times during the auction window.

A window of 100 to 300 milliseconds is a lifetime given the rate at which trades are executed in today's marketplace and the complexity of implementing these auctions should not be downplayed. The market data associated with operating numerous, simultaneous qualified auctions, particularly when paired with narrowing pricing increments, the redefinition of "round lot," and the dissemination of odd-lot information,[22] will substantially increase the amount of data required to be collected and disseminated by the exchanges and the securities information processors. The Commission ignores the potential for these auctions along with the other significant changes to market structure to cause market disruptions. The Commission's plan is not supported by sufficient analysis regarding the burdens it places on market participants and underweights those burdens, including the complexity and the costs of implementation, which ultimately will have to be borne by retail investors. This point is underscored by the fact that exchanges, like the NYSE, have indicated that the Commission's estimated implementation period for other significant market structures changes, such as new round lots and odd-lot information,

---

[20] Proposing Release at 178.

[21] The figures noted reflect NBBO price changes in the named security on the date in question.

[22] *See* Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders, 87 Fed. Reg. 80256 (Dec. 12, 2022).

was woefully insufficient and that implementation of those changes may take up to four times longer than the Commission's estimates.[23]

D. The Proposal ignores other harmful effects of concentrating retail order execution on larger exchanges, such as the greater potential for systems failures.

The dramatic increase in the number of retail orders being routed directly to exchanges and qualified ATSs that is likely to result from the Proposal could have a number of deleterious knock-on effects not addressed by the Proposal. There are only a handful of venues that would qualify as "open competition trading centers" that could run "qualified auctions" under the Proposal, so the strict criteria to meet that definition will act as a significant barrier to entry. The Commission estimates that only six exchanges and only three NMS stock ATSs would likely meet the definition of "open competition trading center," let alone decide to operate a qualified auction.[24] The few larger exchanges and ATSs that do meet the Proposal's requirements to host qualified auctions would need to invest heavily in upgrading their technological infrastructure in order to run numerous, concurrent auctions. Conversely, small exchanges and ATSs, many of which would likely not meet the volume and transparency requirements to host qualified auctions under the Proposal, would be unfairly disadvantaged as they would be unable to meaningfully compete with larger exchanges. In other words, despite the SEC having expressed concerns about the lack of competition amongst wholesalers, which it offers as justification for the Proposal, it would use the Proposal to create a marketplace in which a handful of established exchanges and ATSs could dominate the retail order execution landscape. The SEC would have effectively replaced what it views as a small group of insufficiently competitive wholesalers with a small group of insufficiently competitive exchanges and ATSs, and it would do so at great cost to retail investors. In the absence of any demonstrable net benefit to retail investors, the SEC should not be using its authority to essentially advantage one set of for-profit market participants over another. Notably, in voicing its opposition to the Proposal, the largest exchange, NYSE, in addition to citing the numerous challenges implementing the proposed auctions would present, states that "the [] Proposal includes overly prescriptive elements that could potentially undermine the national market system, *stifle competition*, and potentially harm investors."[25]

Indeed, the increased demand on the technological infrastructure of large exchanges resulting from hosting auctions and dealing with increased retail order flow may create additional problems. For example, the increased volume of orders sent to exchanges could lead to outages or other technological issues from conducting these qualified auctions resulting in potential losses for retail investors when technology outages occur. This concern is not theoretical; outages have occurred in the past, as demonstrated by Nasdaq's technology issues during the Facebook initial public offering in May 2012, and more recently, with the NYSE exchange system failure in January 2023. Furthermore, as investor recovery is restricted by exchange rules, it is the retail investors, whose orders are being forced into this new auction process, who stand to suffer the fallout from these inevitable outages, not the exchanges, whose liability to investors is limited by

---

[23] *See* the Jarkowski Letter at 7.
[24] *See* Proposing Release at 220, nn.616-617.
[25] *See* the Jarkowski Letter at 9 (emphasis added).

their own rules.[26] Wholesalers, which stand ready in today's market structure to assist when technology issues arise at exchanges, would effectively be removed from the equation by the Proposal and would no longer play an elevated service role for retail investors. Given this limitation on exchange liability, if retail investors forced into qualified auctions were to suffer losses because of an exchange outage, will they be permitted to seek redress from the SEC?

