Cboe

433 W Van Buren St.
Chicago, Ill
60607
United States

cboe.com

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Via Electronic Submission

Ms. Vanessa Countryman, Secretary
Secretary Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-1090

Re: File No. S7-29-22; Release No. 34-96493; Disclosure of Order Execution Information
File No. S7-30-22; Release No. 34-96494; Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders
File No. S7-31-22; Release No. 34-96495; Order Competition Rule
File No. S7-32-22; Release No. 34-96496; Regulation Best Execution

Dear Ms. Countryman:

Cboe Global Markets, Inc. ("Cboe") appreciates the opportunity to file an additional comment letter on the above-referenced proposed rule changes ("the Proposals") published by the Securities and Exchange Commission ("SEC" or "Commission") on December 14, 2022. As a leading provider of market infrastructure and tradeable products globally, Cboe is well positioned to offer a birds-eye view of the equity market structure landscape that can inform a do-no-harm approach.

Cboe carefully evaluated responses to the Proposals to better understand the most common concerns raised by industry participants. It is evident that there is overwhelming concern that the proposed reforms are too expansive and that impacts, known and unknown, would be too far-reaching. We share those concerns and have previously offered more modest and targeted solutions that will prevent market disruption while meaningfully improving market dynamics.[1]

We do not, however, agree with all comments, and this letter seeks to counter a specific narrative put forward by certain commenters. More specifically, in response to the Reg NMS Tick Size Proposal[2] ("Tick Size Proposal"), there is some suggestion that the SEC need only proceed with further regulating exchange fees –including in the absence of tick-size and other changes. We strongly disagree with this approach. Cboe submits that it would be plain wrong for a series of expansive rulemakings focused on sweeping changes to the equity market landscape to devolve into a narrow attack on exchange pricing practices, especially as exchanges continue to compete for an increasingly smaller addressable share of the market.

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[1] See Cboe comment letter Re: Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders, File No. S7-30-22; Order Competition Rule, File No. S7-31-22; Regulation Best Execution, File No. S7-32-22; Disclosure of Order Execution Information, File No. S7-29-22, available at, https://cdn.cboe.com/resources/government_relations/Cboe-Response-to-SEC-Market-Structure-Proposals-3-31-23.pdf

[2] See Securities and Exchange Commission, Release No. 34-96494, 87 FR 80266 (December 29, 2022) ("Tick Size Proposal")

Given the constant level of regulatory review and scrutiny associated with exchange fees generally, we believe market reforms are better focused on areas that are less regulated, less transparent, and that directly impact investors. In support of our perspective, we note the following:

- Exchanges have demonstrated superior resiliency and operational performance in recent years despite considerable periods of volatility that have challenged other market participants.
- Volume continues to accumulate on over-the-counter (OTC) off-exchange market centers that are not regulated as extensively as registered exchanges, and some of which are not subject to Regulation ATS.[3]
- Exchange fees and processes are the most regulated and transparent in the industry.
- Exchange access fees enable exchanges to develop pricing schedules and mechanisms (including rebates), which then allow exchanges to more effectively compete with off-exchange market centers.
- Rebates directly result in narrower spreads and more liquidity for investors.
- Reducing the ability of exchanges to compete could directly result in more volumes migrating to off-exchange market centers and could have price discovery implications.
- Calls for regulatorily mandated reductions in exchange access fee caps fail to recognize that exchange access fee caps were adopted and justified to facilitate effective intermarket linkages. Access fee caps are inextricably linked to that facet of Reg NMS. In connection with the Proposals, it would be inappropriate to pivot to an access fee cap focus, particularly while ignoring the justification for the existence of the fee caps.
- Other existing exchange fee constructs such as volume-based pricing tiers are important tools that allow exchanges to compete with one another and with non-exchange venues.
- Regulatory intervention aimed at exchange fee pricing is unjustified, contrary to congressional intent, and would harm a generally well-functioning market. Access fee cap reductions and limitations on rebate tiers do nothing to reform market structure and only advance the interests of a vocal minority, while ignoring the benefits of exchanges and their existing economic model. Any reactionary over-regulation of exchange fees could ultimately prove detrimental to investors in the form of, among other things, higher costs and diminished choice.

Cboe urges the Commission to proceed carefully with its market structure rulemaking agenda, and to use a holistic, measured, evidence-based approach that recognizes the above realities. In particular, the Commission should consider how any given change in one part of the market could impact *overall* market dynamics and incentives, rather than allow a vocal minority exclusively focused on exchange fees (or any narrow self-serving agenda) to disrupt the Commission's policymaking process.[4] More specifically, we suggest that a shift in focus toward regulatory harmonization between trading venues would greatly enhance fair competition, and that facilitating industry led initiatives (e.g., Cboe's retail price improvement program) will better benefit investors without disrupting a well-functioning market.

