FINANCIAL INFORMATION FORUM

March 31, 2023

By electronic mail to rule-comments@sec.gov

Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090
Attn: Vanessa A. Countryman, Secretary

Re: File Number S7-30-22: Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders

Dear Ms. Countryman,

The Financial Information Forum ("FIF")[1] appreciates the opportunity to comment on the recent rule proposal by the Securities and Exchange Commission (the "Commission") titled "Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders."[2] This comment letter is focused on implementation issues related to the Commission's Regulation NMS rule proposal (the "proposed rule"). This comment letter is being submitted on behalf of FIF members that are broker-dealers and technology vendors.

FIF members expect that reducing the minimum pricing increments ("MPIs") will result in a significant increase in message traffic. Firms will need to upgrade their hardware and software for processing an increased volume of market data and for increased routing and quoting activity. The level of increase in message traffic cannot be predicted at this time. Given this uncertainty and the potential risks to market resiliency, FIF members recommend that the Commission implement any reduction in MPIs through a phased approach where the impact of MPI reductions on market resiliency at each phase is evaluated before proceeding to the next phase. This would be consistent with the phased approach that the Commission mandated for decimalization.[3] Given the risks to market resiliency, it is also important that firms have sufficient time to upgrade their hardware (including bandwidth) to process the increased

[1] FIF (www.fif.com) was formed in 1996 to provide a centralized source of information on the implementation issues that impact the securities industry across the order lifecycle. Our participants include broker-dealers, exchanges, back office service bureaus, and market data, regulatory reporting and other technology vendors in the securities industry. Through topic-oriented working groups, FIF participants focus on critical issues and productive solutions to technology developments, regulatory initiatives, and other industry changes.
[2] Securities Exchange Act Release No. 34-96494 (Dec. 14, 2022), 87 FR 80266 (Dec. 29, 2022) ("Proposing Release").
[3] Exchange Act Release No. 42360 (Jan. 28, 2000), 65 FR 5004 ("Decimalization Order"). Exchange Committee on Decimals, "Decimals Implementation Plan for the Equities and Options Markets" (submitted July 24, 2000; posted July 26, 2000), available at https://www.sec.gov/rules/other/decimalp.htm ("Decimalization Plan").

volume of market data and to upgrade their routing and other firm systems in light of the anticipated changes in quoting and trading volume and behavior. These points are discussed in further detail below.

FIF also discusses the following points in this comment letter:

- If a stock crosses the $1 price threshold during a calendar quarter or undergoes a corporate event during a calendar quarter, the MPI for the stock should not change until the following quarter.
- MPIs should be communicated through a data file that is available to the public.
- The Commission should provide further guidance to firms for GTC orders where the MPI changes while the GTC order is in effect.
- Consistent with the prior implementation of decimalization, the Commission should direct the exchanges and the SIPs to develop an implementation plan for reduced MPIs that provides for a phased implementation with checkpoints.
- The initial implementation phase should include a limited number of stocks.
- Given the potential impact on market resiliency, it is important for the Commission to provide a sufficient implementation period for the proposed MPI changes, including sufficient time for testing.
- For many firms, the implementation costs to ingest and process the increased volume of market data that will result from the Commission's proposed MPI changes will be many multiples of the costs that the Commission has estimated.
- The Commission should consider whether the options exchanges will seek to reduce MPIs for options if MPIs for equities are reduced, and the potential associated costs and implementation challenges.
- The proposed MPI changes could result in a significant increase in operating costs for the Consolidated Audit Trail ("CAT") system; prior to adopting MPI reductions, the Commission should engage Consolidated Audit Trail, LLC ("CAT LLC") to provide an estimate of these potential increased costs.
- The Commission should reconsider the current CAT processing deadlines in light of the potential increased CAT costs.
- The Commission should implement updates to Rule 605 prior to implementing the proposed MPI changes. This would provide a baseline for measuring market quality prior to the introduction of MPI changes and allow for a more accurate comparison of market quality by market participants and the public prior to and after the MPI changes.
- The SIPs should communicate when an odd lot quote duplicates quantity that is included in the NBBO or an exchange's BBO.
- Round lot sizes should be adjusted on a quarterly (instead of a monthly) basis, consistent with the timing for MPI adjustments.
- The Commission should not amend the vendor display rule to require that a broker-dealer disseminate odd-lot quotes with other market data.
- It is important that the Commission provide a sufficient time period for the implementation of the proposed round lot and odd-lot changes, including sufficient time for testing.