In sum, it is inevitable that there will be more exchange system failures in the future and, if the Proposal is adopted, retail investors will suffer when these failures do occur.

E. The Proposal will minimize the role of wholesalers, which would reduce retail investors' order execution quality and introduce new transaction costs.

A required auction process limits the role of wholesalers, which in turn limits retail investors' ability to receive certain, efficient, and superior-priced executions. It also significantly reduces any incentive for wholesalers to accept retail orders for handling upstream of a qualified auction despite the Commission's apparent view that wholesalers will choose to act as uncompensated order routers in this new market structure. Unlike price improvement auctions commonly held on options exchanges, the qualified auctions will not provide wholesalers with a guaranteed execution against the orders they route to these auctions. Instead, wholesalers will be "last in line" and allowed to internalize a routed order only after it is broadcast to other market participants and those participants decline to execute it. Unexecuted orders are generally considered to be undesirable orders. Though the wholesaler would be permitted to internalize any unexecuted order post auction, it would not be economically advantageous to do so in most instances given that the order has already been widely broadcast to other market participants. This risk is even greater for orders in illiquid securities, which are even less likely to receive full executions in auctions and will not have the certainty of execution that wholesalers provide for these orders today. As a result, retail investors will experience sufficiently degraded execution quality for these orders.

It is worth noting that a further effect of decreased wholesaler activity would be a reduction in or elimination of PFOF. As things stand currently, wholesalers pay certain retail broker-dealers for retail order flow so that they can have the ability to internalize that order flow; in turn, retail broker-dealers can offer their customers low or zero commission trading, lower margin rates, and other services at a reduced cost to the customer. Notably, much of the order flow wholesalers pay for would fall into the category now deemed "segmented orders" by the SEC, i.e., the exact orders the SEC seeks to force into its new auction process on exchanges. As PFOF is reduced and/or goes away, retail broker-dealers that rely on PFOF may need to introduce new or additional commissions or fees and may reduce or eliminate certain services that they provide to investors today. As a result, retail investors may have to pay more to receive less.

[26] *See. e.g.*, Nathaniel Popper, *Nasdaq Is Fined $10 Million Over Mishandled Facebook Public Offering*, N.Y. TIMES (May 29, 2013), https://archive.nytimes.com/dealbook.nytimes.com/2013/05/29/nasdaq-to-pay-10-million-fine-over-facebook-i-p-o/; John Mccrank et al., *NYSE Glitch Leads to Busted Trades, Prompts Investigation*, REUTERS (Jan. 24, 2023), https://www.reuters.com/markets/us/some-nyse-listed-stocks-briefly-halted-trading-after-market-open-2023-01-24/.

F. The SEC bases its Proposal on an unrealistic and purely speculative expectation that institutional investors will participate in auctions.

The Commission's assertion that institutional investors are likely to become a significant source of liquidity in the proposed qualified auctions *and* be willing to trade at prices better than wholesalers lacks any reasonable basis. As a preliminary matter, many institutional investors likely trade different securities than retail investors, particularly when retail order flow has become active in a specific security (e.g., low/sub-dollar securities, active ETFs).[27] When institutional investors trade, they typically seek to do so in a way that minimizes information leakage, thus often seeking to trade at a time and in a manner that does not align them with retail traders. For the subset of institutional investors interested in participating in a qualified auction, the technological capabilities needed to participate in the auctions are significant and could serve as a barrier to entry. The Commission seems to believe that the prevalence of smart order routers will enable wide participation, but this assertion lacks evidentiary support. Indeed, the Commission expressly acknowledges that institutional investors may not participate in these auctions.[28]

Additionally, the Commission's proposal "Further Definition of 'As a Part of a Regular Business' in the Definition of Dealer and Government Securities Dealer," File No. S7-12-22, under the Exchange Act would require institutional investors to register as dealers if they use execution techniques captured by the qualitative criteria of that proposal in their engagement with these auctions.[29] The sorts of techniques that would likely be most utilized to engage in these auctions are precisely of the sort that would require dealer registration, specifically "routinely expressing trading interests that are at or near the best available prices on both sides of the market and that are communicated and represented in a way that makes them accessible to other market participants."[30] This limitation would likely result in an even smaller than expected pool of firms participating in the auctions, specifically just sophisticated trading firms that are already registered as broker-dealers today or are amenable to registration as a broker-dealer if the Commission's "dealer" proposal were to be implemented as proposed. This exact point has been made by our affiliate Two Sigma Investments, LP—precisely the type of firm the Commission believes will engage with these auctions—in its comment letter on this Proposal.[31]