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[3] See Securities and Exchange Commission, Release No. 34-40760, 63 FR 70844 (April 21, 1999) ("Regulation of Exchanges and Alternative Trading Systems")

[4] See "View EO 12866 Meetings," available at, https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202304&RIN=3235-AN29

Please find below more detailed analysis of the current equity market structure landscape, the beneficial role exchanges play in the resilient framework the Commission has overseen over the last half century, and responses to some of the more flawed arguments raised with respect to exchange access fees and rebates. We welcome further discussions with the Commission.

Background

As an exchange operator, Cboe has a vested interest in improving efficiency, transparency, and liquidity in order to be able to attract a broad range of participants to our marketplace. To do so, we invest in the latest technology for our platforms, ensure orderly trading and efficient dissemination of price information for our products, detect market manipulation, offer tailored services, and charge competitive rates. Exchanges are central to the price discovery process and a key component of the market ecosystem that drives beneficial outcomes for investors and issuers and have helped make the U.S. equity markets the deepest and most liquid in the world.

Where once a single listing venue controlled nearly all of the trading in its listings, today no single exchange has more than 15% market share. The development of venue and order competition as well as improvements in technology, alongside new rules, have given rise to an interlinked trading ecosystem that offers investors low-cost trading, tight spreads, faster speeds of execution, and access to more sophisticated tools to match their growing knowledge and investing needs.

However, today's marketplace is not without trends that merit serious observation. For starters, markets have a new type of imbalance. Where off-exchange trading of stocks on Alternative Trading Systems (ATSs) and internalization networks once existed to serve niche institutional needs and constituted a minority of the volumes, today these off-exchange are responsible for a significant share of consolidated volume – roughly *40% on average, up from 16% a decade ago* (Figure 1). Off-exchange volume includes two types of market centers: Alternative Trading Systems (ATS) and Non-ATS Over the Counter (OTC). ATSs are multilateral market centers that match buyers and sellers of securities. Non-ATS OTC trading is bilateral and includes market centers such as single dealer platforms, wholesalers, and central risk book facilities.[5] Notably, these non-ATS OTC off-exchange market centers do not have regulatory filing requirements specific to their operations. At the same time that these non-ATS OTC market centers rely on public market data feeds for pricing of their executions, those market centers are also able to offer many services that exchanges are not, including but not limited to segmentation, counterparty selection, and scoring, which allows participating firms to maximize performance at those trading market centers.

Chair Gensler has rightfully noted: "Right now, there isn't a level playing field among different parts of the market: wholesalers, dark pools, and lit exchanges."[6] The Proposals acknowledge this

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[5] See May 2023, "Off-Exchange Trends: Beyond Sub-Dollar Trading," available at, https://www.cboe.com/insights/posts/off-exchange-trends-beyond-sub-dollar-trading/

[6] See June 2022, Remarks by Chair Gensler Before the Piper Sandler Global Exchange Conference, Harvard Law School Forum on Corporate Governance, available at, https://corpgov.law.harvard.edu/2022/06/09/remarks-by-chair-gensler-before-the-piper-sandler-global-exchange-conference/#:~:text=Today%2C%20we%20lack%20a%20level%20playing%20field%20amongst,orders%20at%20sub-penny%20prices%20and%20without%20open%20competition

trend but do not address it optimally. As discussed in this letter, an appropriate first step is to pursue narrowly targeted structural changes coupled with meaningful regulatory harmonization including enhanced transparency and disclosures for off-exchange market centers.

It is dismaying that rather than acknowledging the more important need to re-balance the relationship between lit and dark markets, a small minority of commenters have suggested that exchange access fees are the real problem and have suggested that such fees should be reduced irrespective of other regulatory changes. This not only ignores this concerning dilution to price discovery, but also the origins of the access fee cap and the benefits that arise from access fees.

Exchange Fees

As noted above, access fee caps were adopted to ensure the Regulation NMS framework facilitated identification of (and protected) the best price. In adopting access fee caps, the SEC was concerned that "in the absence of a fee limitation, some 'outlier' trading centers might take advantage of the requirement to protect displayed quotations by charging exorbitant fees to those required to access the outlier's quotations."[7] As such, access fee cap limitations are inextricably linked to ensuring markets do not display a better price that is greatly diminished by a fee that compromises the value of the better price, and modifications should only be discussed in that context. Moreover, the size of the fee cap is similarly linked to the desire to avoid disrupting existing practices. At the time the Commission stated that a fee limitation of $0.003 per share was the most appropriate because it would "not seriously interfere with current business practices, as trading centers have very few fees on their books of more than $0.003 per share or earn substantial revenues from such fees."[8] That may have been the case when the fee cap was adopted, but reducing the fee cap further will in fact disrupt current business practices and competitive dynamics. Additionally, it would do nothing to advance the reason for its existence.

A mandated reduction in access fee caps that is not only divorced from the original justification for their existence but also disrupts current business practices, would be arbitrary and particularly disruptive when considering the impact that reductions would have on the ability of exchanges to compete.