While this comment letter is focused on implementation issues, FIF members also have views on the policy impacts of the proposed rule. FIF members are addressing these views through comment letters submitted by other industry associations or through individual firm comment letters. The comments below are generally ordered based on the order in which the associated topic is presented in the Commission's proposing release for the proposed rule (the "proposing release").

A. Minimum Pricing Increments

Stocks that cross the $1 price threshold during a calendar quarter

The proposed rule provides that "… the minimum increment for any bid or offer, order, or indication of interest or trade in any NMS stock priced equal to or greater than $1.00 shall be …" based on "… the time weighted average quoted spread for the NMS stock during the Evaluation Period."[4] The proposed rule defines "evaluation period" as:

> … the last month of a calendar quarter (March in the first quarter, June in the second quarter, September in the third quarter and December in the fourth quarter) of a calendar year during which the primary listing exchange shall measure the Time Weighted Average Quoted Spread of an NMS stock that is priced equal to or greater than $1.00 per share to determine the minimum pricing increment to be in effect for an NMS stock for the next calendar quarter, as set forth by paragraph (c) of this section.[5]

The proposed rule provides that "… the minimum increment for any bid or offer, order, or indication of interest for an NMS stock that is priced less than $1.00 per share shall be no smaller than $0.0001."[6]

It is unclear how the proposed rule would apply to a stock that was below $1 throughout the prior calendar quarter and crosses above the $1 threshold during the current calendar quarter as neither of the above provisions addresses this scenario. On the one hand, the provision for setting the MPI for stocks priced below $1 per share is no longer applicable once the stock crosses the $1 threshold. On the other hand, the primary listing exchange was not required to compute the applicable MPI for this stock during the prior evaluation period (to be applied to the current calendar quarter) because the stock was not priced equal to or greater than $1 during the evaluation period.

It is similarly unclear how the proposed rule would apply to a stock that was above $1 throughout the prior calendar quarter and crosses below the $1 threshold during the current calendar quarter. In this scenario, both of the provisions quoted above would apply. Proposed Rule 612(a) would require an MPI based on the weighted average quoted spread during the prior evaluation period, while proposed Rule 612(d) would require an MPI of $0.0001.

FIF members recommend that the Commission clarify that if a stock crosses the $1 threshold during a calendar quarter, this would not impact the MPI for the stock for the current quarter. This approach is

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[4] Proposed Rule 612(c); Proposed Release, at 346.
[5] Proposed Rule 612(a); Proposing Release, at 345.
[6] Proposed Rule 612(d); Proposing Release, at 346.

consistent with the Commission's general approach that MPIs should only change on a quarterly basis. If the Commission agrees with this approach, the Commission also would need to clarify the point at which (or time period over which) the primary listing exchange, when making this end-of-quarter MPI calculation, would need to compare the stock price against the $1 threshold. For example, the primary listing exchange could compare the stock price against the $1 threshold as of the close of trading on the last day of the evaluation period. Alternatively, the primary listing exchange could take the average closing price during the evaluation period. One way to implement the approach proposed by FIF members would be to amend the proposed rule to clarify that an MPI of $0.0001 would apply where the NMS stock was priced less than $1.00 as of the end of the prior calendar quarter (or was less than $1 based on an average closing price during the evaluation period).

While currently the MPI for a stock can change between $.0001 and $.01 on a real-time basis as the stock crosses above or below the $1 threshold, this is a rule that a firm can implement systematically because the only variable to consider is the stock price. This is also relativity straightforward to communicate to customers. Requiring real-time updating of MPIs based on the proposed rule would be more complex and problematic because of the greater complexity of the proposed MPI regime. Real-time MPI changes also would be more complex to explain to customers. Given these concerns, FIF members support the Commission's proposed approach of providing for quarterly MPI updates and request clarification that this approach also would apply when a stock crosses the $1 threshold during a calendar quarter.

Other scenarios where the Commission should clarify that MPIs can only change on a quarterly basis

FIF members recommend for the Commission to clarify that the MPI for a stock will not change during a calendar quarter based on a stock split, reverse stock split or other corporate event that results in the change in the pricing level of the stock. This approach is consistent with how FIF members interpret the proposed rule. When a corporate event occurs, the MPI for the stock could potentially change for the following calendar quarter if the change in the pricing level of the stock during the current calendar quarter impacts the time weighted average quoted spread for the stock for the evaluation period during the current calendar quarter.

