

December 22, 2020

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

Re: Periodic Auctions for Trading of U.S. Equity Securities (SR-CboeBYX-2020-021)

Dear Ms. Countryman:

BMO Capital Markets¹ is writing to provide its views on the Cboe BYX Exchange (“Exchange”) proposed rule change to introduce periodic auctions for the trading of U.S. equity securities.

Innovation around the execution of orders, including new order types or methods of trade execution that are intended to improve liquidity and encourage price formation and competition, are critical for the effective trading of securities. The proposed periodic auctions are designed to facilitate meaningful price discovery in securities traded on the Exchange and are intended to respond to the Commission’s request on ways to address market quality concerns in thinly-traded securities. BMO Capital Markets therefore supports the overall goals of the proposal, as we have for other innovative initiatives proposed and implemented by exchanges and trading venues that could improve the execution of orders and the efficiency of trading.²

While we support the goals of the proposal, as discussed further below, we believe questions remain about several aspects of the operation of the proposed periodic auctions, including the impact on executions on the continuous order book. We also have concerns around the marking of orders and potential information leakage, as well as the ability to trade in the periodic auction utilizing a “true minimum quantity” functionality. Our specific comments and recommendations follow.

¹ BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Europe p.l.c, and Bank of Montreal (China) Co. Ltd, the institutional broker dealer business of BMO Capital Markets Corp. (Member FINRA and SIPC) and the agency broker-dealer business of Clearpool Execution Services, LLC (Member FINRA and SIPC) in the U.S., and the institutional broker dealer businesses of BMO Nesbitt Burns Inc. (Member Investment Industry Regulatory Organization of Canada and Member Canadian Investor Protection Fund) in Canada and Asia, Bank of Montreal Europe p.l.c. (authorized and regulated by the Central Bank of Ireland) in Europe and BMO Capital Markets Limited (authorized and regulated by the Financial Conduct Authority) in the UK and Australia. “Nesbitt Burns” is a registered trademark of BMO Nesbitt Burns Inc., used under license. “BMO Capital Markets” is a trademark of Bank of Montreal, used under license. “BMO (M-Bar roundel symbol)” is a registered trademark of Bank of Montreal, used under license. ® Registered trademark of Bank of Montreal in the United States, Canada and elsewhere. ™ Trademark of Bank of Montreal in the United States and Canada. © 2020 BMO Financial Group.

² References to prior comments, comment letters, and submissions on trading and market structure issues cited in this letter were filed under the “Clearpool Group” name. Clearpool Group was acquired by BMO Financial Group in April 2020.

I. Potential Impact of Periodic Auctions on Continuous Order Book

As proposed, periodic auctions of one hundred milliseconds would be conducted throughout the course of the trading day when there are matching buy and sell “Periodic Auction Orders”³ that are available to trade in the auction. The Exchange states that periodic auctions would not interrupt trading in the continuous market and would operate simultaneously with, and alongside trading on, the continuous book. Specifically, the proposed periodic auctions could incorporate orders entered on the continuous book, *i.e.*, orders on the continuous book would not initiate a periodic auction but would be eligible to participate in an auction when it is executed. Periodic auctions would be executed at the price level that maximizes the total number of shares in both the auction book and the continuous market that are executed in the auction.

The Exchange states that it developed its system for processing periodic auctions with the goal of minimizing interference with trading in the continuous market. The Commission notes, however, that the Exchange also states that based on testing it has conducted, it believes that the periodic auction would cause additional latency in the continuous book but that any additional latency that may be experienced would be minimal and would not impair the ability of the Exchange to execute incoming orders entered on the continuous book against its published bids or offers. The Exchange adds that, “in rare circumstances where a number of Periodic Auctions could potentially be triggered at or around the same time, the Exchange may throttle the initiation of such Periodic Auctions if needed to maintain appropriate system performance and latency.”

The Commission requests comment whether the Exchange has provided sufficient information regarding any additional latency in the continuous book that may be caused by the proposed periodic auctions or how the Exchange intends to address or otherwise minimize such latency. We believe additional information would be helpful for market participants to better understand the implication that additional latency may have on trades executed either on the continuous book or in the proposed periodic auctions. In particular, would there be any impact on price discovery in the continuous order book? What effects are there of the inability of orders on the continuous book to choose not to interact with the periodic auctions? What are the parameters surrounding the circumstances in which the Exchange would “throttle” the initiation of periodic auctions?

In addition, it is important to note that the proposed periodic auction mechanism and its interaction with the continuous book is complex, adding to the importance of providing as much information as possible regarding the operation of the mechanism. With complexity come risks to the securities markets - the additional latency in the continuous book being one of these risks.

