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March 13, 2023

**Via Email**

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

Re: File No. S7-30-22; Release No. 34-96494; Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders ("Reg NMS Proposal")

File No. S7-29-22; Release No. 34-96493; Disclosure of Order Execution Information ("Rule 605 Proposal")

File No. S7-31-22; Release No. 34-96495; Order Competition Rule ("Auctions Proposal")

File No. S7-32-22; Release No. 34-96496; Regulation Best Execution ("Best Ex Proposal")

Dear Ms. Countryman:

NYSE Group, Inc. ("NYSE"), on behalf of the New York Stock Exchange LLC, NYSE Arca, Inc., NYSE American LLC, NYSE National, Inc., and NYSE Chicago, Inc. (together, the "NYSE Exchanges"), appreciates the opportunity to comment on the U.S. Securities and Exchange Commission's ("Commission") December 14, 2022 proposals relating to equity market structure.

NYSE commends the Commission for its intense focus on issues affecting the structure of equity markets, which are fundamental to our capital market systems. We share the Commission's goals of modernizing the rules that govern our markets. In particular, we welcome opportunities to "level the playing field," providing all market centers the opportunity to compete for order flow without structural impediments. Public investors benefit from competition.

We believe that our U.S. capital markets are the envy of the world, and we must maintain our status as a shining example for the world financial community. We take seriously our role at the intersection of our issuer community and investors, and as stewards of our capital markets, we must carefully implement any changes to avoid an unintended set of circumstances that may do more harm than good to issuers and investors. To that end, we joined a letter with Charles

Schwab & Co. and Citadel Securities to propose an incremental approach to modernizing equity market structure.[1] The approach we laid out in that letter is intended to address the same goals identified by the Commission but would take a phased approach to equity market structure reform.

For example, we believe that changing the quoting tick size for tick-constrained stocks would result in meaningful change for issuers and investors in an expeditious fashion and provide the opportunity for study as to potential further adjustments to expand the universe of covered stocks. Likewise, establishing a minimum trading increment will enable public investors utilizing exchange retail liquidity programs ("RLPs") to more avidly compete with off-exchange activity. And expanding and modernizing Rule 605 disclosure requirements will allow exchanges and broker-dealers to capture the data points necessary to measure the impact of those changes. NYSE believes that if the Commission focuses on the Reg NMS Proposal and Rule 605 Proposal first, the Commission will be able to advance its policy goals both for issuers and the investing public quickly while reserving the ability to do more in the future, as appropriate.

With this letter, NYSE seeks to provide the Commission and interested parties with additional data analysis to support modernizing and harmonizing the tick-size regime and other proposed modifications to the Reg NMS Proposal. We also fully support Rule 605 reform and have included suggestions intended to clarify and augment the Commission's proposal on that topic. We believe that there are already existing, less disruptive, alternatives that would achieve certain policy objectives in the proposed Open Competition Rule that should be augmented instead of requiring participation in a prescribed auction. Finally, we recommend that the Commission pause moving forward with implementing a new best execution regime until the impacts of the Reg NMS Proposal and Rule 605 Proposal changes are better understood.

## ***Reg NMS Proposal***

NYSE strongly agrees with the Commission that market quality will be improved by adjusting quoting and trading increments and harmonizing these independently across market venues. However, NYSE believes that the Commission can achieve the same goals with a simpler phased approach than what is contemplated in the Reg NMS Proposal.

### *Identifying Tick-Constrained Securities*

NYSE believes that the securities that, at least initially, need to have an adjusted quoting increment are those securities that are tick constrained, i.e., securities that are nearly always quoted in the smallest increment currently permitted and therefore investors are potentially missing execution opportunities at smaller increments and incurring unnecessarily high explicit

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[1] See Letter to Vanessa Countryman, Secretary, Commission, from Michael Blaugrund, Chief Operating Officer, NYSE, Jason Clague, Managing Director, Head of Operations, Charles Schwab & Co., and Joseph Mecane, Head of Execution Services, Citadel Securities, dated March 6, 2023, available at https://www.ice.com/publicdocs/nyse/Joint_Consensus_Position_Letter_to_the_SEC.pdf

transaction costs. NYSE appreciates that there have been multiple proposals regarding how to determine whether a security is tick constrained. NYSE offers a straight-forward approach to identifying which securities are tick constrained that looks first at the time-weighted average spread and, second, at the stability of a quote for a security.