Exchanges such as Cboe are able to remain competitive as it relates to the addressable market by relying on access fees to offer rebates to exchange liquidity providers (i.e., maker-taker model) or liquidity takers (i.e., inverted model). Volume-based rebate tiers are an extension of this approach. The latter model exists for those market participants who do not want to pay to take liquidity. These rebates are innovative and critically important tools that enhance market depth, promote tighter bid-ask spreads, and encourage order flow to be routed to lit exchanges. Fee discretion is instrumental in an environment where off-exchange market centers, which continue to grow in terms of overall volume captured over time, are able to set their own prices without government constraints or meaningful transparency.

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[7] See Securities and Exchange Commission, Release No. 34-50870, 70 FR 1503 (January 7, 2005) ("Proposed rules and amendments to joint industry plans")

[8] See Securities and Exchange Commission, Release No. 34-51808, 70 FR at 37495 (June 29, 2005) ("Regulation NMS: Final rules and amendments to joint industry plans")

Despite there being no evidence of harm to investors, select market observers continue to advocate for lowering access fee caps and against rebates with flawed claims. The following paragraphs address those false claims:

- *Myth #1*: *Advances in technology have improved the cost for processing data and transactions, so access fee caps should decrease too.* The reality is that costs for exchanges have not decreased. Ensuring operational resiliency while maintaining compliance with Regulation SCI, CAT, and other requirements involves considerable investment and cost. More important, and of likely greater concern to policymakers, is that overall trading costs for *investors* have in fact decreased over time significantly with the market infrastructure we have in place today. Many, if not most, individual investors do not pay any commissions on their stock trades, and fees charged to larger institutions and hedge funds have also decreased over time. Exchange access fees and rebates are key aspects of the broader ecosystem and competitive tools that allow for these lower overall costs. Given equities market competition continues to be vibrant, imposed price controls are unnecessary.

- *Myth #2*: *Fees are too complicated to understand, so they need more SEC scrutiny than ever before.* In practice, individual investors and many traditional active and passive fund managers do not interact directly with exchanges. The institutions that *do* interact directly with exchanges and other parts of the market cannot deny that exchange fees are extremely transparent. Cboe provides tools to help our clients understand and incorporate pricing information into their decisions on a real time basis. Additionally, exchanges are highly regulated entities that already receive a significant amount of SEC review. For instance, exchanges are required to publish fee schedules on their websites and file fee schedules with the SEC which can be rejected. The SEC has long understood that variable and flexible pricing enables exchanges to compete and offer liquid markets with lower costs for investors. There is nothing to suggest more SEC scrutiny is needed. In fact, the increasingly burdensome fee review process undertaken by SEC staff as of late is not consistent with congressional intent. The Securities Exchange Act of 1934 ("Exchange Act") allows for exchanges to make and propose changes that can become effective immediately and can only afterward potentially be suspended by the Commission if "such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of this title."[9] In other words, Congress intended for exchanges to have flexibility as it relates to exchange fee pricing and implementation timing.

- *Myth #3*: *Exchange rebates lead to conflicts of interest for broker-dealers so exchange rebates should be banned*. First, approximately half of the rebates on Cboe accrue to non-agency market-making activity – thus, there is no real or perceived conflict of interest. Second, even for order flow where brokers do act in an agency capacity, some of that client flow is "directed" meaning the clients give specific instructions for the order to be routed to a particular venue for execution –again there can be no conflict of interest provided brokers are routing to market centers that are consistent with the client's order handling instructions. Third, brokers have a duty of best execution regardless of the pricing model

[9] See Securities Exchange Act of 1934, available at, https://www.govinfo.gov/content/pkg/COMPS-1885/pdf/COMPS-1885.pdf

used by exchanges.[10] If there is evidence that brokers are violating their best execution obligations because of rebates paid by exchanges, then any such concern should be addressed directly by enforcing those brokers' best execution obligations.[11] Addressing such a problem, if any, *indirectly*—by diminishing rebates—likely would lead to unintended consequences, such as reducing the exchanges' ability to compete with each other and with off-exchange trading venues. Further transparency between brokers and their clients regarding broker practices and policies also would help avoid potential problems arising out of any purported conflicts of interest. For instance, requiring broker-dealers to make publicly available their routing strategies, and best execution metrics would help to hold broker-dealers accountable for their order routing decisions, as market participants would be able to compare their execution quality metrics versus publicly available routing disclosures. By contrast, it is entirely inappropriate to experiment with *exchange* pricing models for fear of *broker* failings. Importantly, access fees enable exchanges to offer rebates to liquidity providers, which in turn results in enhanced liquidity and narrower spreads, thereby benefiting investors.

