

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-89424; File No. SR-CboeBYX-2020-021)

July 29, 2020

Self-Regulatory Organizations; Cboe BYX Exchange, Inc.; Notice of Filing of a Proposed Rule Change to Introduce Periodic Auctions for the Trading of U.S. Equity Securities

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),¹ and Rule 19b-4 thereunder,² notice is hereby given that on July 17, 2020, Cboe BYX Exchange, Inc. (the “Exchange” or “BYX”) filed with the Securities and Exchange Commission (the “Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization’s Statement of the Terms of Substance of the Proposed Rule Change

Cboe BYX Exchange, Inc. (“BYX” or the “Exchange”) is filing with the Securities and Exchange Commission (the “Commission”) a proposed rule change to introduce periodic auctions for the trading of U.S. equity securities. The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange’s website (http://markets.cboe.com/us/equities/regulation/rule_filings/byx/), at the Exchange’s Office of the Secretary, and at the Commission’s Public Reference Room.

II. Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of the proposed rule change is to introduce periodic auctions for the trading of U.S. equity securities (“Periodic Auctions”).³ On October 17, 2019, the Commission issued a Statement on Market Structure Innovation for Thinly Traded Securities (“Statement”).⁴ The Statement requested comment on potential innovations that could improve market quality in equity securities that trade in lower volume (“thinly-traded securities”), and sought further feedback on the regulatory changes that may be needed to facilitate such innovation. Cboe Global Markets, Inc. (“Cboe”), the Exchange’s parent company, submitted a comment letter in response to the Statement on December 20, 2019.⁵ As expressed in that comment letter, Cboe shares the Commission’s interest in improving market quality in this segment of the U.S. equities market, and believes that the best way to accomplish this goal is through innovation and targeted approaches that invite investor choice.⁶ At that time, Cboe suggested a handful of different approaches that national securities exchanges could take to improve market quality in thinly-traded securities, without requiring anti-competitive and ultimately harmful changes to U.S.

³ The term “Periodic Auction” shall mean an auction conducted pursuant to Proposed Rule 11.25. See Proposed Rule 11.25(a)(4).

⁴ See Securities Exchange Act Release No. 87327 (October 17, 2019), 84 FR 56956 (October 24, 2019) (File No. S7-18-19).

⁵ See Letter from Adrian Griffiths, Assistant General Counsel, Cboe to Vanessa Countryman, Secretary, Commission dated December 20, 2019, *available at* <https://www.sec.gov/comments/s7-18-19/s71819-6574727-201085.pdf>.

⁶ Id.

equities market structure.⁷ Following the submission of that comment letter, Cboe has continued to work on the design of potential market structure innovations that it could implement to improve market quality in thinly-traded securities, consistent with the Commission's request. As a result of those efforts, the Exchange is now proposing to implement Periodic Auctions.

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, as defined below, that are available to trade in such an auction. Periodic Auctions would not interrupt trading in the continuous market, and would be price forming auctions that are 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. While Periodic Auctions would be available in all securities traded on the Exchange, the Exchange believes that this trading mechanism would be particularly valuable for securities that trade in lower volume and consequently suffer from wider spreads and less liquidity displayed in the public markets. Cboe has been a global leader in the implementation of periodic auctions, and currently runs the largest periodic auction book for the trading of European equities. The proposed Periodic Auctions that the Exchange would implement are based on the model that Cboe offers to clients in Europe, with targeted changes to adapt this model for the U.S. equities market. The Exchange believes that its implementation of Periodic Auctions would enhance the ability for investors to source liquidity in both thinly-traded securities where liquidity is naturally more scarce, as well as in more actively traded securities, including where available liquidity may be diminished due to increased volatility or other market conditions. Today, U.S. equities market participants are largely limited to two significant liquidity events where orders are pooled and executed at a

⁷ Id.

single point in time – *i.e.*, the opening and closing auctions. During the rest of the trading day, liquidity may be more limited, particularly for market participants that are seeking to trade larger orders. As proposed, Periodic Auctions would offer a new price forming auction that could be utilized by investors seeking liquidity, including block-size liquidity, during the course of the trading day. The Exchange believes that concentrating available liquidity in Periodic Auctions that would take place when the Exchange has received matching auctionable buy and sell orders would assist investors in obtaining needed liquidity, particularly in the case of investors seeking to execute larger orders that would be difficult to execute without market impact in the continuous market. In addition, since the proposed Periodic Auctions would be price forming, these auctions would perform a valuable price discovery function, which may be particularly helpful for investors when trading thinly-traded or other securities that typically trade with wider spreads.

I. Order Entry and Cancellation

The Exchange would offer Periodic Auction Only Orders and Periodic Auction Eligible Orders,⁸ both of which indicate a member’s desire to initiate a Periodic Auction, if possible, as well as Continuous Book Orders that would not initiate a Periodic Auction but would be eligible to participate in such an auction when it is executed.⁹ Thus, as provided in Proposed Rule 11.25(b), Users may enter Periodic Auction Orders, *i.e.*, Periodic Auction Only Orders or

⁸ A “Periodic Auction Only Order” is a Limit Order entered with an instruction to participate solely in Periodic Auctions pursuant to Proposed Rule 11.25. A “Periodic Auction Eligible Order” is a Non-Displayed Limit Order eligible to trade on the Continuous Book that is entered with an instruction to also initiate a Periodic Auction, if possible, pursuant to Proposed Rule 11.25. See Proposed Rule 11.25(b)(1)-(2).

⁹ The term “Continuous Book Order” shall mean an order on the BYX Book that is not a Periodic Auction Order, and the term “Continuous Book” shall mean System’s electronic file of such Continuous Book Orders. See Proposed Rule 11.25(a)(2).

Periodic Auction Eligible Orders,¹⁰ that are eligible to initiate Periodic Auctions pursuant to Proposed Rule 11.25(c), as discussed later in this proposed rule change, and Continuous Book Orders that may participate in such Periodic Auctions if present on the Continuous Book at the time a Periodic Auction is executed. As explained in more detail below, the ability to choose between Periodic Auction Only Orders, Periodic Auction Eligible Orders, and Continuous Book Orders would allow members to control how their orders are handled in Periodic Auctions – *e.g.*, whether the order is able to initiate a Periodic Auction, or not, and whether the order participates on the Continuous Book, or not. The choice of different methods of participating in Periodic Auctions would therefore provide flexibility to members based on their individual business needs, or the needs of their customers. Regardless of the type of order submitted, orders entered on the Exchange that are present when a Periodic Auction is executed would generally be eligible to participate in that execution. The proposed introduction of Periodic Auctions would therefore benefit both Users explicitly seeking to use this functionality, as well as other Users that may benefit from any increased liquidity routed to the Exchange in order to participate in such Periodic Auctions.

General Requirements for Order Entry and Cancellation. Periodic Auction Orders and Continuous Book Orders may be modified and/or cancelled at any time, including during the Periodic Auction Period,¹¹ at the discretion of the User. Periodic Auctions are designed to allow seamless participation in a price forming auction process without impacting continuous trading, and market participants would therefore remain able to manage orders that they have entered to

¹⁰ The term “Periodic Auction Order” shall mean a “Periodic Auction Only Order” or “Periodic Auction Eligible Order” as those terms are defined in Proposed Rules 11.25(b)(1)-(2), and the term “Periodic Auction Book” shall mean the System’s electronic file of such Periodic Auction Orders.. See Proposed Rule 11.25(a)(6).

¹¹ The term “Periodic Auction Period” would be defined in Proposed Rule 11.25(a)(8) as the fixed time period of 100 milliseconds for conducting a Periodic Auction.

participate in such auctions during the course of the trading day. Since some Users may not wish to cancel Periodic Auction Orders inadvertently during the course of an ongoing Periodic Auction, however, the Exchange would provide an optional instruction that would allow such Users to instruct the Exchange not to cancel a Periodic Auction Order during a Periodic Auction Period if it is marketable at the Periodic Auction Book Price.¹²

Given that Periodic Auctions are designed, in part, to facilitate the sourcing of larger blocks of liquidity that may not be available in continuous trading, the Exchange would also implement certain size restrictions that would be applicable to Periodic Auction Orders. Specifically, Periodic Auction Orders would have to be for a size of 100 shares or more in securities priced below \$500 based on the consolidated last sale price, *i.e.*, the last sale price that is disseminated by the securities information processor, or if no consolidated last sale price is available, the previous day's closing price.¹³ There would be no similar size restrictions for higher-priced securities, where such a size requirement would require a higher notional value to participate in a Periodic Auction.