III. <u>The SEC's Cost-Benefit Analysis is Insufficient to Support a Complete Overhaul of U.S. Equity Market Structure.</u>

The SEC has a regulatory obligation to conduct a reasonable economic or cost-benefit analysis for any rulemaking. The cost-benefit analysis of the Proposal fails to satisfy this fundamental obligation and is insufficient to support the proposed significant changes to the market. The heart of the Commission's cost-benefit analysis is the claim that the current market structure results in a "competitive shortfall" of $1.5 billion as a result of suboptimal price

---

[27] For example, the top 10 securities by volume for 2022 were TQQQ, SQQQ, SPY, AMD, AAPL, TSLA, AMZN, SOXL, F, and QQQ, five of which are ETFs.
[28] Proposing Release at 214.
[29] Further Definition of "As a Part of a Regular Business" in the Definition of Dealer and Government Securities Dealer, 87 Fed. Reg. 23054 (Apr. 18, 2022).
[30] *Id*. at 23065.
[31] *See* Two Sigma Investments, LP, Comment Letter re: Order Competition Rule Proposal – Release No. 34-96495; File No. S7-31-22 (March 31, 2023).

improvement for orders sent to wholesalers. However, the approach used to reach this conclusion is deeply flawed.

First, throughout the Proposing Release, the Commission acknowledges the considerable uncertainty that accompanies the cost-benefit analysis of the Proposal. Indeed, the Commission has acknowledged that the Proposal could cause significant harm to retail investors, though it fails to give this concern sufficient consideration:

> First, the *Proposal would likely cause wholesalers and some retail brokers to incur significant adjustment costs to their operations*, as well as a possible decline in profitability. The *Proposal could also result in costs to individual investors, such as some retail brokers potentially resuming charging commissions for NMS stock trades . . . There may also be an increase in trading costs for retail broker customers* that carry greater adverse selection risks . . .. Retail brokers could also experience costs . . ., *which could ultimately be passed on to individual investors* (emphasis added).[32]

Additionally, the Commission's claim of a "competitive shortfall" relies on unfounded assumptions to justify the Proposal's significant changes. The Commission does not fully account for the many benefits that wholesalers provide that we have described in this letter, including the full amount of price improvement, size improvement, speed, certainty, and other customer service functions that wholesalers provide. It also omits or undercounts significant costs that would be borne by retail investors from changes to the current market structure, including the potential return of commissions, higher margin rates, lower rates on cash balances, other increased costs and wider spreads. The Commission also omits the potential effects of the Commission's other market structure proposals from its analysis. Furthermore, the Commission relies on information sources to evaluate execution quality that are inaccessible to market participants for further analysis – i.e., data from the Consolidated Audit Trail ("CAT")—or are by the Commission's own admission outdated in their application to today's equity markets—i.e., data available as a result of current Rule 605, which the SEC has proposed to overhaul.[33]

The very basis of the $1.5 billion annual amount that the SEC asserts its Proposal will save retail investors is highly questionable. A significant variable in the SEC's formula for estimating the $1.5 billion annual "competitive shortfall" is realized spread.[34] The SEC calculates "the potential additional price improvement (and reduction in transaction costs) that the marketable orders of individual investors would receive from having their order being exposed to greater competition among liquidity suppliers in qualified auctions, as the difference in the *realized spreads* between marketable orders executed on exchanges and individual investor marketable orders that were executed after being routed to wholesalers."[35] The Proposal, therefore, relies on

---

[32] *Id*. at 179.
[33] Disclosure of Order Execution Information, 88 Fed. Reg. 3786 (Jan. 20, 2023) ("Rule 605 Proposal").
[34] Proposing Release at 206.
[35] *Id*. (emphasis added).

realized spread as a proxy to determine wholesalers profits on trades, which, as the SEC itself acknowledges, is a wholly theoretical exercise.[36]

Furthermore, in tacit acknowledgement of the flaws inherent in the use of this metric, the SEC, while using realized spread as a metric to justify the Proposal, is simultaneously proposing revisions to Rule 605, which include changing the way realized spreads are calculated.[37] Specifically the SEC has proposed measuring average realized spread at intervals of 15 seconds and one minute after the time of execution as opposed to the current five-minute interval.[38] By proposing these changes to realized spreads under Rule 605, the SEC is clearly indicating that the current realized spread metrics are unreliable. However, the Commission does not address these considerations in its use of realized spreads for purposes of the Proposal.

