

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-89528; File No. SR-CBOE-2020-072)

August 12, 2020

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing of a Proposed Rule Change to Amend its Rules Relating to the Processing of Auction Responses

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),¹ and Rule 19b-4 thereunder,² notice is hereby given that on July 30, 2020, Cboe Exchange, Inc. (the “Exchange” or “Cboe Options”) filed with the Securities and Exchange Commission (“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 Exchange, Inc. (the “Exchange” or “Cboe Options”) proposes to amend its rules relating to the processing of auction responses. 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://www.cboe.com/AboutCBOE/CBOELegalRegulatoryHome.aspx>), 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 proposed

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

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 Exchange seeks to amend its rules related to its auction mechanisms to provide a dedicated path for auction response messages originating from logical ports that will allow the System to process such messages more efficiently. Specifically, the Exchange proposes to amend Rule 5.25 (Message Traffic Mitigation) to adopt two separate message queues which would allow for auction response messages to be processed by the System in priority sequence relative to other non-auction response message traffic on a rotating basis.

Background

The Exchange currently offers a variety of auction mechanisms which provide price improvement opportunities for eligible orders. Particularly, the Exchange offers the following auction mechanisms: Complex Order Auction (“COA”),³ Step Up Mechanism (“SUM”),⁴ Automated Improvement Mechanism (“AIM”),⁵ Complex AIM (“C-AIM”),⁶ Solicitation Auction

³ See Rule 5.33(d).

⁴ See Rule 5.35.

⁵ See Rule 5.37.

⁶ See Rule 5.38.

Mechanism (“SAM”),⁷ Complex SAM (“C-SAM”),⁸ FLEX Auction Process,⁹ FLEX AIM¹⁰ and FLEX SAM.¹¹ The Exchange notes that eligible orders are electronically exposed for an Exchange determined period (collectively referred to herein as “auction response period”) in accordance with the applicable Exchange Rule, during which time Users may submit responses (collectively referred to herein as “auction responses”) to an auction message. Trading Permit Holders (“TPHs”) may submit auction responses via logical port connectivity. By way of background, a User connects to the Exchange using a logical port available through an API, such as the industry-standard FIX or BOE protocol. Logical ports represent a technical port established by the Exchange within the Exchange’s trading system for the delivery and/or receipt of trading messages, including orders, cancels, and auction responses. Currently, the System processes all messages through a single “queue” and prioritizes the processing of all message traffic from the logical ports in the order in which the System received them (i.e., in time priority).

Proposal

The Exchange proposes to modify the operation of its System to allow for the System to handle auction responses received via such logical ports in a way that the Exchange believes may reduce latency associated with auction responses. Currently, auction response messages wait in the same System queue as all other order and quote message traffic. In certain circumstances, the auction response period may end before queued response messages are processed, resulting in the initiating eligible order missing out on potential price improvement from respective queued

⁷ See Rule 5.39.

⁸ See Rule 5.40.

⁹ See Rule 5.72(c).

¹⁰ See Rule 5.73.

¹¹ See Rule 5.74.

auction response(s). For example, if an auction response submitted during an auction response period is received at a time where there is a deep queue of other message traffic, the auction response may not be “processed” by the System in sufficient time (i.e., prior to the end of the auction response period so that it is able to participate in the applicable auction mechanism) because the System is “busy” processing the deep queue of pending message traffic that was received prior to the auction response. An auction response may only execute in the applicable auction and is cancelled if it does not execute during an auction. If an auction response is unable to be processed by the System during the auction response period, that auction response is unable to receive any execution opportunity or provide liquidity (and possible price improvement) on the Exchange.

The Exchange therefore proposes to modify the way the System processes auction responses in order to allow the System to handle auction responses in a more timely manner, including during periods of high message traffic. As noted above, the System currently processes all message traffic in time priority. In other words, all messages are placed in a single “queue” based on the time the message is received by the System and handled by the System in that order. The Exchange proposes to adopt a separate “priority queue”, which queue would consist solely of auction response messages. Specifically, the System would be able to identify auction response messages and divert such messages from the general message queue (“general queue”) to the priority queue. The System would then alternate processing a certain number of messages as determined by the Exchange from each queue (i.e., on a rotating basis). Although the System would alternate between the two queues, the priority queue would offer reduced latency as the priority queue would consist only of auction responses, as compared to the general queue which

would consist of all other message traffic, (i.e., new orders/quote messages, cancel messages (including mass cancel messages) and modify messages).

The Exchange believes the proposed modification to provide for a separate queue for the processing of auction responses increases the possibility that such responses are processed by the Exchange during the auction response period and have an opportunity for execution in the applicable auction mechanism. The Exchange believes this will, as a result, increase execution opportunities for liquidity providers that submit auction responses and enhance the potential for price improvement for orders submitted to each mechanism to the benefit of investors and public interest. The Exchange also believes the benefits that result from the adoption of a priority queue for auction responses would outweigh any potential negative impact to other message traffic. Moreover, the Exchange believes the impact to other message traffic to be de minimis.