Periodic Auction Only Orders. A “Periodic Auction Only Order” would be defined in proposed Rule 11.25(b)(1) as a Limit Order entered with an instruction to participate solely in Periodic Auctions pursuant to Proposed Rule 11.25. The Periodic Auction Only Order is designed for market participants that want to access liquidity that is available in one or more

¹² The Periodic Auction Book Price is an indicative price that is designed to provide information about the price where a Periodic Auction may ultimately be executed. See *infra* note 28. The instruction to “lock-in” a Periodic Auction Order would be included as a port setting that a User can use to flag any orders entered through a particular port. Users that wish to use this feature must use the port setting and would not be able to flag individual orders on an order-by-order basis.

¹³ Periodic Auction Only Orders that do not meet applicable size requirements would be rejected. Periodic Auction Eligible Orders would be handled as Continuous Book Orders, and would be eligible to trade on the Continuous Book based on User instructions.

Periodic Auctions and do not wish to participate in the continuous market. As such, a Periodic Auction Only Order would not be eligible for execution on the Continuous Book. Instead, such orders would remain on the Periodic Auction Book for participation in Periodic Auctions until executed or cancelled.

Periodic Auction Only Orders would only be accepted with a time-in-force of Regular Hours Only (“RHO”) or immediate-or-cancel (“IOC”). Specifically, Periodic Auction Only Orders entered outside of Regular Trading Hours must include a time-in-force of Regular Hours Only (“RHO”) as the Exchange would conduct Periodic Auctions only during Regular Trading Hours,¹⁴ and not during the Early Trading,¹⁵ Pre-Opening,¹⁶ or After Hours Trading Sessions.¹⁷ Periodic Auction Only Orders entered during Regular Trading Hours may be either RHO or immediate-or-cancel (“IOC”). If entered with a time-in-force of IOC, the order must include an instruction pursuant to Proposed Rule 11.25(b) not to cancel the order during a Periodic Auction Period if it is marketable at the Periodic Auction Book Price. As previously discussed, with the inclusion of this instruction, an order that initiates a Periodic Auction would be considered “locked-in” and would not be cancellable by the entering User during the course of an ongoing Periodic Auction Period unless it is not marketable at the Periodic Auction Book Price. An IOC order entered with this instruction would therefore be able to immediately initiate a Periodic Auction on entry. And, if it does so, it would not be cancelled for the duration of the Periodic

¹⁴ The term “Regular Trading Hours” means the time between 9:30 a.m. and 4:00 p.m. Eastern Time. See BYX Rule 1.5(w).

¹⁵ The term “Early Trading Session” means the time between 7:00 a.m. and 8:00 a.m. Eastern Time. See BYX Rule 1.5(ee).

¹⁶ The term “Pre-Opening Session” means the time between 8:00 a.m. and 9:30 a.m. Eastern Time. See BYX Rule 1.5(r).

¹⁷ The term “After Hours Trading Session” means the time between 4:00 p.m. and 8:00 p.m. Eastern Time. See BYX Rule 1.5(c).

Auction Period, except in circumstances where the Periodic Auction Book Price indicates that the order might not be executable, thereby ensuring that Periodic Auction Only Orders entered with these attributes would ordinarily be eligible to participate in Periodic Auctions that they initiate.

The Exchange believes 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 expose for trading on the Continuous Book. Thus, the Exchange would permit Users to specify a minimum execution quantity for their Periodic Auction Only Orders. A Periodic Auction Only Order entered with a minimum execution quantity would be executed in a Periodic Auction only if the minimum size specified can be executed against one or more contra-side Periodic Auction Orders or Continuous Book Orders. The Exchange offers Minimum Quantity Orders to Users that trade on the Continuous Book today.¹⁸ The proposed instruction that could be attached to a Periodic Auction Only Order is similar to the current Minimum Quantity Orders used for trading on the Continuous Book but would only permit the default handling of that order type, and would not allow a member to alternatively specify that the minimum quantity condition be satisfied by each individual contra-side order. Periodic Auction Eligible Orders and Continuous Book Orders entered as Minimum Quantity Orders would be subject to similar restrictions.

In addition, the Exchange believes that some Users may wish to use Periodic Auctions to seek liquidity at or better than a pegged price that is based on the applicable national best bid and offer (“NBBO”). The Exchange would therefore allow a User to optionally include an instruction on its Periodic Auction Only Orders to peg such orders to either the midpoint of the NBBO

¹⁸ See BYX Rule 11.9(c)(5).

(“midpoint peg”), or the same side of the NBBO (“primary peg”). Similar to pegging instructions offered for Continuous Book Orders today,¹⁹ Periodic Auction Only Orders entered with a primary peg instruction could be pegged to the NBB or NBO, or a certain amount above the NBB or below the NBO (“offset”).²⁰ The inclusion of a pegging instruction for Periodic Auction Only Orders would ensure that Users have the opportunity to specify that these orders are only executed at prices defined in relation to the market for the particular security, including midpoint executions that offer price improvement compared to the applicable NBBO.

Periodic Auction Eligible Orders. A “Periodic Auction Eligible Order” would be defined in Proposed Rule 11.25(b)(2) as a Non-Displayed Limit Order eligible to trade on the Continuous Book that is entered with an instruction to also initiate a Periodic Auction, if possible, pursuant to Proposed Rule 11.25. The Periodic Auction Eligible Order would allow market participants to trade in the continuous market during the course of the trading day, with the ability to also initiate Periodic Auctions when there is contra-side liquidity available to trade. The Exchange notes that there may be situations where an incoming Periodic Auction Eligible Order would be able to either initiate a Periodic Auction, or alternatively trade immediately with one or more orders resting on the Continuous Book. Since Periodic Auction Eligible Orders are geared towards participation in Periodic Auctions, with attendant price discovery benefits and potential price improvement opportunities, an incoming Periodic Auction Eligible Order that is eligible both to trade on the Continuous Book and initiate a Periodic Auction would initiate a Periodic Auction. For similar reasons, Periodic Auction Eligible Orders would not trade on the Continuous Book during a Periodic Auction Period in the security. Although the Exchange

¹⁹ See BYX Rule 11.9(c)(8)(A).

²⁰ Since Periodic Auctions are restricted from trading outside of the applicable Protected NBBO, the offset included on such orders would have to result in the order being more aggressive than the NBBO – *i.e.*, priced higher for buy orders or lower for sell orders.

would not halt or otherwise suspend trading on the Continuous Book while conducting a Periodic Auction, the Exchange believes that Periodic Auction Eligible Orders that are designed for use in Periodic Auctions should preference trading in such auctions over trading on the Continuous Book.

The time-in-force included on a Periodic Auction Eligible Order would also need to allow the order to be entered and remain on the Periodic Auction Book during the course of a Periodic Auction. As a result, there would be certain limitations on the entry of Periodic Auction Eligible Orders with a time-in- IOC or fill-or-kill (“FOK”). An IOC order is defined in BYX Rule 11.9(b)(1) as a limit order that is to be executed in whole or in part as soon as such order is received. Thus, under the ordinary terms of an IOC order, if such an order were to initiate a Periodic Auction, it would generally not be available for later execution at the end of any Periodic Auction Period. To ensure that IOC orders that initiate a Periodic Auction are eligible to participate in the auction’s eventual execution, the Exchange therefore proposes that Periodic Auction Eligible Orders entered with a time-in-force of IOC must include an instruction pursuant to Proposed Rule 11.25(b) not to cancel the order during a Periodic Auction Period if it is marketable at the Periodic Auction Book Price. Such Periodic Auction Eligible Orders would be handled in a manner consistent with that described above with respect to Periodic Auction Only Orders. Similarly, an FOK order is defined in BYX Rule 11.9(b)(6) as a limit order that is to be executed in its entirety as soon as it is received and, if not so executed, cancelled. The Exchange is not proposing to support the use of FOK orders in Periodic Auctions, and therefore Periodic Auction Eligible Orders would not be able to be entered with a time-in-force of FOK.²¹

²¹ Although the Exchange is not proposing any special handling for IOC or FOK orders that are entered as Continuous Book Orders, the Exchange notes that such orders would not participate in Periodic Auctions as they would never be posted to the Continuous Book.

As previously explained, the Exchange believes that Users seeking liquidity in Periodic Auctions may wish to use such auctions to receive an execution at prices at or better than the midpoint of the NBBO. The Exchange currently offers functionality that allows members entering Mid-Point Peg Orders on the Continuous Book to forgo an execution in situations where the NBBO is locked.²² However, in order to avoid a Periodic Auction from being initiated that may not ultimately result in an execution during a locked market, Mid-Point Peg Orders that are entered with an instruction to not execute when the NBBO is locked would not be eligible to be entered as Periodic Auction Eligible Orders.²³ This handling would mirror the handling of Periodic Auction Orders, which as proposed could be entered with a midpoint peg instruction, but would not include any further instructions that would allow the User to elect not to trade during a locked market.