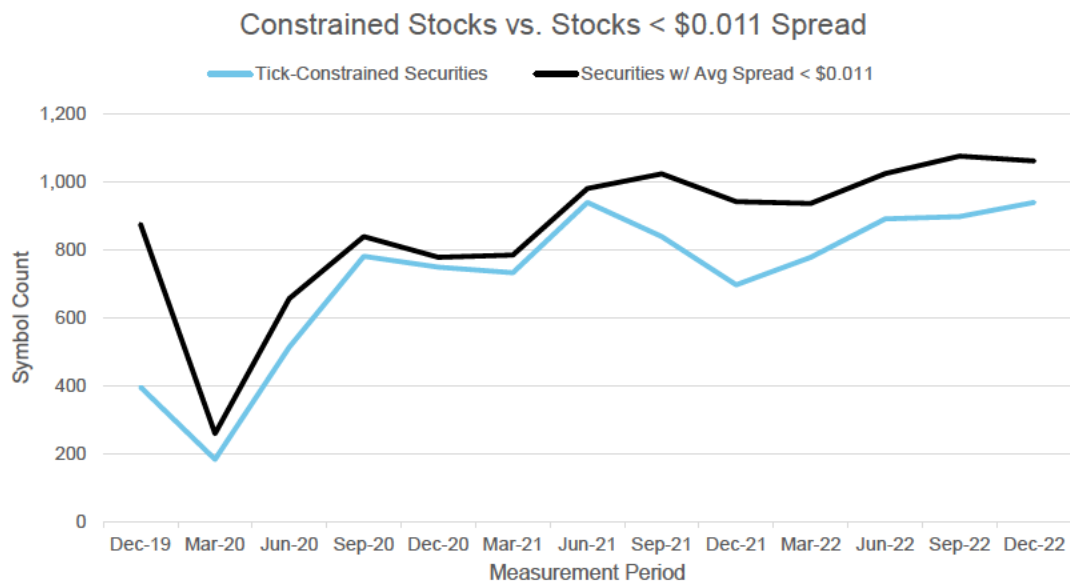
Taking first the time-weighted average spread, NYSE agrees with the Commission that the starting point for determining whether a security is tick-constrained is when a security has a time-weighted average spread of $0.011 or less, as calculated during regular trading hours. We agree that allowing such securities to quote in a smaller sub-penny increment would be economically meaningful.[2] As the Reg NMS Proposal describes, these securities would experience smaller quoted spreads but for the requirement under current Rule 612 to be quoted in penny increments.

To identify securities with a $0.011 time-weighted average spread, a security would need to be quoted at the minimum $0.01 width for over 90% of the trading day. To zero in on the securities that would meet this requirement, NYSE reviewed trading and quoting activity from December 2019 through December 2022, and then calculated the time-weighted average quoted spreads applicable for a security for each quarterly period based on the quoting activity from the last month of the preceding quarter, as described in the Commission's proposal. In the most recent measurement period, December 2022, 1,062 securities had an average spread of less than $0.011.

Once we identified symbols with an average quoted spread of $0.011 or less, we assessed quote stability for these symbols. One indication of quote stability, and therefore liquidity available relative to demand at a given quote, is the change in the quote after an execution. If quotes widen after a trade, the quoted liquidity may not be sufficient for the liquidity demanded, suggesting that the quote increment is not actually constraining quoting activity.