The Commission acknowledges the very real costs to retail investors at other points in the Proposal, admitting that "there could be a general lack of interest from liquidity suppliers to participate in a qualified auction," "the possibility of slippage costs" could lead to worse prices than the existing model, "that lower execution quality for some orders currently subsidizes better execution quality for others," and that "the Proposal would undermine the wholesaler business model, which in turn could hinder the ability of wholesalers to continue to provide consistency in their execution services."[39] Beyond simply listing these real costs that could be borne by investors, they are not addressed in any detailed way, and instead the Commission simply repeats that "execution quality . . . would likely improve under the Proposal."[40]

In comparison to the Commission's $1.5 billion shortfall figure, wholesalers industry-wide provided twice that amount, over $3 billion in net price improvement savings for customers in 2022 alone.[41] What's more, that $3 billion in price improvement is separate from the substantial size improvement that wholesalers also provide when executing retail investor orders. These are benefits that investors receive today with certainty that will likely be negatively impacted if the Proposal is adopted. There are significant costs that the Proposal will inflict on both retail investors and other market participants and which the SEC has explicitly acknowledged. The Proposal fails to provide any reasonable justification or benefit in return for these costs. Aside from the Commission's analysis of the "competitive shortfall," the Proposal repeatedly claims that the potential for more order-by-order competition will outweigh the detrimental impacts of the Proposal. But there is no empirical justification or any evidentiary basis for such unsupported, speculative statements.

What is clear from the Proposal is that the SEC is engaging in a massive overhaul of the existing market structure that will have wide-ranging and likely irreversible outcomes, outcomes that the SEC has largely failed to consider. The SEC seeks to justify these sweeping and significant

---

[36] *See e.g.*, Proposing Release at 206, n.515 ("There is also uncertainty in these estimates because of limitations in using the realized spreads to measure the trading profits earned by liquidity suppliers.").
[37] Rule 605 Proposal at 3814.
[38] *Id*. at 3815.
[39] Proposing Release at 214-16.
[40] *Id*. at 215.
[41] Per Bloomberg Intelligence Research, wholesalers – including TSS, Citadel Securities, Virtu Securities, G1 Execution Services, UBS Securities, and Jane Street Capital among others – provided net price improvement of $3,084,204,217 to customers in 2022.

changes with highly speculative unsupported benefits, while giving short shrift to the costs of the Proposal, both in terms of implementation in the short term, and negative effects on retail investors in the long term. What's more, given the scope and significance of these changes, there does not appear to be a way for the SEC to course correct if any of the potential harms to retail investors, as described herein, are realized. Instead, the SEC in extraordinarily cavalier fashion, will have permanently upended the highly efficient, productive, and investor-focused marketplace that exists today.

In sum, as the Proposal stands, the Commission has not fulfilled its obligations under the Administrative Procedure Act and the federal securities laws to conduct a reasonable cost-benefit analysis of the Proposal. Without further support for these substantial changes, the Commission cannot reasonably proceed with the Proposal.

V. Conclusion

TSS recognizes the need to safeguard the interests of retail investors. Existing market structure and regulations achieve that aim and provide retail investors with the best execution quality for the lowest cost that they have ever experienced. The benefits received by today's retail investors are the product of market-driven competition and the innovation that naturally results from that competition. Contrary to its stated purpose, the Proposal would irreparably harm retail investors as well as the market more generally by worsening execution quality, stifling competition, and injecting significant uncertainty into the stock market. As such, TSS strongly opposes the Proposal and urges the Commission not to adopt it.

*   *   *

We would welcome the opportunity to discuss this letter and engage in further dialogue with the Commission on these topics.

Respectfully submitted,

Sandip Khosla

____

Sandip Khosla, Esq.
General Counsel