Since the Exchange believes that Periodic Auctions may be beneficial to market participants trading larger orders that they may not want to be executed unless a specified minimum size can be satisfied, the Exchange would also allow for Minimum Quantity Orders to be entered as Periodic Auction Eligible Orders. As previously discussed, the Exchange currently offers two variants of this order type. By default, a Minimum Quantity Order would execute upon entry against a single order or multiple aggregated orders simultaneously. Alternatively, such orders may be entered with an instruction that the order not trade with multiple aggregated orders simultaneously, and that the minimum quantity condition instead be satisfied by each individual order resting on the Continuous Book. As proposed, Minimum Quantity Orders, as

²² See BYX Rule 11.9(c)(9).

²³ This restriction would not apply to Continuous Book Orders. Since Continuous Book Orders do not initiate Periodic Auctions, a Continuous Book Order entered with these instructions would be able to participate in the eventual execution of Periodic Auctions if such execution can take place in accordance with the terms of the order.

defined in Rule 11.9(c)(5), may be entered as Periodic Auction Eligible Orders only if the order includes the default instruction that allows the minimum size specified to be executed against one or more contra-side orders – *i.e.*, similar to the proposed handling of Periodic Auction Only Orders entered with a minimum execution quantity instruction. Orders entered with the alternative instruction that requires the minimum size specified to be satisfied by each individual contra-side order would not be eligible to be entered as Periodic Auction Eligible Orders. As discussed later in this proposed rule change, similar restrictions would also apply to Continuous Book Orders, which would not participate in Periodic Auctions if entered with this alternative instruction.

Finally, similar to the opening process used to begin trading in a security pursuant to BYX Rule 11.23: (1) Discretionary Orders, as defined in rule 11.9(c)(10), would be eligible to participate only up to their ranked price for buy orders or down to their ranked price for sell orders;²⁴ and (2) all Pegged Orders and Mid-Point Peg Orders, as defined in BYX Rule 11.9(c)(8) and (9), would be eligible for execution in Periodic Auctions based on their pegged prices. The Exchange believes that this proposed handling is equally relevant to Periodic Auctions, and would ensure, where appropriate, that the order handling experienced in such Periodic Auctions is familiar to members and investors.

Continuous Book Orders. A “Continuous Book Order” would be defined in Proposed Rule 11.25(a)(2) as an order on the BYX Book that is not a Periodic Auction Order. Continuous Book Orders, which may participate in the eventual execution of a Periodic Auction but would not be able to initiate such an auction, would be handled in the same manner as Periodic Auction Eligible Orders solely with respect to handling of (1) Discretionary Orders, and (2) Pegged

²⁴ The discretionary range of such orders would not be considered in Periodic Auctions.

Orders and Mid-Point Peg Orders, each as discussed in the preceding paragraph. Continuous Book Orders would also be subject to the handling discussed for Periodic Auction Eligible Orders entered as Minimum Quantity Orders, with the caveat that this handling would only apply to Continuous Book Orders entered with the default instruction that permits the execution of such orders against one or more contra-side orders. As proposed, similar to the treatment of Periodic Auction Orders – including both Periodic Auction Only Orders and Periodic Auction Eligible Orders – Continuous Book Orders entered with the alternative instruction that requires the minimum size specified to be satisfied by each individual contra-side order would not be included in Periodic Auctions. However, rather than prohibiting Users from entering Minimum Quantity Orders with this instruction on the Continuous Book, where this instruction may still be valuable for investors, the Exchange would simply prohibit any orders entered with that instruction from participating in the execution of any Periodic Auctions. Finally, Continuous Book Orders that are entered as Reserve Orders, as defined in Rule 11.9(c)(1), would be eligible to participate in Periodic Auctions to the full extent of their displayed size and Reserve Quantity.²⁵

II. Initiation and Publication of Periodic Auction Information

The Exchange would conduct Periodic Auctions during Regular Trading Hours to give market participants an opportunity to obtain liquidity during the course of the trading day. Instead of initiating such auctions on a set schedule, the Exchange would wait until it has executable interest that is eligible to initiate a Periodic Auction, thereby ensuring that Periodic Auctions are only performed when it may be possible for interested market participants to obtain

²⁵ There are no similar requirements applicable to Periodic Auction Eligible Orders since Reserve Orders include a displayed portion and therefore would not be eligible for entry as Periodic Auction Eligible Orders. As discussed, Periodic Auction Eligible Orders, as defined, would include only Non-Displayed Limit Orders.

an execution at the end of the Periodic Auction Period. Specifically, as provided in Proposed Rule 11.25(c), a Periodic Auction would be initiated in a security during Regular Trading Hours when one or more Periodic Auction Orders to buy become executable against one or more Periodic Auction Orders to sell pursuant to Proposed Rule 11.25. This would begin a Periodic Auction Period of 100 milliseconds where the Exchange would match buy and sell orders for potential execution.²⁶

Once the Periodic Auction Period has begun, the Exchange would consolidate any additional Periodic Auction Orders that it receives, which would be used to calculate the information disseminated at a randomized time thereafter in a Periodic Auction Message.²⁷ Specifically, at a randomized time in one millisecond intervals after a Periodic Auction has been initiated and before the end of the Periodic Auction, the Exchange would disseminate via electronic means a Periodic Auction Message that includes two important pieces of information about the Periodic Auction: (1) the Periodic Auction Book Price,²⁸ and (2) the total number of shares of Periodic Auction Orders that are matched at the Periodic Auction Book Price. With

²⁶ One relevant exception to this would be for Periodic Auctions that would otherwise end after the Regular Trading Session. As previously discussed, Periodic Auctions would only be conducted during Regular Trading Hours. As a result, such Periodic Auctions would be performed at the end of the Regular Trading Session.

²⁷ The “Periodic Auction Message” would be defined in Proposed Rule 11.25(a)(7) as a message disseminated by electronic means that includes information about any matched Periodic Auction Orders on the Periodic Auction Book, as described in Rule 11.25(c).

²⁸ The “Periodic Auction Book Price” would be defined in Proposed Rule 11.25(a)(5) as the price within the Collar Price Range at which the most shares from the Periodic Auction Book would match. In the event of a volume-based tie at multiple price levels, the Periodic Auction Book Price would be the price that results in the minimum total imbalance. In the event of a volume-based tie and a tie in minimum total imbalance at multiple price levels, the Periodic Auction Book Price would be the price closest to the Volume Based Tie Breaker. As calculated, the Periodic Auction Book Price would be expressed in the minimum increment for the security unless the midpoint of the NBBO establishes the Periodic Auction Book Price.

these two pieces of information, market participants would be informed of both the price at which Periodic Auction Orders would match based on current market conditions, and the number of shares of such orders that would be matched. The calculation of the Periodic Auction Book Price would exclude Continuous Book Orders. Although Continuous Book Orders are eligible to trade in a Periodic Auction at the end of the Periodic Auction Period, they are potentially subject to execution on the Continuous Book prior to the execution of the Periodic Auction. As a result, similar to certain information disseminated by other national securities exchanges in advance of their auctions,²⁹ Continuous Book Orders would not be used to calculate the data elements included in the Periodic Auction Message. After its initial dissemination, a revised Periodic Auction Message would be disseminated in one millisecond intervals for the remaining duration of the auction, thereby ensuring that market participants maintain a current view of the market with which to make appropriate trading decisions throughout the Periodic Auction Period.

III. Determination of Periodic Auction Price

Periodic Auctions are designed to facilitate meaningful price discovery in securities traded on the Exchange throughout the course of the trading day. Similar to the operation of opening and closing auctions in securities listed on the Exchange's affiliate, Cboe BZX Exchange, Inc. ("BZX"),³⁰ as well as similar auctions conducted on other national securities exchanges, Periodic Auctions would therefore be executed at a price that maximizes the number

²⁹ For example, the "Current Reference Price" disseminated ahead of Nasdaq's closing cross is defined as the single price that is at or within the current Nasdaq Market Center best bid and offer at which the maximum number of shares of MOC, LOC, and IO orders can be paired, subject to certain tie-breakers. See Nasdaq Rule 4754(a)(7)(A). Nasdaq does not include "Close Eligible Interest" entered on its continuous book in determining the Current Reference Price pursuant to Nasdaq Rule 4754(a)(7)(A), nor does it include such orders in its dissemination of the number of shares represented by MOC, LOC, and IO orders that are paired at the Current Reference Price. See Nasdaq Rule 4754(a)(7)(B).