FIF members note that there is not necessarily a linear relationship between a change in stock price after a stock split or reverse stock split and the associated weighted average spread; for example, a 2 for 1 stock split for a stock would not necessarily result in a doubling of the weighted average spread for the stock. If the primary listing exchange were required to calculate and disseminate an updated MPI during the calendar quarter in which a stock is subject to a corporate event, it is not clear what methodology the exchange would use to calculate this updated MPI. Given the potential complexity for this calculation, FIF members recommend that the MPI for a stock subject to a stock split, reverse stock split or similar corporate event should not be adjusted during the calendar quarter in which the event occurs.

FIF members also request clarification on the following:

- Which MPI would apply during the calendar quarter in which a security has an initial public offering, and how would the MPI for the security be communicated to market participants?

- If an issuer changes its listing exchange during a calendar quarter, would the new listing exchange be obligated to apply, for the remainder of the quarter, the MPI previously determined for the quarter by the prior listing exchange?
- Are there scenarios where an MPI could change during a calendar quarter? If so, under what scenarios would this occur, and how would the updated MPI be communicated to firms? As discussed above, FIF members recommend that an MPI only be subject to change on a quarterly basis.

Process for notification of MPIs and MPI changes

FIF members request that the Commission provide further detail on how the Commission would expect the SIPs and the primary listing exchanges to communicate MPIs and MPI changes. It is important that MPIs and MPI changes be communicated not just through quote messages[7] but that this information also be communicated through a data file that is accessible to the public, including vendors. The Commission should direct the primary listing exchanges to collaborate to publish a file specification that includes a file naming convention with version and date, file content specifications, a consistent ticker/CUSIP/ISIN symbology, and delivery and retrieval procedures. Each primary listing exchange should make its data file available through a publicly available page on its website where the file can be retrieved systematically.

MPI changes: GTC and day orders

FIF members request further guidance on how a customer-facing firm should handle a GTC (Good Till Cancel) order if the MPI for a stock changes while the GTC order continues in effect. There are two sets of scenarios that should be considered. In the first set of scenarios, the MPI widens. In some cases where the MPI widens, the customer's limit price might no longer be a valid limit price. For example, the customer could provide a limit price of $10.001 for a buy order when a stock has an MPI of $.001. If the MPI for the stock increases to $.002, this is no longer a valid limit price. FIF understands that many customer-facing firms would seek to cancel the customer's order in this scenario. Would this be a requirement, or could a firm implement a policy to change the limit price to the closest less aggressive increment (for example, in this scenario, decrease the limit to $10.000)? It is unclear whether this approach would be permitted given that a broker-dealer does not have price discretion for a held order.[8] FIF members request clarification on this point.

The customer's limit price also could continue to be a valid limit price when the MPI widens. For example, in the scenario above, if the customer originally provided a limit price of $10.002, this would still be a valid limit price if the MPI for the stock were to increase from $.001 to $.002. Would the customer-facing firm be permitted to maintain this order without modification? A second set of

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[7] See, for example, CQS Consolidated Quotation System Multicast Output Binary Specification, Version 2.9d (Dec. 16, 2022), available at https://www.ctaplan.com/publicdocs/ctaplan/CQS_Pillar_Output_Specification.pdf.

[8] The Commission has distinguished between held and not held orders as follows: "[T]ypically, a 'not held' order provides the broker-dealer with price and time discretion in handling the order, whereas a broker-dealer must attempt to execute a 'held' order immediately." Securities Exchange Act Release No. 84528 (Nov. 12, 2018), 83 FR 58338 (Nov. 19, 2018) (Disclosure of Order Routing Information), at 10.

scenarios involves the narrowing of the MPI for a stock. In these scenarios, the original limit price will continue to be a valid limit price. Is the customer-facing firm permitted to maintain this order? CAT LLC will need to provide guidance on how to report the cancellation or adjustment of a customer order in any of the circumstances described in this section.

MPIs for quoting

Various market participants have recommended a more measured approach for reducing MPIs for quoting as compared to the approach proposed by the Commission in the proposed rule.[9] These market participants have expressed concerns that setting quoting increments too narrowly for a stock could adversely impact execution quality. Many FIF members share these concerns about the impact on execution quality.