To assess quote stability, NYSE reviewed all intra-day trades in securities with an average quoted spread of $0.011 or less and compared the spread at the time of execution to the spread ten milliseconds after the execution. Under this view, we considered a security not to be tick-constrained where spreads were stable 10 milliseconds after less than 90% of trades in such security. The following chart shows how adding a quote-stability factor results in adjusting the number of securities that would be considered tick constrained over time. In the most recent measurement period, the quote stability criterion eliminated 122 securities from our definition of tick constrained, resulting in 940 securities with a constrained designation.

[2] See Reg NMS Proposal, 87 FR 80266 at 80268 n.17, 80274 n.102, and 80278.




In reviewing the trading data from December 2019 through December 2022, NYSE identified significant quarter-to-quarter variation in the number of symbols that met this definition of tick-constrained, as well as the share of intraday consolidated volume that was executed in tick-constrained securities. The table below shows the historical record of NYSE-determined tick-constrained securities and their share of consolidated intraday volume, both during a given quarter and the one-month "measurement period" at the end of the previous quarter. As the table shows, while the greatest variability in the share of volume to be considered tick-constrained happened during the COVID-19 pandemic, variability existed throughout the entire three-year study period. The variability highlights the importance of quarterly updating of the constrained stocks list as market environment and individual stock behavior changes.

| Constrained Security Estimates: Dec. 2019 through Dec. 2022 | | | | | |
|---|---|---|---|---|---|
| **Measurement Period** | **Forward Period** | **Symbols <= $0.011** | **Constrained Count** | **% of Intraday Volume Constrained** | **Fwd. % Const. Volume** |
| Dec-19 | 2020:Q1 | 876 | 396 | 21.5% | 21.9% |
| Mar-20 | 2020:Q2 | 259 | 183 | 18.3% | 17.1% |
| Jun-20 | 2020:Q3 | 657 | 514 | 38.6% | 35.5% |
| Sep-20 | 2020:Q4 | 839 | 781 | 43.5% | 42.5% |
| Dec-20 | 2021:Q1 | 778 | 749 | 38.7% | 37.1% |
| Mar-21 | 2021:Q2 | 785 | 733 | 40.9% | 39.7% |
| Jun-21 | 2021:Q3 | 981 | 940 | 47.9% | 44.1% |
| Sep-21 | 2021:Q4 | 1,024 | 839 | 43.0% | 41.3% |
| Dec-21 | 2022:Q1 | 942 | 697 | 35.7% | 35.6% |
| Mar-22 | 2022:Q2 | 937 | 778 | 41.9% | 39.6% |
| Jun-22 | 2022:Q3 | 1,025 | 891 | 44.8% | 45.0% |
| Sep-22 | 2022:Q4 | 1,076 | 898 | 45.5% | 44.1% |
| Dec-22 | 2023:Q1* | 1,062 | 940 | 44.3% | 42.8% |

* *Data through March 8, 2023*

Because the number of stocks that meet this definition of tick-constrained varies from quarter to quarter, NYSE recommends that the measurement period for a particular quarter be the last month in the previous quarter. This approach uses the period immediately closest in time to measure securities' behavior to ensure that the next quarter's universe of tick-constrained names is selected using the most recent and relevant basis and allows for monitoring of other securities that are not yet tick constrained but that may be starting to exhibit tick constrained behavior.

*<u>Adjusted Quoting Increment</u>*

Once tick constrained securities are identified, NYSE proposes changing the quoting increment of such securities to $0.005. While these securities meet the criteria for tick constrained with a $0.01 quoting increment, there is no way to forecast quoting behavior at narrower increments. Indeed, there is research from academics and international regulators supporting quoting increments equivalent to 2 ticks per spread, making this proposal a reasonable first step.[3] NYSE believes that initially decreasing the tick size to $0.005 for stocks with an average quoted

[3] French Regulator AMF recommends a spread between 1.5 and 2.0 ticks for liquid securities (https://www.amf-france.org/sites/institutionnel/files/contenu_simple/lettre_ou_cahier/risques_tendances/MiFID%20II%20Impact%20of%20the%20New%20Tick%20Size%20Regime.pdf), while Li and Ye argue that the optima spread for a security is two ticks (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3763516.)

spread of $0.011 or less, with less than 10% of its trades precipitating a spread 10 milliseconds later wider than the spread at the time of execution, represents a measured step that will allow market participants to evaluate the market quality impact of the smaller tick size.