- *Myth #4*: *Volume-based rebate tiers from exchanges benefit bigger firms to the exclusion of smaller ones.* Certain participants argue only a select few liquidity providers receive the lion's share of rebates. However, rebate tiers are open to all regardless of firm size and are generally based on volume precisely because they are designed to attract maximum order flow and liquidity. The practice of offering bigger discounts to customers that buy more (e.g., volume discounts) is ubiquitous in this country and plays out in the everyday lives of consumers - buy more, pay less. Analogously, one of the goals of exchanges is to maximize each participants' incentive to provide liquidity to maximize overall liquidity. Therefore, in trading markets, it is a common practice used by other types of market participants such as large brokerage firms, as well. It is also integral to understand that a small rebate will not have the same impact on market quality as a larger rebate based on meeting a specific tier. By offering larger rebates for larger volume tiers, exchanges can incentivize greater participation and improve liquidity and market quality. Importantly, volume-based tiers do not restrain trade or represent a burden on competition. *See, e.g.*, *Southeast Missouri Hosp. v. C.R. Bard, Inc.*, 642 F.3d 608, 612-13 (8th Cir. 2011); *Virgin Atlantic Airways Ltd. v. British Airways PLC*, 257 F.3d 256, 265 (2d Cir. 2001).[12] They fully meet the statutory requirements set forth in the Exchange Act. Liquidity helps investors. Rebates are received

[10] See FINRA, Rule 5310 Best Execution and Interpositioning, available at, https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310

[11] For instance, in 2022, FINRA fined a broker dealer for failing to comply with its best execution obligations in connection with customer order flow. FINRA noted that for the review period in question, the broker-dealer, which operated its own ATS, routed *all* of its customers' marketable orders to its ATS, prior to routing to any competing venue, if the order could be filled completely or partially at the NBBO. This was the default routing strategy, unless customers opted out of such practice. FINRA found that the broker-dealer failed to conduct reasonable reviews of its execution quality for its customers' orders and did not review price improvement data for orders it internalized. Additionally, the broker-dealer did not consider other factors for away venues, such as speed of execution or fill rates, when formulating its routing strategy. FINRA found that this broker-dealer violated, amongst other FINRA Rules, Rule 5310 – Best Execution.

[12] Along these lines, this issue recently surfaced in the Commission's May 2023 suspension orders of the EDGX and BZX volume-based fee changes filed 60 days prior. Cboe strongly believes that all statutory requirements have been met, given that much like our other volume-based pricing tiers the suspended filings are available but not required for all members. See Cboe comment letter Re: Securities Exchange Act Release No. 34-97406 (SR-CboeEDGX-2023-016), and Release No. 34-97437 (SR-CboeBZX-2023-020), available at, https://www.sec.gov/comments/sr-cboeedgx-2023-016/srcboeedgx2023016-204099-410922.pdf

by providers of liquidity. Provide more liquidity and receive more rebates. Investors benefit. Ignoring this reality based on the views of commenters who choose not to provide enhanced liquidity will only harm investors. It is concerning that some commenters channel efforts into continuously lobbying policymakers to change the rules in their favor instead of competing under existing rules.

- *Myth #5: Competition would improve, and in turn investors would benefit from limiting volume-based rebate tiers.* At Cboe, we consistently subject our proposed fee filings to an extensive internal review so that they meet the Act's statutory requirements to be reasonable, equitably allocated, not unfairly discriminatory, and to not unduly burden competition. The SEC's review and processing of these implemented fees substantiates our assessments. Many of the comments, however, ignore the fundamental point that offering volume-based rebates is itself a form of price competition. It allows exchanges to compete for order volume against other exchanges and off-exchange trading forums. Indeed, courts have long recognized that offering rebates or discounts to attract additional business is the essence of competition. *See, e.g., Matsushita Elec. Indus. Co. v. Zenith Radio Corp*., 475 U.S. 574, 594 (1986). And volume or incentive discounts or tiered rebates "allow firms to reward their most loyal customers. Rewarding customer loyalty promotes competition on the merits." *Virgin Atlantic Airways Ltd. v. British Airways PLC*, 257 F.3d 256, 265 (2d Cir. 2001). Such competition directly benefits customers, *id*. at 259 and is consistent with the Exchange Act. By contrast, limiting volume-based rebate tiers would in fact harm competition and disadvantage the very small to mid-sized brokers who support this myth. First, brokers of different sizes have a complementary relationship with each other which would be disrupted. Mid-sized brokers typically leverage white label services provided by the larger brokers in the ecosystem, as the larger brokers have invested in the infrastructure that allows them to offer a wide range of services beyond order execution. For their part, smaller brokers may have a niche specialty they can then sell to the larger institutions. There is no reason to believe that limiting rebates for larger firms will mean that smaller brokers will build out an entire infrastructure or expand their services (i.e., limiting rebate tiers may do nothing to enhance competition between brokers). Instead, larger firms will face increased costs, which will limit their own spending, and spillover to end users. Secondly, as discussed above, competition between brokers is not the only type of competition that merits attention in a trading ecosystem. Competition between exchanges and between off and on exchange marketplaces will also be impacted by changes in volume-based rebate tiers. More specifically, tiers are a tool that exchanges depend on to compete with off exchange market centers. Off-exchange venues are exempted from the 19b-4 rule filing process and can freely change their fee schedules without prior approval from the SEC. Rather than improving competitive dynamics between broker dealers and benefit investors, the Commission would instead hurt competition in other ways, as well as investors.