³⁰ See BZX Rule 11.23(b)(2)(B); (c)(2)(B).

of shares traded in the auction within designated auction collars (“Collar Price Range”).³¹ Specifically, as provided in Proposed Rule 11.25(d), the Periodic Auction Price would be established by determining the price level within the Collar Price Range that maximizes the number of shares executed between the Continuous Book and Periodic Auction Book in the Periodic Auction.³²

The Exchange would also implement certain “tie-breakers” that would be used to determine the applicable Periodic Auction Price if multiple price levels would satisfy the requirement to maximize the number of shares executed in the auction. These tie-breakers would be the same as the tie-breakers currently used for opening and closing auctions on BZX for that exchange’s listed securities. Specifically, in the event of a volume-based tie at multiple price levels, the Periodic Auction Price would be the price that results in the minimum total imbalance – *i.e.*, the price at which the number of any executable shares to buy or sell that do not participate in the Periodic Auction is minimized.³³ In the event of a volume-based tie and a tie in minimum total imbalance at multiple price levels, the Periodic Auction Price would be the price closest to

³¹ The term “Collar Price Range” shall mean the more restrictive of the Midpoint Collar Price Range, as defined in Proposed Rule 11.25(a)(1), and the Protected NBBO. See Proposed Rule 11.25(a)(1). Notwithstanding the foregoing, if the Collar Price Range calculated by the Exchange would be outside of the applicable Price Bands established pursuant to the Limit Up-Limit Down Plan, the Collar Price Range will be capped at such Price Bands. Id.

³² The calculation of Collar Price Range, as defined in the Proposed Rule, is described in more detail in Section IV of this proposed rule change. As calculated, the Periodic Auction Price would be expressed in the minimum increment for the security unless the midpoint of the NBBO establishes the Periodic Auction Price.

³³ Selecting a price that would minimize the imbalance best reflects the value of the security based on the auction's price discovery process because it is the price level where the amount of buy and sell interest is closest to equal.

the Volume Based Tie Breaker, which would be defined in Proposed Rule 11.25(a)(9) as the midpoint of the NBBO for a particular security where the NBBO is a Valid NBBO.³⁴

IV. Determination of Collar Price Range

As discussed, 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. While Periodic Auctions are designed to balance supply and demand through a competitive auction process, the Collar Price Range would restrict trading from occurring at prices that are far away from the market. Specifically, as proposed, the term “Collar Price Range” would be defined in Proposed Rule 11.25(a)(1) as the more restrictive of the Midpoint Collar Price Range and the Protected NBBO.³⁵ The Collar Price Range would be similar to the auction collars used today for BZX’s opening and closing processes, with important differences to account for the fact that Periodic Auctions would be subject to the requirements of the Rule 611 of Regulation NMS (“Order Protection Rule”) and the Plan to Address Extraordinary Market Volatility (the “Limit Up-Limit Down” or “LULD” Plan).

³⁴ As is the case on the Exchange’s affiliate, BZX, for opening and closing auctions for BZX-listed securities, a NBBO would be considered a Valid NBBO where: (i) there is both a NBB and NBO for the security; (ii) the NBBO is not crossed; and (iii) the midpoint of the NBBO is less than the Maximum Percentage away from both the NBB and the NBO as determined by the Exchange and published in a circular distributed to Members with reasonable advance notice prior to initial implementation and any change thereto. See BZX Rule 11.23(b)(23). Where the NBBO is not a Valid NBBO, the consolidated last sale price would be used. Id.

³⁵ The term “Midpoint Collar Price Range” shall mean the range from a set percentage below the Collar Midpoint (as defined below) to above the Collar Midpoint, such set percentage being dependent on the value of the Collar Midpoint at the time of the auction, as described below. See Proposed Rule 11.25(a)(3). The “Protected NBBO” is the national best bid or offer that is a Protected Quotation. See BYX Rule 1.5(s).

Specifically, Periodic Auctions would be subject to a Collar Price Range that is the more restrictive of the Midpoint Collar Price Range (described below) and the Protected NBBO. This implementation would therefore ensure that such Periodic Auctions are executed at a price that is consistent with the requirements of the Order Protection Rule as well as the additional protections provided by auction collars that are similar to those currently used by the Exchanges' affiliate, BZX, for opening and closing auctions in that exchange's listed securities. For all Periodic Auctions, the Exchange would calculate a Midpoint Collar Price Range to establish an upper and lower bound for the execution of such auctions. The Midpoint Collar Price Range would mirror the collars currently established for use in BZX auctions, and would be defined in Proposed Rule 11.25(a)(3) as the range from a set percentage below the Collar Midpoint to above the Collar Midpoint,³⁶ such set percentage being dependent on the value of the Collar Midpoint at the time of the auction. Specifically, the Collar Price Range would be determined as follows: (1) where the Collar Midpoint is \$25.00 or less, the Collar Price Range would be the range from 10% below the Collar Midpoint to 10% above the Collar Midpoint; (2) where the Collar Midpoint is greater than \$25.00 but less than or equal to \$50.00, the Collar Price Range would be the range from 5% below the Collar Midpoint to 5% above the Collar Midpoint; and (3) where the Collar Midpoint is greater than \$50.00, the Collar Price Range would be the range from 3% below the Collar Midpoint to 3% above the Collar Midpoint. Finally, all Periodic Auctions would be conducted during Regular Trading Hours and therefore would be subject to the requirements of the LULD Plan. Generally, the LULD Plan sets forth procedures that provide for market-wide limit up-limit down requirements to prevent trades in individual NMS Stocks

³⁶ The Collar Midpoint would be the Volume Based Tie Breaker for all Periodic Auctions. As discussed later in this proposed rule change, the Volume Based Tie Breaker would generally be the midpoint of the NBBO, except where there is no Valid NBBO.

from occurring outside of specified Price Bands. Consistent with the requirements of the LULD Plan, the Exchange would not execute Periodic Auctions at a price that is outside of the applicable Price Bands. Thus, if the Collar Price Range calculated by the Exchange would be outside of the applicable Price Bands established pursuant to the LULD Plan, the Collar Price Range would be capped at such Price Bands.

V. Priority and Execution of Orders

As discussed, Periodic Auction Orders and Continuous Book Orders that are executable at the end of the Periodic Auction Period would be executed at the Periodic Auction Price determined pursuant to Proposed Rule 11.25(d). Such orders would be executed in accordance with Proposed Rule 11.25(e), which describes the allocation model for Periodic Auctions. Generally, the allocation model described in this rule is intended to encourage active participation of Periodic Auction Orders, including participation of larger orders, while ensuring that Continuous Book Orders are also able to participate in resulting executions, as appropriate, in order to encourage continued liquidity on the Continuous Book. First, any displayed Continuous Book Orders that are executable at the Periodic Auction Price would be executed in price/time priority, thereby encouraging the continued submission of displayed orders. Second, after any displayed Continuous Book Orders have been executed, the Exchange would execute any Periodic Auction Orders that are executable at the Periodic Auction Price. Since Periodic Auctions are designed, in part, to facilitate the execution of larger orders, such Periodic Auction Orders would be executed in size/time priority, beginning with the largest order. Finally, any non-displayed Continuous Book Orders that are executable at the Periodic Auction Price would be executed pursuant the normal price-time priority allocation used for the execution of orders on the Continuous Book, as provided in BYX Rule 11.9(a)(2)(B). All Match Trade Prevention

modifiers, as defined in BYX Rule 11.9(f), would be ignored as it relates to executions occurring during a Periodic Auction.

VI. Regulatory and Other Considerations

The Exchange would also adopt rule language in the Interpretations and Policies to the proposed rule that describes how Periodic Auctions would be processed consistent with certain other regulatory obligations, including obligations related to member conduct, or otherwise to ensure transparent handling in certain specified circumstances. These rules would provide additional clarity and transparency to members and investors with respect to how the Exchange would process Periodic Auctions consistent with relevant obligations under the Exchange Act, or as otherwise necessary or appropriate to maintain a fair and orderly market on the Exchange.

First, as explained in Interpretations and Policies .01 to Proposed Rule 11.25, the Exchange would not conduct Periodic Auctions during a trading halt when such trading is prohibited. If a symbol is halted prior to the execution of a Periodic Auction that has already been initiated pursuant to Proposed Rule 11.25(c), the Periodic Auction would be immediately cancelled without execution, consistent with applicable limitations on trading during a halt.

Second, as explained in Interpretations and Policies .02 to Proposed Rule 11.25, a Periodic Auction would not be initiated during a Crossed Market. If the market becomes crossed during a Periodic Auction that has already been initiated pursuant to Proposed Rule 11.25(c), and remains crossed at the end of the Periodic Auction Period, the Periodic Auction would be cancelled without execution.³⁷ If the market subsequently becomes uncrossed, resting Periodic Auction Orders may trigger a Periodic Auction pursuant to Rule 11.25(c).