Furthermore, moving the quoting increment to $0.005 from $0.01 (a reduction of 50%) is a substantial change that will affect not just quoted spread, but also displayed liquidity, volatility, message traffic, and potentially other unforeseen market attributes. If some securities remain tick-constrained with a $0.005 quoting increment, the Commission could consider introducing a further reduction in a similar, judicious manner.

*Harmonized Trading Increment*

NYSE recommends establishing a common trading increment of $0.001 for securities priced above $1.00 that would be applicable for both on and off exchange trading.[4]

NYSE believes that a harmonized trading increment of $0.001 would preserve meaningful price improvement opportunities for retail while allowing public investors to compete with bi-lateral trading through the use of exchange RLP programs. Establishing a common minimum trade increment would improve the relative competitiveness of RLP programs; further enhancements to RLP program design, such as displaying the price and size of available RLP liquidity, would promote determinism in execution price and allow public market participants to be on a more level competitive playing field.

But rather than take a prescriptive approach regarding how exchanges could offer trading opportunities at $0.001 increments, NYSE believes that the Commission should focus on creating a framework to allow for innovation and competition by moving to a harmonized trading increment. NYSE welcomes the opportunity to work with the Commission to identify additional opportunities to provide trading opportunities for orders at the $0.001 increment. Enhanced Rule 605 reporting will highlight the increased opportunities to trade on exchanges and receive equivalent price improvement to off-exchange facilities.

The impact on market participants of tightening trading increments from $0.0001 to $0.001 is very small relative to market activity. For example, NYSE has estimated daily price improvement provided at both exchanges and off-exchange venues. In measuring the first two months of 2023, liquidity-seeking market participants received $49.8 million in average daily price improvement.[5] Adjusting the actual execution prices to the next nearest $0.001 increment, always moving further towards the far side of the market (e.g., increasing (decreasing) the

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[4] Current exemptions, such as for midpoint and VWAP, should continue to be provided.

[5] Measured as the difference between the execution price and the estimated opposite side of the market for regular-way trades. For full methodology see https://www.nyse.com/publicdocs/nyse/NYSE_Price_Improvement_202208.pdf.

prices for estimated buy (sell) executions), lowers average daily price improvement by just 0.8%, or about $396,000 for activity in the same two-month time period.

This impact to price improvement can easily be offset by the quoting increment change recommended above: if just 5% of current on-exchange trades at the bid or offer occurring in tick-constrained securities were to benefit from a $0.005 improvement in the quote, the lost price improvement due to trade increment harmonization would be replaced. And the upside is substantial: improving half of today's tick-constrained on-exchange volume trading at the bid or offer by the proposed $0.005 quoting increment would result in an additional $3.8 million in daily price improvement, or nearly $1 billion in annual price improvement. This estimate is likely conservative, as off-exchange trades would also be priced using these new, tighter quoted spreads.

*Updated Access Fees*

NYSE supports making changes to the access fee cap proportionate to any reduction in the minimum quoting increment. NYSE recommends reducing the current $0.0030 per share cap to $0.0015 per share for symbols with the $0.005 quoting increment. For symbols whose quoting increments remain at current levels, NYSE believes that the corresponding access fees should similarly remain unchanged.

*Round Lots and Odd Lots*

NYSE is supportive of advancing the SEC's Market Data Infrastructure Rule ("MDIR")[6] changes to the round lot definition but believes that the Commission's suggested 90-day implementation timeline for doing so is insufficient. While changes to round lot definitions are within the authority of the primary listing exchange to make, such changes will require downstream programming changes both by the securities information processors ("SIPs") and by market participants who receive market data. In addition, broker-dealers monitoring for protected quotes will need to make system changes to account not only for varying round lot sizes, but also the potential of a round lot applicable to a security changing from month to month. Accordingly, NYSE believes that an implementation timeline beyond 90 days is required to provide adequate opportunity for testing of the changes at the primary exchange, SIPs, and customer level.