Exchange fees and rebates are an easy target precisely because these fees are so transparent and must pass through SEC review, but equities market reform cannot boil down to an overhaul of exchange pricing schedules for the half of the market that is lit. It is not clear how limiting the fees that exchanges can charge or rebates they pay would improve our national market system overall.

In practice, Cboe believes at least three unintended consequences will be triggered as stated in our prior comments.

First, given the present market structure dynamic where we have transparent market centers and opaque market centers, focusing exclusively on exchange fees and rebates would indubitably compound the regulatory disparities between the two. Secondly, displayed liquidity will deteriorate as market makers have less incentive to fill liquidity gaps if faced with higher costs and new market participants (i.e., institutional investors) will have no incentive to step in to serve the market, particularly during times of market stress. This will lead to wider bid-ask spreads and potentially increase volatility in thinly traded securities, which will translate into higher costs for investors. As Figure 2 shows, increased volatility as measured by the Cboe Volatility Index (VIX) is strongly correlated (r =.777) with an increase in on-exchange activity, highlighting the important role exchanges play as backstops. Third, it may directly impede exchanges' ability to continue to invest in the best-in-class technology infrastructure and ensure fair and orderly markets consistent with all regulations.[13]

Restricting exchange access fee caps and pricing schedules will limit differentiation and competition between market centers (including pure lit venue competition) to the detriment of investors. This view is supported by data and analysis. For instance, current Cboe research looking at the impact that the introduction of tiered pricing at one exchange in the U.S. had on market liquidity has found that the switch from a flat rebate model to a tiered pricing model in July 2021 improved market prices and quality during the period of study from March 2021 to June 2022. We find that starting in July 2021, when the exchange added rebate tiers for the first time, their contribution to the market's best bid and offer prices rose significantly from 8.73% to 11.63% (Figure 3A) and 8.87% to 11.89% (Figure 3B), respectively.

<u>Regulatory harmonization - transparency requirements for non-exchange market centers</u>

The Tick Size Proposal speaks, at length, about leveling the playing field between exchanges and off-exchange market centers[14] and uses proposed tick-size reform as the primary tool in accomplishing this goal. However, one critical area that the Commission must consider addressing to better level the playing field is closing the regulatory gap that exists between exchanges and off-exchange market centers.

Exchanges are heavily regulated entities, subject to various rules and restrictions under the Act and its rules thereunder, including fair access requirements and the SEC Rule 19b-4 rule filing process. As a result, as previously noted, exchanges –unlike their off-exchange competitors– are often unable to offer participants certain features, including counterparty selection and the greater

[13] Exchange responsibilities extend far beyond matching bids and offers. Exchanges monitor and regulate markets, declare trading halts, operate listing regimes, and ensure market resiliency and stability.

[14] <u>See</u> <u>Supra</u> note 3 ("The proposed amendments to Rule 612 would level the competitive playing field in this regard by requiring market participants, regardless of trading venue, to offer price improvement to investor orders in the same minimum pricing increments, unlike today where OTC market makers are able to offer investors orders price improvement in smaller pricing increments compared to their exchange and ATS counterparts." at 32; "By harmonizing the trading increment the proposal would create a more level playing field for exchanges and ATSs to innovate to attract retail order flow." at 258).

anonymity and simplicity generally afforded to off-exchange market centers.[15] For instance, electronic liquidity providers ("ELPs") and ATSs, as well as wholesale broker-dealers, can commit capital to orders, provide targeted indications of interest, and offer order segmentation to increase fill rates and improve parent order level performance. This makes off-exchange market centers preferable to trading on an exchange for certain market participants. Additionally, off-exchange market centers can offer such features without having to comply with the lengthy, and often unpredictable 19b-4 rule filing process that exchanges must satisfy prior to offering even benign trading features to their members. While Cboe recognizes the Commission's continuous efforts to improve markets, as an exchange we have no choice but to operate in an environment where the rule filing process can take as long as 300 days; and, even after navigating this lengthy process, there is no guarantee the Commission will approve an exchange's proposal. This provides off-exchange market centers with a competitive advantage in that the new offerings or features they adopt are not subject to approval by the SEC and can be implemented in a much more timely manner than similar or identical offerings from an exchange.

To help level the playing field between exchanges and off-exchange market centers, the Commission should take steps to harmonize the regulatory requirements for exchanges and off-exchange market centers and close the regulatory gap that serves only to favor off-exchange market centers to the detriment of exchanges. This could be accomplished by leaving much of the regulatory framework in place (i.e. without amending Rule 19b-4 or requiring off-exchange market centers to submit rule filings of their own), by simply mandating increased levels of transparency from off-exchange market centers and market participants as well as by administering Rule 19b-4 in the same way it once did. A comparison between 19b-4 submissions from 20 years ago and today reveals a significant shift in what the SEC staff requires in these filings despite no change in the relevant requirements of the rule. The elevation of what is required in a 19b-4 filing has not necessarily benefitted investors. Enhanced transparency requirements would help to mitigate inconsistencies, help to level the playing field for exchanges, and foster the protection of investors and the markets.