³⁷ The Exchange would not immediately cancel the auction as crossed markets are typically short-lived and the market may no longer be crossed at the end of the Periodic Auction Period, in which case the Exchange could successfully execute the auction.

Third, Interpretations and Policies .03 to Proposed Rule 11.25 would detail the proposed handling of orders consistent with Regulation SHO. As proposed, all short sale orders designated for participation in the Periodic Auction would have to be identified as “short” or “short exempt” pursuant to Rule 11.10(a)(5). Rules 201(b)(1)(i) and (ii) of Regulation SHO generally requires that trading centers such as the Exchange establish, maintain, and enforce written policies and procedures reasonably designed to: (i) prevent the execution or display of a short sale order of a covered security at a price that is less than or equal to the current national best bid if the price of that covered security decreases by 10% or more from the covered security’s closing price; and (ii) impose this price restriction for the remainder of the day and the following day. So as to maintain compliance with Rule 201 of Regulation SHO, the Exchange would only execute short sale orders (*i.e.*, those not marked short exempt) if the execution would take place at a permissible price pursuant to Regulation SHO. Specifically, if a security is in a short sale circuit breaker, orders marked short will only trade in a Periodic Auction if the Periodic Auction Price determined pursuant to Rule 11.25(d) is above the national best bid.³⁸

Finally, Interpretations and Policies .04 to Proposed Rule 11.25 would describe member conduct obligations with respect to the entry of Periodic Auction Orders. As proposed, Periodic Auction Orders must be entered with the intent to participate in Periodic Auctions. A pattern or practice of submitting orders for the purpose of disrupting or manipulating Periodic Auctions, including entering and immediately cancelling Periodic Auction Orders, would be deemed conduct inconsistent with just and equitable principles of trade. The Exchange would conduct

³⁸ This restriction would not apply to orders marked short exempt, which are exempted from these restrictions pursuant to Rule 201(b)(1)(iii)(B) of Regulation SHO. Rule 201(b)(1)(iii)(B) of Regulation SHO provides that the policies and procedures required by the rule must be reasonably designed to permit the execution or display of a short sale order of a covered security marked “short exempt” without regard to whether the order is at a price that is less than or equal to the current national best bid.

surveillance to ensure that Users do not inappropriately enter Periodic Auction Orders for impermissible purposes, such as to gain information about other Periodic Auction Orders that are resting on the Periodic Auction Book, or otherwise disrupting or manipulating Periodic Auctions.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the requirements of Section 6(b) of the Act,³⁹ in general, and Section 6(b)(5) of the Act,⁴⁰ in particular, in that it is designed to remove impediments to and perfect the mechanism of a free and open market and a national market system, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest and not to permit unfair discrimination between customers, issuers, brokers, or dealers. Specifically, the Exchange believes that the proposed rule change is consistent with the protection of investors and the public interest as it would facilitate improved price formation and provide additional execution opportunities for investors, particularly in thinly-traded or other securities that may suffer from limited liquidity.

As mentioned in the purpose section of this proposed rule change, the Exchange believes that its proposed introduction of Periodic Auctions is responsive to the Statement that the Commission issued in October 2019 to address market quality concerns in thinly-traded securities.⁴¹ Specifically, the Periodic Auction proposal is designed to improve liquidity and price formation in such thinly-traded securities, while also allowing the Exchange to better compete with off-exchange venues that currently offer features that investors may find beneficial for sourcing liquidity when displayed liquidity in the public markets is more scarce. Cboe offered its thoughts in response to the Statement in a comment letter submitted to the

³⁹ 15 U.S.C. § 78f(b).

⁴⁰ 15 U.S.C. § 78f(b)(5).

⁴¹ See supra note 4.

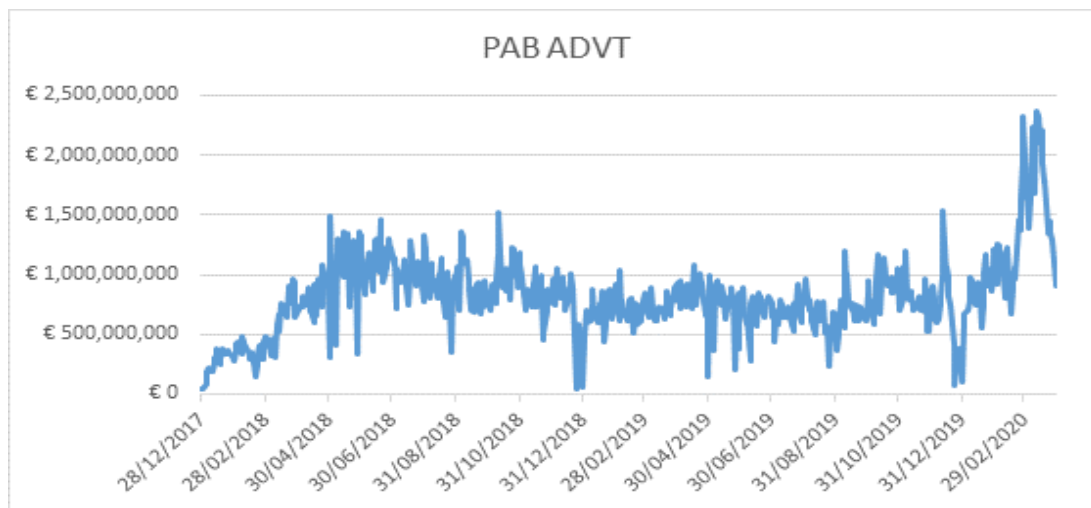
Commission on December 20, 2019. As stated in that comment letter, Cboe believes that innovation by national securities exchanges, rather than potentially harmful regulatory changes that favor a limited segment of the market, is what is ultimately needed to facilitate better market quality in thinly-traded securities. The Exchange believes that Periodic Auctions, as designed, are such an innovation.

Periodic Auctions would supplement existing opening and closing auctions by consolidating buy and sell interest in a price forming auction when investors seek liquidity during the course of the trading day. Although liquidity is frequently available in size around the open and close of trading, liquidity may be more limited intraday. Thus, investors looking to trade in size may have issues getting their orders filled during the trading day, or may receive inferior execution quality due to the market impact of trading larger blocks of equity securities in a market with limited liquidity. As proposed, Periodic Auctions would allow the Exchange to consolidate volume from market participants, thereby increasing the liquidity available to investors. By creating a deeper pool of liquidity for the intraday execution of orders, including block-sized liquidity, the Exchange believes that members and investors would be able to secure better quality executions. In addition, Periodic Auctions would perform an important price discovery function, which the Exchange believes may be particularly valuable in thinly-traded securities that often trade with significantly wider spreads that negatively impact the ability for investors to ascertain market value.⁴² The proposed introduction of Periodic Auctions would therefore contribute to a fair and orderly market in equity securities traded on the Exchange.

⁴² See Letter from Adrian Griffiths, *supra* note 5, which illustrates the wider spreads that often impact trading in thinly-traded securities. The Exchange believes that Periodic Auctions would improve price discovery in securities that tend to trade with wider spreads. As explained in that letter, volume in thinly-traded securities often migrates to off-exchange venues where market participants can trade without publicly displaying

The Exchange’s affiliate, Cboe Europe, has had a successful history with periodic auctions in the European equities market, and the proposed introduction of Periodic Auctions for the trading of U.S. equity securities is based, in part, on the successful implementation of a similar product offered by Cboe Europe. As illustrated in Chart A, Cboe Europe’s periodic auction book has grown to about 2% - 2.5% of notional value traded on European equities exchanges since its introduction in October 2015. Indeed, such periodic auctions now account for an average daily value traded (“ADVT”) of about €1 billion, with two months in Q1 2020 actually exceeding this threshold, reflecting the value that this offering has provided to market participants that trade European equities.

Chart A: Average Daily Value Traded in Cboe Europe Periodic Auctions



their orders and while potentially minimizing market impact.