FIF members also are concerned about the potential risks to market resiliency associated with a reduction in MPIs for quoting. The more narrowly that MPIs for quoting are set, the greater the potential risks to market resiliency. In this comment letter we focus on these potential risks to market resiliency as well as the process, timing and costs for implementing reduced MPIs.

The need for a measured and phased implementation approach to ensure market resiliency

The Commission writes as follows in the proposing release:

> The Commission also expects there may be other costs associated with updating systems to account for an increase in message traffic resulting from the new tick sizes. However, absent an estimate in the change in message traffic or existing bandwidth capacities it would be impractical for the Commission to attempt to place a reliable estimate on these costs. Estimating the change in message traffic would involve predicting how various types [of] market participants would change their trading behavior and how those changes would interact with each other. Such an estimation would depend heavily on tenuous assumptions.[10]

It is important for the Commission to consider the potential increased message traffic that could result from a reduction in MPIs. The NYSE recently reported that "… SIP quoting activity roughly doubles when the price of the stock is below $1 (i.e. when it can be quoted in $0.0001 increments instead of $0.01 increments)."[11] Phil Mackintosh, Chief Strategy Officer and Senior Vice President of Nasdaq, has

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[9] Letter dated Mar. 13, 2023 from Hope Jarkowski, General Counsel, New York Stock Exchange, to the Commission, available at [s73122-20159561-327567.pdf (sec.gov)](s73122-20159561-327567.pdf). Letter dated Feb. 28, 2023 from Angelo Evangelou, Cboe, to the Commission, available at [s73022-20158236-326301.pdf (sec.gov)](s73022-20158236-326301.pdf). John Ramsay, IEX Exchange, "IEX Exchange's Position on the SEC's Proposed Changes to Regulation NMS" (Mar. 21, 2023). Phil Mackintosh, Nasdaq, "A Data-driven Summary of the SEC's New Proposals" (Feb. 13, 2023). Letter dated Mar. 6, 2023 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, available at [s73022-20158675-326601.pdf (sec.gov)](s73022-20158675-326601.pdf)
[10] Proposing Release, at 248.
[11] NYSE, An ICE Exchange, "Price improvement, tick harmonization & investor benefit" (Aug. 22, 2022), available at https://www.nyse.com/publicdocs/nyse/NYSE_Price_Improvement_202208.pdf, at 10.

compared the message traffic for stocks in different price ranges where the stocks have similar average spreads. Mr. Mackintosh concluded from this analysis that "… stocks with 5 ticks inside the NBBO have roughly double the message traffic of a tick-constrained stock. While stocks with 10 ticks between the NBBO have more than triple the message traffic."[12] Because the Commission's proposal would increase the number of ticks inside the weighted average spread for many stocks, we could expect a significant increase in message traffic that would result from the Commission's proposal.

It is difficult to project the magnitude of increased message traffic as well as the potential impact to market resiliency that would result from narrowing the MPIs for quoting. Given this uncertainty, FIF members recommend that the Commission take a measured and phased approach for reducing MPIs for quoting. This phased approach should include applying reduced MPIs initially to a limited number of symbols and applying the reduced MPIs to additional groups of symbols for subsequent phases. After implementation of each phase, the Commission should conduct a review of various predetermined metrics relating to market resiliency (such as latency, capacity and uptime). The Commission should approve moving to the next implementation phase only upon its determination that the applicable resiliency milestones for the current phase have been satisfied. This type of phased implementation approach also would reduce the level of uncertainty for each phase and reduce the level of "over-building" by market participants that is directly correlated with uncertainty.

Consistent with the implementation of decimalization, the Commission should direct the exchanges and the SIPs to develop an implementation plan that provides for a phased implementation with checkpoints

The phased approach proposed by FIF members would be consistent with the phased approach that the Commission mandated for decimalization. For decimalization, the Commission directed the exchanges to "… act jointly in discussing, developing, and submitting to the Commission a plan to implement decimal pricing in the equities and options markets beginning no later than July 3, 2000…."[13] The exchanges developed an implementation plan that included five phases and five associated checkpoints. The first phase provided for "… a minimum of 10 to 15 exchange-listed equity issues (and options on those equities) …" to quote in decimals.[14] The exchange implementation plan also provided for "… five checkpoints where the Participants will formally evaluate the results of the phase-in implementation program and determine the industry's ability to function without disruption to the investing public in a decimal pricing environment."[15] Consistent with the Commission's approach for decimalization, the Commission should direct the exchanges and the SIPs to develop an implementation plan that provides for a phased implementation with checkpoints. In developing this implementation plan, the exchanges and SIPs should request and incorporate input from broker-dealers and other market participants.