Targeted changes will have great benefits for investors

Cboe remains steadfast in its views that today's markets continue to service investors well, and that any changes to the financial markets should be targeted structural modifications designed to improve market quality for investors and further enhance the investor experience without introducing operations risk and complications associated with dramatic overhaul proposals. Consistent with this "do no harm" approach, Cboe again urges the Commission to take a measured, and pragmatic approach to tick size reform by utilizing a framework designed to objectively identify and address truly tick-constrained securities. The results stemming from such tick size reform should be evaluated before considering more granular tick size changes and potential harmonization.

Indeed, in studying the comment letters submitted in connection with the Tick Size Proposal, Cboe is not alone in this view, as a majority of commenters favor a more targeted approach than the tick

[15] See Cboe, "A Deep Dive Into U.S. Equities Trading Venues", May 18, 2021, available at, https://www.cboe.com/insights/posts/a-deep-dive-into-u-s-equities-trading-venues/

size reform currently proposed by the Commission –namely, only reducing ticks to ½ penny and only for tick-constrained symbols, and a shared view that the granular ticks proposed by the Commission will only serve to hurt investors.

We believe that Cboe's proposed Tick-Reduction Framework demonstrates the type of objective methodology the SEC should utilize when implementing tick size reform. As we previously set forth in greater detail, Cboe's Tick-Reduction Framework uses objective criteria to target truly tick-constrained securities, to which we believe a more conservative initial tick-reduction of 0.5 cents should be applied.[16] Cboe believes that the proposed tick increments of $.001 and $.002 are too granular and that the breadth of securities to which the Commission extends the proposed increments is entirely too expansive. Embarking down this path is likely to introduce operational complexity and risk. By extending the proposed minimum pricing increments to such a large number of securities, the Reg NMS Proposal risks applying tick-reform to securities that are arguably not tick-constrained.

Overall, Cboe is supportive of the Commission's proposed targeted measures that can improve market quality for investors and further enhance the investor experience such as odd lot reform, improved 605 disclosures, and the best execution proposal in certain circumstances. With respect to the round lot and odd lot reforms proposed by the Commission, Cboe believes that both proposals will enhance price discovery and help to further reduce spreads. As we previously noted, the case for adding odd lot quotations to the Securities Information Processors ("SIPs") is a strong one. In our prior odd lot study,[17] odd lot quotations represent significant price improvement on Cboe's exchanges, and likely on other similar exchanges, as well. Moreover, as of February 2023, odd lots comprised approximately 57.3% of all trades in the U.S. financial markets. Yet, despite the prevalence of odd lots in today's markets, odd lot quotations are still not disseminated by the SIPs. Given the reliance on the SIPs by millions of investors on a daily basis, the inclusion of odd lot quotations on the SIPs is long overdue.[18]

Prioritize Exchange Innovation – Retail Price Improvement offerings

In addition to our thoughts on regulatory harmonization and tick-size reform, Cboe believes that the SEC can further help level the playing field for exchanges by permitting exchanges to enhance their retail price improvement programs and to innovate and augment their offerings beyond what the SEC has typically permitted exchanges to offer market participants. For instance, allowing Cboe to display the price and size of available retail liquidity (in addition to side and symbol) on its Retail Liquidity Identifier[19] data feeds would help attract additional retail order flow onto the

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[16] See "Cboe Proposes Tick-Reduction Framework to Ensure Market Structure Benefits All Investors," September 22, 2022, available at, https://www.cboe.com/insights/posts/cboe-proposes-tick-reduction-framework-to-ensure-market-structure-benefits-all-investors/; see also Cboe comment letter re: SEC Proposal on Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders (No. 27_30-22), available at, https://cdn.cboe.com/resources/government_relations/Cboe-Tick-Size-Response-2-28-23.pdf

[17] See "An In-Depth View into Odd Lots", October 2021, available at, https://www.cboe.com/insights/posts/an-in-depth-view-into-odd-lots/.

[18] While Cboe strongly supports the proposed odd lot and round lot reform, Cboe believes that an implementation period well beyond the 90-day period currently proposed by the SEC, is required.

[19] See BYX Rule 11.24(e), "An identifier shall be disseminated through proprietary data feeds or as appropriate through the Consolidated Quotation System when RPI interest priced at least $.001 better than the Exchange's Protected Bid or Protected Offer for a particular security is available in the System ("Retail Liquidity Identifier"). The Retail Liquidity Identifier shall reflect

Cboe BYX Exchange by increasing the visibility of retail orders. By displaying price and size of available retail liquidity, Retail Member Organizations[20] can make more deterministic routing decisions – i.e., they will have a more definitive understanding of how much of their order can be filled on BYX, as well as where within the NBBO such order may filled. We expect other market centers will also propose competitive offerings that will benefit investors if they are allowed to bring them to market in a timely fashion.