Chart B: Cboe Europe Periodic Auction Statistics

Month	Periodic Auction Value Traded		Periodic Auction Market Share
	Total Monthly	Average Daily	% Notional Value Traded on Exchanges in EU
Jan-20	€ 19,266,389,823	€ 875,883,628	2.42%
Feb-20	€ 24,377,313,487	€ 1,218,865,674	2.52%
Mar-20	€ 36,933,642,050	€ 1,678,801,911	2.46%
Apr-20	€ 18,370,457,305	€ 918,522,865	2.33%
May-20	€ 15,993,488,255	€ 761,594,679	2.13%
Jun-20	€ 18,221,339,811	€ 828,242,719	1.91%

This growth in Cboe Europe’s periodic auction offering has promoted price improvement opportunities, with an analysis of periodic auctions conducted by Cboe Europe for Q1 2020 showing such periodic auctions trading about 85% of value traded at the midpoint. Although the Exchange recognizes that there are important differences in market structure between the U.S. and European equities markets, as well as relevant design differences between the two products, the Exchange believes that U.S. investors may receive similar benefits from its proposed introduction of Periodic Auctions. Moreover, the Exchange believes that such innovation should take preference over other regulatory approaches that may impede future innovation. As discussed in detail in the paragraphs that follow, Periodic Auctions are designed to improve the investor experience for market participants that trade U.S. equities, and the Exchange believes that this product may therefore contribute to a free and open market and national market system.

The Exchange believes that it is consistent with the protection of investors and the public interest to introduce Periodic Auction Only Orders and Periodic Auction Eligible Orders to facilitate trading in the Periodic Auctions. Use of these order types would be voluntary, and market participants would be able to determine whether and how to participate in Periodic Auctions using these order types. Specifically, while both forms of Periodic Auction Orders would be eligible to initiate Periodic Auctions, Periodic Auction Only Orders would allow firms to indicate that they are seeking liquidity solely in Periodic Auctions, while Periodic Auction Eligible Orders would allow firms to also seek liquidity on the Continuous Book before and after the execution of a Periodic Auction. The Exchange believes that it is appropriate to offer these two methods of initiating Periodic Auctions so that market participants can decide whether to use Periodic Auctions as the sole means of sourcing liquidity, or as an additional means of accessing liquidity if an order entered onto the Continuous Book has not been executed.

Periodic Auction Only Orders would provide a means for Users to indicate that they solely wish to have their order executed in a Periodic Auction. Since Periodic Auctions would only take place during the Regular Trading Session, Periodic Auction Only Orders would be accepted with a time-in-force of RHO (either during or outside of Regular Trading Hours), or IOC (solely during Regular Trading Hours). If entered with a time-in-force of IOC, a Periodic Auction Only Order would also have to be entered with an instruction to “lock-in” the order to avoid situations where a Periodic Auction Only Order initiates an auction and then is immediately cancelled prior to the execution of that auction. Periodic Auction Only Orders are not eligible to trade on the Continuous Book and therefore must include instructions that would allow the order to be executed in a Periodic Auction. The requirement to “lock-in” the order during the course of a Periodic Auction if the order is marketable at the Periodic Auction Book

Price is designed to allow a User to specify that they are only interested in participating in a Periodic Auction if they can do so immediately, while ensuring that they are actually eligible to participate in the execution of that auction, if possible. Without this requirement, a Periodic Auction could be initiated even though the order responsible for initiating that auction, by its terms, would not be eligible to participate at the end of the Periodic Auction Period, which would potentially be to the detriment both of the User entering the order and any Users that submitted contra-side orders to trade with it under the assumption that such interest was available. The Exchange believes that the proposed requirements would benefit Users that are looking for a speedy execution in Periodic Auctions, while also ensuring that Periodic Auction Only Orders entered with a time-in-force of IOC can trade at the end of the Periodic Auction Period.

The Exchange would also allow Users to include certain specified instructions on their Periodic Auction Only Orders. Specifically, such orders would be accepted with minimum execution quantity and pegging instructions. The Exchange believes that the Periodic Auction Only Order may be particularly valuable for market participants that have larger orders to be executed in Periodic Auctions that they may not be willing expose for trading in the continuous market. As illustrated in Cboe's commenter letter in response to the Commission's statement on thinly-traded securities,⁴³ liquidity is often more limited in these securities, and as such market participants often look to off-exchange venues that may be able to meet their liquidity needs without displaying orders in the public market, thereby limiting the market impact of their trading activity. The Exchange believes that market participants that are looking for liquidity in size may find Periodic Auctions to be a valuable means of sourcing needing liquidity without the potential risks of displaying their orders for execution.

⁴³ See Letter from Adrian Griffiths, *supra* note 5.

Given the potential benefits to larger orders, the Exchange would permit Users to specify a minimum execution quantity for their Periodic Auction Only Orders. A Periodic Auction Only Order entered with a minimum execution quantity would be executed in a Periodic Auction only if the minimum size specified can be executed against one or more contra-side Periodic Auction Orders.⁴⁴ The Exchange offers a Minimum Quantity Order on the Continuous Book today. The proposed instruction that could be attached to a Periodic Auction Only Order is similar to the current Minimum Quantity Order but would only permit the default handling of that order type, and would not allow a member to alternatively specify that the minimum quantity condition be satisfied by each individual contra-side order. Periodic Auction Eligible Orders and Continuous Book Orders entered as Minimum Quantity Orders would be subject to a similar restriction.

In addition, in light of the fact that market participants often value midpoint executions, or may wish to receive executions at other prices based on the applicable national best bid or offer (“NBBO”), the Exchange would also allow Users to enter a pegging instruction for such orders. Periodic Auction Only Orders would therefore accommodate instructions that the order is to be pegged to either the midpoint or same side of the market. As is the case for orders entered for trading on the Continuous Book, Periodic Auction Only Orders entered with a primary peg instruction would be pegged to the NBBO, with or without an offset, provided that only aggressive offsets would be permitted given the fact that Periodic Auctions would be restricted to trading within the Protected NBBO and would not be eligible to trade at inferior prices. Although the Exchange would not generally offer special order handling instructions for Periodic Auction

⁴⁴ The Exchange notes that in rare circumstances, the inclusion of a minimum execution quantity on one or more Periodic Auction Orders and/or Continuous Book Orders may result in the Exchange being unable to process a Periodic Auction in a timely manner. To prevent potential capacity and/or performance issues that may impact both the execution of the auction, as well as trading on Continuous Book, in such an event the Exchange would cancel the auction after a specified number of attempts.

Only Orders, the Exchange believes that midpoint and primary peg instructions, as described, would allow Users to more accurately capture their trading intent, and may therefore promote more active use of Periodic Auctions as a means of sourcing liquidity for such orders.

With respect to Periodic Auction Eligible Orders, the Exchange would allow Users to include an instruction on non-displayed orders entered to trade on the Continuous Book that would allow such orders to initiate a Periodic Auction if executable against contra-side Periodic Auction Orders. The Exchange would not allow Users to enter displayed orders as Periodic Auction Eligible Orders as such Periodic Auction Eligible Orders would not be available for execution during an ongoing Periodic Auction. As a result, displayed orders, which are disseminated to the market and subject to firm quote requirements under Rule 602(b)(2) of Regulation NMS,⁴⁵ would not be able to be entered as Periodic Auction Eligible Orders. However, such displayed orders could still participate in Periodic Auctions as Continuous Book Orders, and would receive execution priority when executed in that manner.

As discussed in the purpose section of the proposed rule change, the time-in-force included on a Periodic Auction Eligible Order would need to allow the order to remain executable during the course of a Periodic Auction. The Exchange has therefore proposed to: (1) only allow IOC orders to be entered as Periodic Auction Eligible Orders if such orders include an instruction not to cancel the order during a Periodic Auction Period; and (2) disallow FOK orders from being entered as Periodic Auction Orders. The Exchange believes that both of these requirements are consistent with just and equitable principles of trade as they are designed to ensure that a Periodic Auction Eligible Order, which as discussed would be eligible for the initiation of a Periodic Auction, would not be prevented from participating in the eventual

⁴⁵ See 17 CFR 242.602(b)(2).

execution of such Periodic Auction due to a time-in-force that contemplates the order either being executed or cancelled immediately on entry. As discussed with respect to Periodic Auction Only Orders, without this requirement, a Periodic Auction could be initiated even though the order responsible for initiating that auction, by its terms, would not be eligible to participate at the end of the Periodic Auction Period, which would potentially be to the detriment both of the User entering the order and any Users that submitted contra-side orders to trade with it under the assumption that such interest was available. Nevertheless, the Exchange believes that some Users may find it valuable to enter IOC orders as Periodic Auction Eligible Orders. Although such Users may be looking for a speedy execution, and would therefore generally prefer an execution on entry, or not at all, they may be willing to wait 100 milliseconds for a potential execution in a Periodic Auction, instead of having the order cancelled immediately. The Exchange would therefore allow Users to signal their intent to trade in this manner by entering the IOC order with an instruction that it should not be cancelled during a Periodic Auction. If entered in this manner, a Periodic Auction Eligible Order may trade immediately on entry on the Continuous Book, or may alternatively participate in a Periodic Auction, subject to cancellation no later than the end of any Periodic Auction Period. The Exchange does not anticipate the same use case for FOK orders, which contain an additional condition that requires the order to be executable in full, and would therefore restrict their ability to be entered as Periodic Auction Eligible Orders.