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[12] Phil Mackintosh, "More Ticks, More Messages" (Oct. 27, 2022), available at https://www.nasdaq.com/articles/more-ticks-more-messages.

[13] Decimalization Order, at 5003.

[14] Decimalization Plan, Section V.A.

[15] Decimalization Plan, Section V.F.

Steps that should be included in any implementation plan

The Commission proposes that "… the initial proposed Evaluation Period (Mar., June, Sept., or Dec., as applicable) would be the first full calendar month after the effectiveness of rule 612."[16] The Commission does not discuss in the proposing release or the proposed rule how the effective date would be determined. Assuming, worst case, that the Commission intends for the effective date to be the date that the rule is adopted, and the Commission adopts the rule on November 30, 2023, industry members would need to implement the updated MPIs as of January 2, 2024. This timetable would not provide industry members sufficient time to provision new servers, increased bandwidth and make other required hardware changes. This timeline also would not provide industry members with sufficient time to update various order handling and order processing systems, as described above. This timetable also would not provide the SIPs and exchanges with sufficient time to update the capacity of their own systems, determine and provide capacity requirements to industry participants, update their technical specifications, update their systems to reflect the reduced MPIs, and test with each other and with subscribers to the SIPs and direct exchange feeds. Given the potential impact on market resiliency, it is important for the Commission to provide a sufficient implementation period for the proposed MPI changes, including sufficient time for testing.

The Commission should ensure that the following steps are incorporated into any implementation plan:

- The exchanges determining expected message traffic and system capacity
- The exchanges providing estimates of expected message traffic and system capacity to the SIPs
- The SIPs making determinations as to expected message traffic and system capacity
- The SIPs and exchanges providing guidance to industry participants as to expected message traffic
- The SIPs and exchanges updating their technical specification documents and disseminating these updates
- The SIPs and exchanges providing guidance in response to questions and issues raised by market participants relating to the updated technical specifications
- The SIPs and exchanges updating their hardware (as used in this letter, hardware upgrades include increased bandwidth) and trading systems
- Industry participants updating their hardware and trading systems, as described above; this would include provisioning of hardware and expanded bandwidth
- A sufficient period for the SIPs and exchanges to test with each other and with other industry participants; testing must cover distribution and ingestion of market data and the operation of order handling, routing, execution and other systems.

Certain of these steps cannot commence until other steps have completed. This should be reflected in any implementation plan. The timetable for implementing hardware upgrades should take into account the fact that a very large number of market participants would be seeking simultaneously to purchase and provision a finite supply of hardware.

[16] Proposing Release, at 77.

Costs resulting from the reduction of MPIs for quoting

Understanding the potential impact on message traffic is important in understanding the potential costs for the proposed MPI changes and required timing for implementation. Potential costs to industry members resulting from increased message traffic would include the following:

- The need to provision and operate additional servers to receive and process an increased volume of market data from the equity and options SIPs
- The need to provision and operate additional servers to receive and process an increased volume of market data from the various exchange proprietary feeds for both options and equities
- The need to reallocate message traffic across previously-deployed and newly-deployed servers
- The need to provision additional bandwidth to receive and process an increased volume of equity market data from the equity and options SIPs and the various proprietary feeds for options and equities
- Additional hardware costs such as rack space and cooling.

The costs above would apply to production, back-up, test and development environments. Some FIF members would estimate that the increased server, bandwidth and other costs would be roughly proportional to the increase in message traffic. The SIPs and exchanges also would incur increased costs. In addition to hardware costs, firms will need to incur costs to update their algorithms and smart order routers and their order management, execution management, customer trading, middle-office trade processing, reporting, settlement, surveillance and compliance systems. Another increased cost is that algos and smart order routers will need to process a larger quantity of data.

These costs are not necessarily determinative of whether the Commission should proceed with the proposed MPI reductions, but it is important for the Commission to consider and quantify these costs as part of its analysis.