The SEC should also grant narrowly crafted exchange retail liquidity programs the ability to accept, rank, and display orders in $.001 increments. While Rule 612 does not prohibit the execution of orders in increments finer than $.01, exchanges may only accept orders explicitly priced in $.01 increments, resulting in most on-exchange trading being executed in $.01 increments. Conversely, while OTC market makers must also accept only orders priced in Rule 612's $.01 increment, OTC market makers are not limited to executing orders in the increment they were accepted, and as such often elect to execute in sub-penny increments.

This dynamic has resulted in the majority of retail order flow being executed off-exchange. Indeed, even the SEC noted in its Tick Size Proposal that a large percentage of retail order flow is executed off-exchange by OTC market makers, and of that order flow, 37% of executions off-exchange are reported in sub-penny increments.[21] By allowing exchange retail liquidity programs the ability to accept, rank, and display retail orders, exchanges will be better positioned to compete with OTC for retail order flow. In turn, market makers may use these programs when trading as riskless principal and provide investors with a better priced execution.

The SEC should also seriously consider providing exchanges with the flexibility to attract retail liquidity by offering retail liquidity providers the option to post to exchanges at less aggressive prices but have the opportunity to improve the price of better-priced hidden orders on the same side and execute against an incoming retail removing order, at an improved price within their established discretionary price range. Recent filings from peer exchanges have sought to offer functionality that would allow retail liquidity providing orders to execute against retail removing orders at prices *equal* to the price of hidden orders and were met with resistance from the Commission during the rule filing process.[22] However, requiring liquidity providers to offer meaningful price improvement, rather than match existing prices, would indeed benefit investors. Cboe believes that exchanges must be afforded the opportunity to innovate in such fashion, particularly when such solutions are designed to enhanced on-exchange liquidity, which in turn will afford retail orders greater opportunity for price improvement.

As always, Cboe welcomes the opportunity for continued discussion with the Commission. There are many views and disagreements regarding the Proposals, but there should be little or no disagreement that registered national securities exchanges have continuously fulfilled their

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the symbol for the particular security and the side (buy or sell) of the RPI interest but shall not include the price or size of the RPI interest."

[20] See BYX Rule 11.24(a), "A Retail Member Organization or 'RMO' is a Member (or a division thereof) that has been approved by the Exchange under this Rule to submit Retail Orders."

[21] Supra note 2, at p. 32-33.

[22] See Securities and Exchange Commission, Release No. 34-94866 (May 6, 2022), 88 FR 8008 (February 7, 2023) (SR-MEMX-2021-10); See also Securities and Exchange Commission, Release No. 34-92398 (July 13, 2021), 86 FR 38166 (July 19, 2021) (SR-IEX-2021-06).

obligations including under incredibly trying circumstances such as the COVID-19 pandemic. Amidst a myriad of scandals and collapses, registered, highly regulated and transparent exchanges have been part of the solution not the problem. As such, we urge the Commission to recognize that arguments from commenters suggesting that the Proposals should only land on exchange pricing reform are self-serving and without merit.