The Exchange would also not accept Mid-Point Peg Orders entered as Periodic Auction Eligible Orders if the Mid-Point Peg Order is entered with an instruction to not execute when the NBBO is locked. If the Exchange permitted Mid-Point Peg Orders with this instruction to be entered as Periodic Auction Eligible Orders, those orders could initiate a Periodic Auction but would not be available for the auction's eventual execution if the market subsequently becomes

locked at that time. The Exchange believes that the proposed handling is consistent with just and equitable principles of trade as the Exchange wishes to avoid the potential for such orders to initiate a Periodic Auction that may ultimately not execute due to the inclusion of this condition. Periodic Auction Eligible Orders are designed to initiate Periodic Auctions and may encourage other Users to enter orders that could participate in the auction's execution. As a result, the Exchange believes that such orders should reflect trading interest that does not include unnecessary conditions. Users that wish to use Mid-Point Peg Orders with this instruction would still be eligible to participate in Periodic Auctions as Continuous Book Orders, which are able to participate in the eventual execution of a Periodic Auction, but would not initiate such auctions.

Similar to the proposed handling of Periodic Auction Only Orders, the Exchange would allow Periodic Auction Eligible Orders to be entered as Minimum Quantity Orders, but would only permit such orders to be entered with the default handling of that instruction. That is, Minimum Quantity Orders entered as Periodic Auction Eligible Orders would execute only if the minimum size specified can be executed against one or more contra-side Periodic Auction Orders or Continuous Book Orders. Although the Exchange does offer an alternative instruction that permits the User to request that the Exchange only execute the order against a single contra-side order, such handling is designed primarily for use on the Continuous Book, and would complicate the execution of Periodic Auctions.⁴⁶ For similar reasons, Minimum Quantity Orders are excluded from the Exchange's opening process for securities traded pursuant to unlisted trading privileges. However, as discussed, the Exchange believes that Users participating in Periodic Auctions may value the ability to specify a minimum quantity, and the Exchange has therefore proposed to allow such functionality for Periodic Auction Eligible Orders so long as

⁴⁶ See BYX Rule 11.23(a)(2).

the User is willing for those orders to be executed against one or more contra-side orders. The Exchange believes that this strikes the right balance between allowing Users to ensure that they only trade in a Periodic Auction if their minimum quantity criteria can be met, while excluding instructions that could unnecessarily complicate the execution of Periodic Auctions.

In addition, the Exchange would specify handling for Discretionary Orders, Pegged Orders, and Mid-Point Pegged Orders that are entered as Periodic Auction Eligible Orders. Including this information in the rule would increase transparency around the operation of the Exchange and ensure that Users are properly informed about how orders with these instructions would be handled in Periodic Auctions. The same handling is currently applied to the Exchange's opening process for securities traded pursuant to unlisted trading privileges, and treating these orders in the same manner for purposes of Periodic Auctions would ensure a consistent and familiar experience for market participants that enter such orders on the Exchange. The Exchange therefore believes that these proposed rules are consistent the maintenance of a fair and orderly market.

The Exchange also believes that it is consistent with just and equitable principles of trade to allow Continuous Book Orders, *i.e.*, orders that are not entered as either Periodic Auction Only Orders or Periodic Auction Eligible Orders, to participate in any Periodic Auction that results in an execution. Although Continuous Book Orders would not initiate a Periodic Auction, such orders would be eligible to participate in the resulting execution, thereby facilitating additional liquidity for those orders without disrupting their ability to trade normally during the course of the auction. Continuous Book Orders would remain on the Continuous Book and subject to potential execution during a Periodic Auction Period, but would be included in the final determination of the Periodic Auction Price, and participate in any resulting execution.

Although the Exchange believes that a number of Users may wish to use Periodic Auction Orders that are specifically designed for participation in Periodic Auctions and have the ability to initiate those auctions, the Exchange also believes that Periodic Auctions would be valuable to Users that wish primarily to trade on the Continuous Book but may be able to secure an execution in a Periodic Auction if possible. As a result, Continuous Book Orders would generally be eligible to trade in Periodic Auctions at the end of the auction process.

Such Continuous Book Orders would be subject to similar handling to Periodic Auction Eligible Orders that may also trade on the Continuous Book in addition to Periodic Auctions, including the same handling discussed above with respect to Discretionary Orders, Pegged Orders, and Mid-Point Peg Orders. The Exchange believes that this handling is consistent with just and equitable principles of trade as it would ensure consistent treatment of similar orders traded in Periodic Auctions. In addition, Continuous Book Orders that are entered as Minimum Quantity Orders would be subject to similar but not identical handling to Periodic Auction Eligible Orders. Given the value of Minimum Quantity Orders that include the alternative instruction that allows a User to specify that the minimum size specified be satisfied by each individual contra-side order, Users would continue to be able to use this instruction for trading on the Continuous Book. However, such orders, which would not be permitted to be entered as Periodic Auction Orders, would similarly not be able to participate in Periodic Auctions as Continuous Book Orders. Users that wish to include a minimum quantity on their orders could participate in Periodic Auctions as either Periodic Auction Only Orders, Periodic Auction Eligible Orders, or Continuous Book Orders, provided that for each of these order types, the order must be willing to trade against one or more contra-side orders. As discussed, the

Exchange believes that this treatment is necessary in order to offer a minimum quantity instruction in an auction that pools interest and executes such interest at a single price.

The Exchange also believes that the proposed handling of Continuous Book Orders entered as Reserve Orders is consistent with the maintenance of a fair and orderly market as it will ensure a familiar and consistent experience for market participants that trade on the Exchange. Although Periodic Auction Eligible Orders must be non-displayed and therefore cannot be entered as a Reserve Order that, by rule, includes both a displayed portion and non-displayed portion, the proposed handling for Continuous Book Orders is the same as the handling applied to the Exchange's opening process securities traded pursuant to unlisted trading privileges. Thus, similar to the treatment of Discretionary Orders, Pegged Orders, and Mid-Point Peg Orders, detailing the proposed handling of Reserve Orders would both increase operational transparency and ensure consistent and familiar treatment of similar orders on the Exchange.

Periodic Auctions would be initiated throughout Regular Trading Hours when Periodic Auction Orders entered by Users are executable against each other, thereby ensuring that the initiation of an auction is tied to demonstrated interest from both buyers and sellers in the security. Once the Exchange has matched two or more Periodic Auction Orders in this manner, a Periodic Auction Period of 100 milliseconds would begin to allow orders from additional market participants to participate in the execution of the Periodic Auction. To facilitate the pooling of Periodic Auction Orders during this period, the Exchange would publish information about the auction, including (1) an indicative Periodic Auction Book Price that reflects price at which the Periodic Auction could be executed, counting only Periodic Auction Orders and excluding Continuous Book Orders that may be subject to execution prior to the end of the Periodic Auction Period; and (2) the total number of shares of Periodic Auction Orders that are matched

at the Periodic Auction Book Price. This information would be published beginning at a randomized time in one millisecond intervals, and would be refreshed in one millisecond intervals thereafter as additional orders are entered or cancelled, or other changes to market conditions are made that could impact the Periodic Auction Book Price. The Exchange believes that it is consistent with the protection of investors and the public interest to publish this information as it may inform potential trading in periodic auctions and encourage additional order flow to be entered to participate in such auctions. The Exchange also believes that sending out the initial dissemination at a randomized time after Periodic Auction Orders have been matched would facilitate the operation of a fair and orderly market. This handling would allow additional Periodic Auction Orders received during this interim period to be pooled in the initial dissemination of auction information. In addition, since market participants would not know how much time is left in the Periodic Auction Period, firms would be incentivized to respond quickly with Periodic Auction Orders to participate in the Periodic Auction, rather than potentially waiting until the end of the auction, which may reduce the value of the information proposed to be disseminated to investors and may impact price discovery.

Once the 100 millisecond Periodic Auction Period has ended, the Exchange would calculate the execution price of the auction, *i.e.*, the Periodic Auction Price, and execute Periodic Auction Orders and Continuous Book Orders that are eligible to trade at that price. The Exchange believes that the proposed methodology for determining the Periodic Auction Price is consistent with just and equitable principles of trade. Generally, the proposed methodology for calculating the Periodic Auction Price is designed to allow Periodic Auctions to facilitate price discovery while maintaining important investor protections and assuring compliance with applicable regulations. Given the important price formation function of these auctions, the

Exchange would use logic for pricing Periodic Auctions that largely mirrors the logic used by its affiliate, BZX, for opening and closing auctions in that exchange's listed securities.