Cost estimates in the proposing release for reducing MPIs

The Commission writes in the proposing release that, "[T]he estimated $11,000 in one-time costs to all broker-dealers with order entry systems assumes that broker-dealers with order entry systems would not need to acquire new hardware or develop new systems but rather they would modify existing systems."[17] The Commission provides the same cost estimate and makes the same assumption for broker-dealers operating smart order routers. As discussed in the preceding section, FIF members expect that broker-dealers with order entry systems and broker-dealers operating smart order routers will need to acquire new hardware to process an increased volume of market data and also update various internal systems. Given these hardware costs and other required system changes, FIF members believe that the $11,000 estimate for implementation costs for these broker-dealers is too low. For the

[17] Proposing Release, at 246.

same reasons, FIF members believe that the Commission's $140,000 estimate for implementation costs for trading venues[18] also is too low.

For many firms, the implementation costs will be many multiples of the costs that the Commission has estimated. Firms will need to incur implementation costs for internal hardware upgrades and could also incur increased market data costs passed through from the SIPs and exchanges. The Commission should consider the potential impact of these increased costs on smaller broker-dealers and other market participants that subscribe to Level 1 market data. A smaller broker-dealer will need to implement the same types of hardware upgrades as a larger firm to ingest the same volume of Level 1 market data. Firms that also subscribe to direct exchange market data feeds will incur higher costs relative to firms that only subscribe to Level 1 market data.

Potential MPI reductions for options

The Commission should seek feedback from the options exchanges as to whether they would plan to seek reduced MPIs for options in response to the MPI changes for equities. This would result in further increased costs and is necessary to consider in evaluating the expected costs for introducing reduced MPIs for equities.

Increased CAT costs

FIF members are concerned that increased message traffic could significantly increase the costs for the operation of the CAT system as increased quote volumes (including increased frequency of quote updates) would increase the number of CAT-reportable events. 100% of these increased CAT costs would be charged to broker-dealers and exchanges. The operating expenses for CAT were $84.5 million for 2020 and $146.5 million for 2021.[19] CAT LLC, the operator of the CAT system, has estimated the total expenditures for CAT for 2022 at $178.9 million.[20] These costs are in excess of the costs that were contemplated in the CAT NMS Plan. The CAT NMS Plan, approved by the Commission on November 15, 2016, estimated the annual CAT system expenditures over the first five years to range from $35.2 to $134.9 million.[21] CAT LLC wrote in a webinar presentation on April 6, 2022, less than two years after the launch of CAT, that the CAT data volumes are "currently at year 10 projections".[22]

FIF members are concerned that CAT processing costs could increase at more than a linear rate relative to the increase in quote and order volume, meaning, for example, that a doubling of quote and order

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[18] Proposing Release, at 244.

[19] Consolidated Audit Trail, LLC, Financial Statements, December 31, 2021 and 2020, available at https://catnmsplan.com/sites/default/files/2022-06/CAT-NMS-LLC-2021-and-2020-Financial-Statements.pdf, at 4.

[20] Consolidated Audit Trail, LLC, 2022 Financial and Operating Budget, available at https://www.catnmsplan.com/sites/default/files/2022-11/11.14.22-CAT-Q4-2022-Budget.pdf, at 1.

[21] Limited Liability Company Agreement of CAT NMS, LLC, a Delaware Limited Liability Company (Nov. 15, 2016), available at https://catnmsplan.com/sites/default/files/2020-02/34-79318-exhibit-a.pdf, at C-79 to C-80.

[22] "Consolidated Audit Trail Industry Webinar: Proposed Funding Model" (Apr. 6, 2022), available at https://catnmsplan.com/sites/default/files/2022-04/04.06.22-CAT-April-2022-Industry-Webinar-on-Fee-Model_0.pdf, at 10.

volume could mean more than a doubling of CAT processing costs.[23] This concern is, in part, related to the tight timeframes that the CAT NMS Plan imposes on CAT LLC to process records that are submitted to CAT. These timeframes impose significant costs on the industry (including broker-dealers and exchanges), and the Commission has not conducted an appropriate cost-benefit analysis of continuing to mandate these accelerated processing timeframes given the current CAT costs. As presented above, when the Commission approved these processing timeframes in 2016 as part of the original approval of the CAT NMS Plan, the projected CAT operating costs were well below what have turned out to be the actual costs for operating the CAT system.