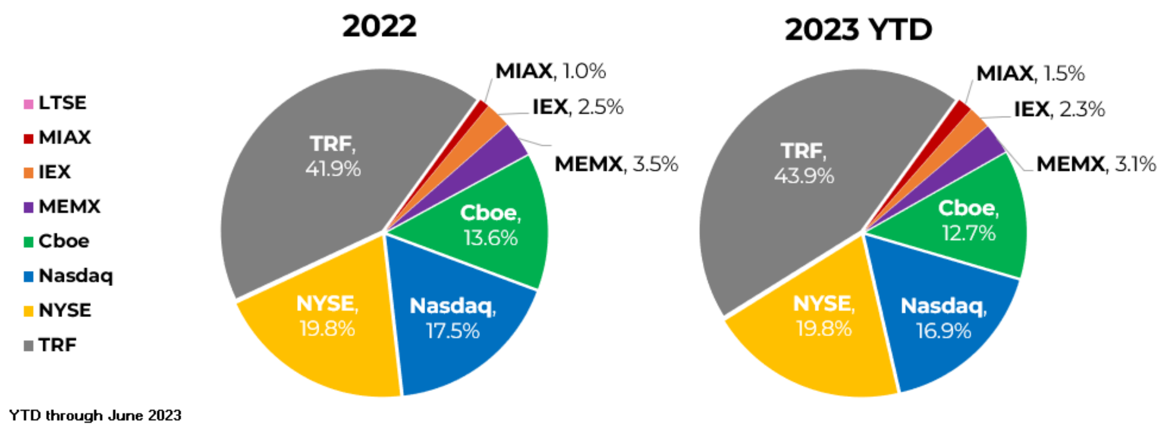
Sincerely,

s/Patrick Sexton

Patrick Sexton
EVP, General Counsel & Corporate Secretary

Appendix

Figure 1 – U.S. Equities Market Share by Exchange Group

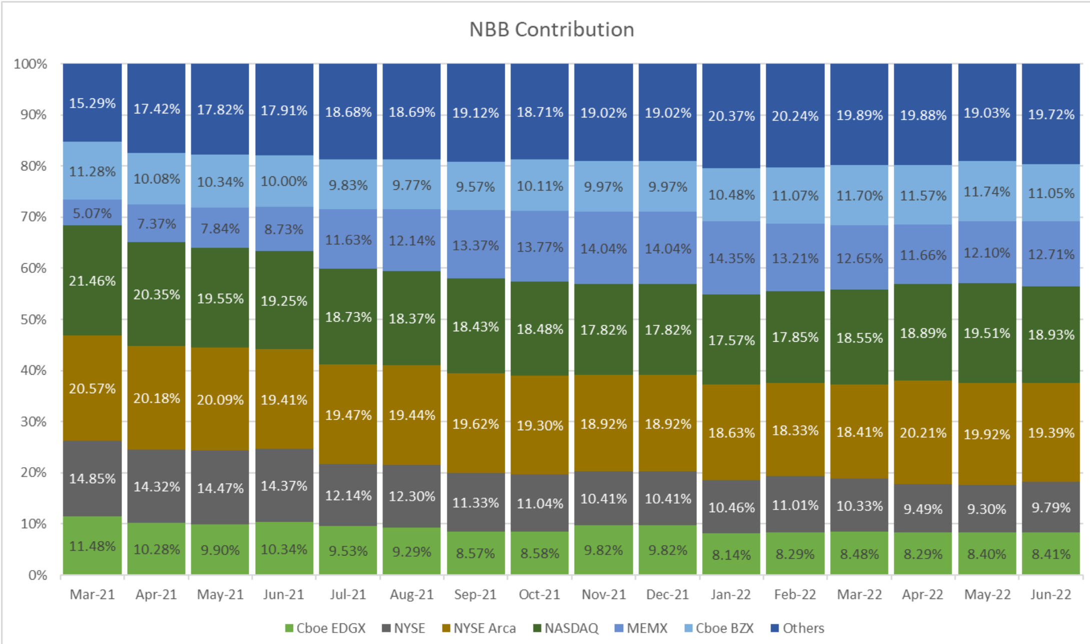


Source: Cboe

Figure 2 – VIX Index Close Price vs Average Daily Volume

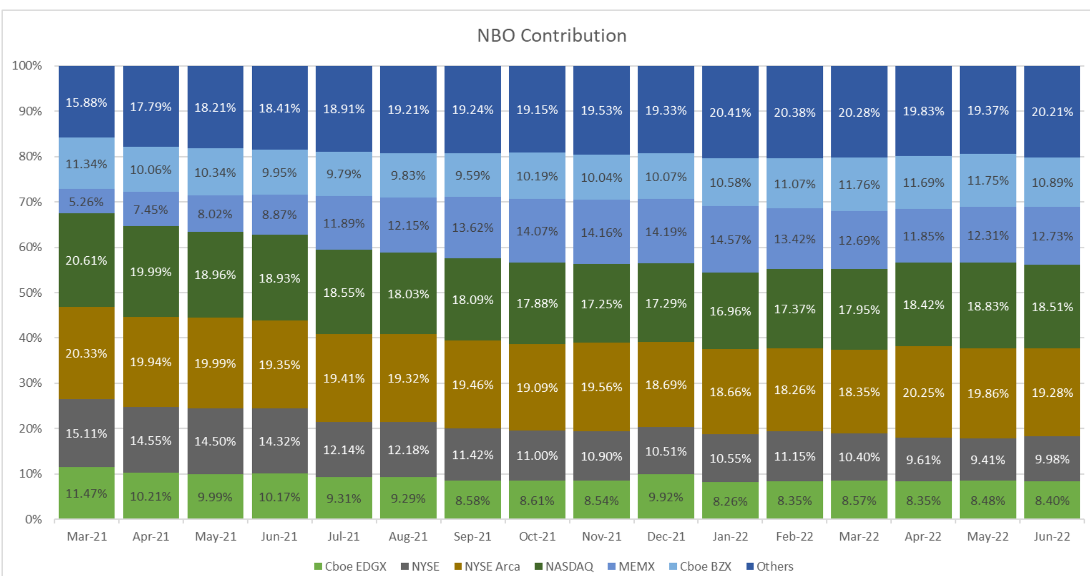
Source: Cboe

Figure 3A – NBB Contribution, March 2021 – June 2022



Note: Contribution to NBB = (end of day exchange's NBB size)/ (end of day NBB size)
Source: Cboe calculations using SIP data

Figure 3B. NBO Contribution, March 2021 – June 2022



Note: Contribution to NBO = (end of day exchange's NBO size)/ (end of day NBO size)
Source: Cboe calculations using SIP data