Regarding the acceleration of MDIR's odd lot changes, NYSE believes that it is difficult at this time to estimate the how long the SIPs would require to make such changes, but in our view, it is likely to take more than a year. Concurrent with these changes by the SIPs, exchanges will need to make changes on their side to produce the odd lot information required in Rule 600(b)(59), including making changes to begin providing new regulatory data elements to the

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[6] Securities Exchange Act Release No. 90610 (December 9, 2020), 86 FR 18596 (April 9, 2021) (File No. S7-03-20) (final rule on Market Data Infrastructure).

SIPs, including an indicator of the applicable round lot size for each symbol[7] and an indicator of the applicable minimum pricing increment for each symbol.[8] NYSE believes that the changes required by all areas of the industry will require over a year to implement.

***Rule 605 Proposal***

NYSE strongly supports enhancing execution quality disclosure and believes the Rule 605 proposal would encourage robust disclosure to the benefit of issuers and investors. NYSE offers the following suggestions for the Rule 605 Proposal where we believe that additional information from the Commission would help clarify respondents' obligations.

The Rule 605 Proposal provides that key implementation details are to be determined by the Participants in the Rule 605 Reg NMS Plan.[9] NYSE believes that deferring such decisions to the NMS Plan Participants may introduce additional complications and further delay implementation of the Rule 605 Proposal since NMS Plan Participants would first need to reach agreement and then file amendments to the Rule 605 NMS Plan with the Commission, which the Commission would need to approve. NYSE believes that the Rule 605 Proposal would be more efficiently implemented with specific instructions from the Commission to market participants in the following areas.[10]

- *View of market data.* NYSE requests that the Commission provide guidance on permissible data sources for determining order marketability. Specifically, are market centers permitted to use their own view of the NBBO for purposes of preparing the required Rule 605 disclosures, or may they use data from the SIPs (or, in the future, competing consolidators pursuant to MDIR)?

- *Orders considered "special handling."* NYSE suggests that the Commission provide more detailed instructions relating to any order types that would be excluded from the definition of "covered order" (e.g., order types that are considered "special handling") to ensure that such orders are treated uniformly by respondents in their data disclosures.

- *Non-Marketable Limit Orders.* The Rule 605 Proposal defines "executable" to mean, for a non-marketable buy order, that its "limit price is equal to or greater than the national best bid during regular trading hours," and, for a non-marketable sell order, that its "limit

[7] See Rule 600(b)(78)(i)(E).

[8] See Proposed Rule 600(b)((78)(i)(F).

[9] See Securities Exchange Act Release No. 44177 (April 12, 2001), 66 FR 19814 (April 17, 2001).

[10] With respect to data formatting, NYSE notes, for example, that the Rule 605 Proposal does not currently explain how many decimal places should be reported for new data fields such as percent effective spread.

> price is equal to or less than the national best offer during regular trading hours."[11] NYSE notes that under the Limit-Up Limit-Down ("LULD") Plan, these orders would not necessarily be "executable."[12] NYSE believes the Commission should clarify the definition of "executable" to conform to the provisions of the LULD Plan.

## ***Auctions Proposal***

NYSE is supportive of the goal of the Auctions Proposal, which is to provide greater opportunity for retail and institutional orders to interact in the public market. As noted above, NYSE believes that if the Commission implements changes to quoting and trading increments, it would not be necessary at this time to implement a prescriptive retail auction model.

Instead, NYSE believes that potential innovations in RLP programs or other market-driven product enhancements could meet the Commission's goals. As described above, NYSE believes that the Commission should work with exchanges in allowing for greater innovation in RLP programs, including potentially allowing for greater display of interest eligible to trade in such programs and harmonized trading increments.