In the webinar presentation cited above, CAT LLC wrote that the "[T]he significant and increasing overall CAT costs are driven by the requirements in the CAT NMS Plan to process record data volumes in accordance with complex reporting and linkage requirements, within the narrow timeframes required by the SEC."[24] When considering the potential for increased costs resulting from the proposed MPI changes, all of the following impacts must be considered:

- If the MPI changes result in an x% increase in the number of events submitted to CAT, and the processing times for the CAT system are extended appropriately, this could potentially represent an x% increase in CAT processing and storage costs
- If the MPI changes result in an x% increase in the number of events submitted to CAT, but the processing times are not extended, this would result in a further increase in processing costs beyond this linear increase because more records must be processed within the same period of time
- If firms are required to submit an additional x% number of records within the same time period, this means that some firms likely would be forced to submit records later within the submission cycle than they otherwise would. This would further compress the processing times available to the CAT system, resulting in additional increased costs.

CAT LLC is in the best position to estimate the increased CAT costs that would result from the proposed MPI changes. Given the current level of CAT costs relative to the costs projected in the CAT NMS Plan in 2016, and the concern that the proposed MPI changes could lead to further material increases in CAT costs, FIF members recommend that the Commission take the following steps prior to proceeding with the proposed MPI changes:

- Estimate the potential increase in message traffic that would result from the proposed MPI changes (see discussion above)
- Provide these estimates to CAT LLC
- Obtain from CAT LLC estimates of the increased CAT costs that would result from this increased message traffic
- Factor these costs into the cost-benefit analysis of the proposed MPI changes.

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[23] While FIF members have this concern, CAT LLC is the party with the most relevant information to provide informed estimates as to how increased market activity resulting from a reduction in the MPIs would impact CAT processing costs.
[24] Ibid.

With respect to the current CAT processing timelines, FIF members recommend that the Commission obtain from CAT LLC data on how various changes in the CAT processing timelines could reduce the annual costs for operating the CAT system. The Commission should evaluate this data apart from the proposed rule; in other words, the Commission should conduct this analysis based on the current MPIs and message volume. Separately, the Commission should conduct an analysis of how changes in the CAT processing timelines could reduce CAT costs assuming adoption of the proposed MPI changes and the associated increased message traffic.

One important unknown in relation to CAT costs is whether the options exchanges would seek to reduce MPIs for options in response to the reduction in MPIs for equities. Options events represent a large percentage of the events that are reported to CAT and are a significant contributor to CAT operating costs and workload. In connection with estimating the potential for CAT cost increases, the Commission should seek feedback from the options exchanges as to whether they would plan to seek reduced MPIs for options in response to the MPI changes for equities. Any estimate for increased CAT costs provided by CAT LLC should take this feedback into account.

Commission Rule 605

FIF members recommend that the Commission implement updates to Rule 605[25] prior to implementing the proposed MPI changes. This would provide a baseline for measuring market quality prior to the introducing of MPI changes and allow for a more accurate comparison of market quality by market participants and the public prior to and after the MPI changes.

B. Transparency of better priced orders

Duplication of odd lot shares

Upon effectiveness of the proposed rule, consolidated market data would need to include "… [O]dd-lots at a price greater than or equal to the national best bid and less than or equal to the national best offer, aggregated at each price level at each national securities exchange and national securities association."[26] This would result in the duplicate dissemination of odd lot shares under certain scenarios. Example 3 of the Proposal of the CTA and UTP Operating Committees Regarding Odd Lots on the SIPs (the "2022 SIP odd-lot proposal")[27] presents the following scenario:

- Exchange B has an offer at $20.01 for 60 shares and an offer at $20.02 for 80 shares
- These are the best-priced displayed offers in the market
- Because of these two odd-lot orders, Exchange B has an offer at the NBBO for 100 shares.

[25] Securities Exchange Act Release No. 96493 (Dec. 14, 2022), 88 FR 3786 (Jan. 20, 2023).
[26] 17 CFR §§242.600(b)(59) and 242.603(b)(3).
[27] Proposal of the CTA and UTP Operating Committees Regarding Odd Lots on the SIPs (March 2022), available at https://www.ctaplan.com/publicdocs/ctaplan/CTA_Odd_Lots_Proposal_2022.pdf ("2022 SIP Odd-Lot Proposal"), at 6.