Specifically, the Exchange would seek to execute Periodic Auctions at a price that maximizes the number of shares that can trade in the auction, subject to specified price collars that would limit executions at prices that are not reasonably related to the price of the security established by the market. The applicable price collars would also be based on the auction collars used for BZX opening and closing auctions, except that trading would be further limited by applicable LULD Price Bands and the Protected NBBO, as required pursuant to applicable regulatory requirements.⁴⁷ Finally, the price calculation would be subject to tie-breakers that are consistent with those used for BZX opening and closing auctions in situations where there is a volume-based tie at multiple price levels. These tie-breakers would help ensure the selection of a meaningful Periodic Auction Price by selecting the price that would minimize the potential imbalance between supply and demand, and then favoring prices closer to a Volume Based Tie Breaker that is generally the midpoint of the NBBO. In sum, the proposed calculation of the Periodic Auction Price would allow the Exchange to appropriately balance supply and demand in Periodic Auctions and facilitate robust price formation similar to opening and closing auctions.

After the Exchange determines the Periodic Auction Price, any Periodic Auction Orders or Continuous Book Orders that are eligible for execution at that price would be executed based on a special allocation methodology designed for use in Periodic Auctions. First, in order to continue to incentivize the entry of displayed orders on the Exchange, Continuous Book Orders

⁴⁷ As discussed in the purpose section of this proposed rule change, both the requirements of the LULD Plan and the Order Protection Rule apply to transactions executed during Regular Trading Hours. Although opening and closing auctions are generally exempt from these requirements, there are currently no exemptions that would apply to Periodic Auctions that perform a similar role in facilitating price discovery.

that are displayed on the Continuous Book would be executed first in price/time priority. Although the Exchange is proposing to introduce Periodic Auctions to incentivize additional liquidity, the Exchange believes that it is important to continue to encourage the entry of displayed orders on the Continuous Book. Displayed orders entered in the public market contribute to price formation, and are used as a reference price for the execution of orders on other venues. As a result, the Exchange's proposal to introduce Periodic Auctions is designed to continue to encourage the entry of displayed orders that would both trade on the Continuous Book and simultaneously benefit from priority when executed in a Periodic Auction.

Second, after Continuous Book Orders displayed on the Continuous Book have been executed, Periodic Auction Orders would be executed in size/time priority. As previously noted, the Exchange believes that Periodic Auctions may be valuable for investors that are seeking liquidity in size. As a result, the priority methodology employed by the Exchange for Periodic Auction Orders would preference larger orders, which the Exchange believes may contribute to greater depth in Periodic Auctions. In turn, the liquidity provided by these larger orders would contribute to the execution of smaller orders that may also participate in Periodic Auctions, thereby facilitating the execution of all orders, both large and small, that seek liquidity in such auctions, and furthering execution opportunities for investors that trade on the Exchange.

Finally, non-displayed Continuous Book Orders would be executed last in priority. Unlike displayed orders entered on the Continuous Book, or Periodic Auction Orders that contribute to important pricing information disseminated to market participants during the course of a Periodic Auction, non-displayed orders entered on the Continuous Book do not contribute to pre-execution price formation.⁴⁸ As a result, while these orders would be eligible to trade in

⁴⁸ Non-displayed orders would contribute to price formation at the end of a Periodic

Periodic Auctions, where they may benefit from additional execution opportunities, they would be subject to the lowest priority among Periodic Auction Orders and Continuous Book Orders. In addition, since these orders are not specifically seeking liquidity in Periodic Auctions, and would participate in Periodic Auctions solely as an additional source of liquidity, priority within this band would be determined based on the normal execution priority afforded to such orders on the Continuous Book. The Exchange believes that this approach is consistent with just and equitable principles of trade as it would ensure that non-displayed Continuous Book Orders receive the priority that they would normally be afforded for executions on the Continuous Book.

Similar to the Exchange's opening process for securities traded pursuant to unlisted trading privileges,⁴⁹ all Match Trade Prevention modifiers, as defined in BYX Rule 11.9(f), would be ignored as it relates to executions occurring during a Periodic Auction. The Exchange's Match Trade Prevention modifiers are designed to allow Users to better manage order flow and prevent certain undesirable executions on the Continuous Book. However, this functionality would complicate the execution of Periodic Auctions, where orders are pooled together and executed at a price that balances supply and demand in the auction. As a result, the Exchange believes that ignoring Match Trade Prevention modifiers in Periodic Auctions, similar to the handling currently used by the Exchange for its opening process, is consistent with the maintenance of a fair and orderly market in securities traded in such Periodic Auctions.

In addition, the Exchange believes that the proposed language being codified in the Interpretations and Policies to the proposed rule is consistent with the Exchange Act and the rules and regulations adopted thereunder. As proposed, these rules would include language that identifies how Periodic Auctions would be conducted during a crossed market, and consistent

⁴⁹ Auction as they would be considered in the determination of the Periodic Auction Price.
See BYX Rule 11.23(b).

with applicable regulatory requirements related to handling of trading halts and Regulation SHO. Such rules would also describe appropriate standards of member conduct, consistent with the Exchange's obligations under the Act to regulate and surveil its market. The proposed rules included in Interpretations and Policies .01 - .03 would ensure that: (1) Periodic Auctions do not take place when their execution may be complicated by the existence of a crossed market that could interfere with the auction's price discovery function, or when such execution would not be permissible due to a trading halt in a security;⁵⁰ and (2) the execution in Periodic Auctions of any short sale orders that are not marked "short exempt" would only take place at a permissible price when the security is in a short sale circuit breaker pursuant to Rule 201 of Regulation SHO. Further, the proposed rules included in Interpretations and Policies .04 would provide additional guidance to Users with respect to conduct that would be considered inconsistent with just and equitable principles of trade. The Exchange intends to conduct appropriate surveillance of its members to ensure that their participation in Periodic Auctions is done in a manner that is consistent with such rules. As a result, these rules would ensure that orders Periodic Auctions would be processed in a manner that is consistent with applicable regulatory obligations and the maintenance of a fair and orderly market in securities traded on the Exchange.

In conclusion, the Exchange believes that the proposed rule change would enhance the experience of investors looking to access liquidity in the public market and fill an important role in the U.S. equities market where liquidity may be more limited outside of the open and close of trading. By introducing a price forming auction for the aggregation and execution of buy and sell orders intraday, Periodic Auctions would increase execution opportunities available to investors.

⁵⁰ Although Rule 611(b)(4) of Regulation NMS provides an exception from the trade-through requirements of that rule for situations where a protected bid is crossed with a protected offer, the Exchange believes that market participants may not desire an execution in a Periodic Auction during periods when the market is crossed.

In turn, Periodic Auctions may improve trading outcomes for market participants that have trouble sourcing liquidity in the public markets today, including in thinly-traded securities where liquidity is often limited and trading often occurs on a number of off-exchange venues that can offer reduced market impact. As such, the Exchange believes that the proposed rule change would remove impediments to and perfect the mechanism of a free and open market.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. Rather, the proposed rule change is designed to increase competition by introducing an additional mechanism for equities market participants to seek liquidity during the course of the trading day. Indeed, the proposed introduction of Periodic Auctions is a pro-competitive means of addressing the concerns that the Commission expressed in its Statement on thinly-traded securities. The proposal, which seeks to introduce innovative functionality on a non-primary listing exchange, would allow competition, rather than regulatory intervention designed to limit competition (*e.g.*, through the suspension or termination of unlisted trading privileges), to improve market quality in thinly-traded and other securities.

The introduction of Periodic Auctions is designed to improve execution quality for investors sourcing liquidity during the trading day, and, in particular, those that are looking to trade in size, or are looking to access liquidity in thinly-traded or other securities where liquidity may be more scarce. Providing an additional mechanism for price forming orders to be executed would promote competition between venues that seek to execute this order flow, and provide market participants and investors with greater choice with respect to how they choose to source liquidity. The equities industry is fiercely competitive as the Exchange must compete with other

equities exchanges and off-exchange venues for order flow. The proposal is both evidence of this competition, and would further enable the Exchange to compete effectively in this market.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were solicited or received on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

- A. by order approve or disapprove such proposed rule change, or
- B. institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-CboeBYX-2020-021 on the subject line.

Paper comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-CboeBYX-2020-021. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to

make available publicly. All submissions should refer to File Number SR-CboeBYX-2020-021, and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁵¹

J. Matthew DeLesDernier
Assistant Secretary

⁵¹ 17 CFR 200.30-3(a)(12).