NYSE notes that NYSE Arca has a proposal pending with the Commission to modify its existing RLP program to convert it to a midpoint program.[13] As proposed, retail orders submitted to the NYSE Arca RLP program would receive a midpoint or better execution. This design is intended to provide for greater determinism in the price improvement a retail order routing broker can expect to receive when interacting with the program and is an example of exchange innovation for improving access to exchange liquidity for retail participants. Accordingly, instead of proceeding with a prescriptive auction proposal, NYSE believes that the Commission should work to expedite and approve innovations in the RLP space, including the NYSE Arca proposal.

In addition, NYSE is concerned that the proposed Auctions Proposal includes overly prescriptive elements that could potentially undermine the national market system, stifle competition, and potentially harm investors:

- The Commission's proposed 100 millisecond minimum auction length is too long by today's market standards and would present opportunities for arbitrage that could lead to

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[11] 88 FR at 3810.

[12] Under LULD, a security is in a "Straddle State" when the national best bid is below the LULD lower price band or the national best offer is above the LULD upper price band, and an order is not "executable" when the underlying security is in a Straddle State. See Securities Exchange Act Release No. 85623 (April 11, 2019), 84 FR 16086 (April 17, 2019; see also https://www.luldplan.com/plans.

[13] See Securities Exchange Act Release No. 96741 (January 24, 2023), 88 FR 5948 (January 30, 2023) (SR-NYSEArca-2023-06) (Notice of Filing of Proposed Rule Change to Amend Rule 7.44-E Relating to the Retail Liquidity Program).

the NBBO moving while the auction is in progress, to the disadvantage of the retail orders that the proposal is meant to benefit.

- Additionally, because the proposal suggests that auctions conducted during regular trading hours are not exempt from Rule 611's prohibition against trading through the protected quote, there will likely be a need for auctions to terminate early to prevent such trade-throughs -- but it is not clear how such early termination would be possible in light of the mandated 100 millisecond minimum auction length.

- The priority rules in the proposal may have unintended consequences on market makers and on overall exchange liquidity. The proposal would prohibit broker-dealers with knowledge of where a segmented order is to be routed from submitting an order to the continuous book of an open competition center that could have priority to trade with the segmented orders.[14] But the proposal does not account for the impact that this restriction could have on wholesalers that also function as market markers on exchanges, who may decide to withdraw displayed liquidity from an exchange continuous order book for fear of that liquidity interacting with a retail auction. Market makers opting not to post displayed liquidity to the continuous order book could have negative impacts on market quality overall.

***Best Ex Proposal***

There is no question that robust best execution standards serve as a meaningful protection for investors and issuers. NYSE strongly supports rigorous, principle-based best execution standards and welcomes continued refinement of existing best execution obligations via a single, consistent regime. As noted above, the proposed revisions to quoting and trading increments will result in meaningful changes to how orders are routed and executed. And the proposed changes to Rule 605 will provide enhanced execution quality disclosure that will benefit issuers and investors. NYSE believes that outcomes from those changes should be assessed before any additional changes are made that would impact routing decisions.

***Conclusion***

NYSE supports the Commission's efforts to modernize and harmonize the tick-size regime and believes that, with the modifications described above, the Reg NMS Proposal would lower investor trading costs, improve market transparency, and provide an increased opportunity for investors trading on exchanges to interact with retail orders. We also fully support the Commission's Rule 605 Proposal changes to improve investor disclosure and allow exchanges and broker-dealers to better understand the impact of changes to the tick-size regime. We encourage the Commission to take a phased approach with respect to the Auctions Proposal

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[14] See Proposed Rule 615(f)(2).

and Best Ex Proposal and pause moving forward with implementing these changes until the impacts of the Reg NMS Proposal and Rule 605 Proposal are studied and understood.

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Respectfully submitted,

Hope M. Jarkowski
General Counsel
NYSE Group, Inc.

cc: Honorable Gary Gensler, Chair
Honorable Hester M. Peirce, Commissioner
Honorable Caroline A. Crenshaw, Commissioner
Honorable Mark T. Uyeda, Commissioner
Honorable Jaime Lizárraga, Commissioner
Haoxiang Zhu, Director of the Division of Trading and Markets