The Exchange states that it will continue to monitor system performance and latency after the introduction of periodic auctions to ensure that it is able to process both periodic auctions and orders on the continuous book efficiently and without undue latency. Nevertheless, we believe that it is important to better understand the operation of periodic auctions prior to its introduction. In addition, we believe that the Exchange should consider possible methods to dampen the impact of the periodic auctions on the continuous order book, such as providing the ability for orders on the continuous book to “opt out” of participating in the periodic auction.⁴

³ A “Periodic Auction Only Order” is a Non-Displayed Limit Order entered with an instruction to participate solely in Periodic Auctions.

⁴ The proposal states that Periodic Auction Orders and Continuous Book Orders may be modified and/or cancelled at any time, including during the Periodic Auction Period. Given the ability for orders to be cancelled at any time, and the interconnectivity of the periodic auction with the continuous order book, we are concerned that persons may be able to utilize the ability to cancel and the transparency surrounding orders in the periodic auction to garner information about trading interest on the Exchange in general and thereby “game” the market. To address these concerns, we recommend that notification and transparency around an order cancellation not be provided until the 100 millisecond auction is complete. In this manner, persons will not be aware of the

Finally, the proposed rule change would allow users in the periodic auction to receive an execution at prices at or better than the midpoint of the NBBO. Specifically, the Exchange states that the “Periodic Auction Price” would be constrained by auction collars that are designed to ensure that the execution of a periodic auction takes place at a price that is reasonably related to the market for the security. BMO Capital Markets believes that the Exchange should consider executing orders in the periodic auctions only at the midpoint of the NBBO. Midpoint execution could reduce the potential impact on the continuous order book discussed above and address the complexity of the proposed rule change overall.

II. Marking of Orders and Potential Information Leakage

The proposed rule change does not discuss how orders executed in the periodic auction will be designated or labeled post-trade. It is our understanding that the FIX message associated with a periodic auction execution would not have anything indicating that a trade occurred in an auction, *i.e.*, the auction trade print will be a bulk print that includes all fills, but that the trade will be identified as an auction print on the Exchange’s proprietary data feed.

BMO Capital Markets believes that a continuous book order that interacts with an auction order should not have a specific liquidity code attached indicating it was executed as such as this could lead to a “free look” indicating an imbalance and the direction of the imbalance to the markets. The marking of auction order execution information in general via the Exchange’s proprietary data feed also raises significant concerns regarding potential information leakage. We do not see the purpose of indicating that an auction trade occurred, particularly exclusively on the proprietary data feed, other than to provide a mechanism for certain market participants to gain knowledge of the size and direction of institutional orders in order to take advantage of them. These trades therefore should be marked just like any other trade on the Exchange’s proprietary data feed, with no special code associated.

Finally, as discussed above, we believe that the Exchange should consider executing orders in the periodic auctions only at the midpoint of the NBBO. Midpoint execution would provide far less signaling to the market and therefore less potential for information leakage.⁵

III. Need for True Minimum Quantity Functionality

The Exchange states that the Periodic Auction Only order may be particularly valuable for market participants that are seeking to execute larger orders that they may not be willing to expose for trading on the continuous book. The Exchange therefore would permit users to specify a minimum execution quantity for their Periodic Auction Only orders.

The Exchange notes that it currently offers “Minimum Quantity Orders” to users that trade on the continuous book, including a “True Minimum Quantity” feature. An order with a True Minimum Quantity feature enabled will only execute when a single fill meets or exceeds the minimum quantity specified on the order, *i.e.*, multiple fills will not be aggregated to meet the minimum quantity requirement.

cancellation of their orders during an auction, diminishing the ability to take advantage of information regarding the periodic auction during the auction itself.

⁵ We also understand that the fee codes associated with the periodic auctions have not been determined. We request further clarity surrounding how and whether orders that trade in the proposed periodic auction will receive a unique fee code that would indicate the order traded in the auction.

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It is our understanding that the True Minimum Quantity feature offered to orders in the continuous book would not be available for orders in the proposed auction mechanism. Further, any orders in the continuous book that have a True Minimum Quantity enabled would be ineligible to participate in the proposed auction mechanism.

We believe a True Minimum Quantity feature should be made available for orders in the proposed auction mechanism. One of the goals of the proposed rule change is to assist investors seeking to execute larger orders that would be difficult to execute without market impact in the continuous market. Providing a True Minimum Quantity feature would go far in providing a meaningful way for users to find large-in-size contra-side orders, as opposed to having to interact with an aggregation of smaller orders, potentially leading to information leakage. We therefore recommend that the Exchange add this functionality to the periodic auction mechanism.

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BMO Capital Markets offers its assistance to the Commission as it examines the proposed rule change. If you have any questions on our comment letter, please feel free to contact Joe Wald at

[REDACTED] or at [REDACTED] or Ray Ross at [REDACTED] or at [REDACTED]

Sincerely,



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cc: The Honorable Jay Clayton, Chair
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline Crenshaw, Commissioner
Brett Redfearn, Director, Division of Trading and Markets