This scenario would result in a duplicate dissemination of shares because the SIP would disseminate the two 60 and 80-share odd-lot orders by themselves and would separately disseminate the 60-share odd-lot order and 40 shares of the 80-share odd-lot order collectively as the NBBO and the BBO for Exchange B. FIF members propose that the SIP communicate when this duplication occurs; this could be implemented, for example, by including a field associated to an odd-lot quote to indicate the portion of the odd-lot quote, if any, that is included in an exchange's BBO.

Period for resetting round lots

As proposed, the round lot for any stock would be re-evaluated on a monthly basis based on the average closing price for the stock on the primary listing exchange for the prior calendar month.[28] FIF members are concerned that having a quarterly period for resetting MPIs and a monthly period for resetting round lots could create confusion and disruption for customers. Accordingly, FIF members recommend that round lots be subject to adjustment on a quarterly basis.

Display of odd-lot portion of mixed lot bid or offer

As proposed, bids and offers would be disseminated "… rounded down to the nearest multiple of a round lot."[29] The Commission provides as an example that "a 275 share buy order at $25.00 for a stock with a 100 share round lot would be disseminated as 200."[30] The Commission takes this example from the adopting release for the Market Data Infrastructure Rule. FIF members recommend that the full size (including both the round lot and odd-lot portions) be included as consolidated market data for this and other mixed lot orders.

Vendor display rule

In the proposing release the Commission requests feedback on whether the definition of "consolidated display" should "… be amended so that rule 603(c), known as the 'Vendor Display Rule,' would require the best odd-lot orders to buy and sell to be provided in contexts in which a trading or order-routing decision can be implemented?"[31] FIF members believe that that the Commission should not amend the definition of consolidated display to require the display of odd-lot data. Whether market participants display odd-lot data to customers should be based on customer demand.

Message traffic

Adding odd-lots to the SIP will increase message traffic. The same comments relating to increased message traffic set forth above with respect to the proposed MPI changes also relate to adding odd-lots to the SIP. Adding odd-lots to the SIP should not impact CAT costs because odd-lots are reportable to CAT whether or not they are disseminated through the SIP.

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[28] 17 CFR §§242.600(b)(82) and 242.603(b)(3).
[29] Proposed Rule 600(b)(3); Proposing Release, at 343.
[30] Proposing Release, at 132.
[31] Proposing Release, at 145.

Proposed implementation period

The Commission, in the proposing release, proposes a 90-day implementation period for industry members to implement the following changes:

- Dissemination of odd-lot quote information
- Adding to odd-lot information the "best odd-lot order to buy" and "best odd-lot order to sell"
- New round lot definitions
- The requirement to display round lots based on the number of shares instead of the number of round lots.[32]

The implementation time period proposed by the Commission does not take into account the following steps that would be necessary to implement these changes:

- Each SIP would need to prepare and submit proposed amendments to its SIP Plan
- As part of this process, a SIP could request feedback from industry members on specific implementation decisions; for example, in the 2022 SIP odd-lot proposal, the SIPs request feedback on whether odd-lot data should be "… disseminated through a single, integrated feed, as reflected in this proposal, or a channel separate from existing SIP data…."[33]
- The Commission would need to approve each amendment
- After approval, each SIP would need to update its technical specifications and make these available to industry members
- Industry members would need to review the specifications and request and obtain guidance on any technical, business and regulatory issues that require further clarification
- Industry members (including exchanges, the SIPs, broker-dealers and other SIP market data recipients) would need to update their systems to conform to the updated technical requirements
- A reasonable testing period would be required with a test facility provided by each SIP
- After the reasonable testing period has been completed, the changes can be introduced into production.

As part of the required systems changes, certain industry members would need to update customer-facing systems. Any implementation period for industry participants should run from the date that the SIPs have published technical specifications and subsequent to the Commission's approval of the applicable SIP Plan amendments. In connection with the Plan amendments to be submitted by the SIPs, industry participants should have the opportunity to provide input on the proposed timetables.

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[32] Proposing Release, at 135.
[33] 2022 SIP Odd-Lot Proposal, at 1.

FIF appreciates the opportunity to comment on the proposed rule. If you would like clarification on any of the items discussed in this letter or would like to discuss further, please contact me at howard.meyerson@fif.com.

Very truly yours,

/s/ Howard Meyerson

Howard Meyerson
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