Particularly, the Exchange reviewed all submitted message traffic from March 9 – March 13, 2020 and notes that during this time period, auction responses across all its auction mechanisms accounted only for approximately 0.02% of the message traffic, whereas new order/quote messages accounted for approximately 40.3%, modify messages accounted for approximately 47.9%, and cancel messages accounted for approximately 11.7%. Accordingly, the number of messages that would be processed via the priority queue as compared to general queue is extremely small. Indeed, as noted above, only 0.02% of all messages would be processed via the priority queue and therefore the number of rotations between the two queues throughout the trading day would likely be very limited as there are only so many auction responses that would need to be processed compared to other message traffic. Moreover, only a mere 0.007% of non-auction response messages were related to a customer order. Therefore, the chances of a customer order being disadvantaged by allowing an auction response to be processed via a priority queue are

nearly zero. Additionally, executions at the conclusion of an auction mechanism will occur in the same manner as they do today. For example, priority customer orders in the Book will continue to have first priority at each price level at the conclusion of a paired auction, regardless of whether an auction response is processed via a priority queue and processed ahead of a priority customer order.

Furthermore, the Exchange's review of auction responses during the period of March 30 – April 3, 2020 indicated that approximately 17% of auction responses had no opportunity to execute in their respective auctions, notwithstanding being submitted within the auction response period. In certain classes, such as SPXW, this percentage was even higher. Particularly, 47% of SPXW auction responses had no opportunity to execute in the applicable auction, notwithstanding being submitted within the auction response period.

The Exchange also notes that it takes the system approximately 10 microseconds to process a single order/quote or auction response message and, on average, approximately 190 microseconds to process a mass cancel message. As such, under the current system, an auction response that is entered after a mass cancel message is more likely to be detrimentally impacted as compared to a mass cancel message that is entered after an auction response (i.e., a 190 microsecond "wait time" versus a 10 microsecond "wait time").

Accordingly, the Exchange believes that adopting a priority queue for all auction response messages will continue to allow the Exchange to set each auction response period to an amount of time that provides TPHs with sufficient time to respond to, compete for, and provide price improvement for orders but provides auctioned orders with quick executions that may reduce market and execution risk, while also providing timely submitted auction responses with more execution opportunities in the applicable auction prior to the end of the auction response period,

even during periods of high message traffic, thereby potentially providing customers with additional opportunities for price improvements.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the “Act”) and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.¹² Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)¹³ requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)¹⁴ requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In particular, the Exchange believes modifying its System to allow it to handle auction responses in a timelier manner may provide further opportunities for auction eligible orders to receive price improvement that they may not otherwise receive if the System is unable to process auction response messages prior to the conclusion of an auction response period, if submitted during a time when there is a deep queue of message traffic. In particular, the proposed rule change

¹² 15 U.S.C. 78f(b).

¹³ 15 U.S.C. 78f(b)(5).

¹⁴ Id.

will continue to provide investors with timely processing of their options quote and order messages, while providing investors who submit auction eligible orders with additional auction liquidity. Indeed, the proposed rule change may allow more investors additional opportunities to receive price improvement through an auction mechanism. While the Exchange may increase the length of auction response periods to accommodate more auction responses, the Exchange believes the proposed rule change allows the Exchange to continue to mitigate the market risk for TPHs using any such mechanism by setting the length of an auction response period to a time frame that allows an adequate amount of time for TPHs to respond to an auction message and fast executions. Additionally, a priority queue may provide liquidity providers that submit auction responses with additional execution opportunities in auctions, which may encourage the submission of more auction responses which may contribute to a deeper, more liquid auction process and, thus, provide investors with additional price improvement opportunities.

The Exchange believes that the information outlined above demonstrates why adopting a priority queue for auction responses would better provide customers with additional opportunities for price improvements with little impact to non-auction response message traffic. As discussed, auction responses account for an incredibly small fraction of message traffic submitted to the Exchange. Indeed, based on the Exchange's analysis, auction response messages accounted for a mere 0.02% of all message traffic submitted to the Exchange. The Exchange believe the processing of such a small amount of message traffic via a priority queue (which as proposed would rotate with the general queue) would therefore have a minimal impact on the processing of non-auction response messages in the general queue. Conversely, as demonstrated by the data discussed above, the current system configuration (i.e., a single queue for all message traffic) can negatively impact the timeliness of the processing of auction responses to the detriment of investors who may miss

out on opportunities to receive price improvement through one of the Exchange's auction mechanisms due to the time necessary for the System to process auction responses behind a queue of other message traffic. The Exchange therefore believes its proposal will make it more likely that the System processes timely submitted auction responses prior to the end of an auction response period and thus have more opportunities to execute against auctioned orders, even during periods of high message traffic. The Exchange also believes having the flexibility to determine the number of messages that it processes in each queue before alternating allows the Exchange to configure the number as needed to ensure the benefits of alternating between a priority queue and general queue continue to outweigh any potential negative impact to non-auction response message traffic. The Exchange further believes the proposal will continue to allow the Exchange to set an auction response period to an amount of time that provides TPHs with sufficient time to respond to, compete for, and provide price improvement for orders but provides auctioned orders with quick executions that may reduce market and execution risk. Accordingly, the Exchange believes the adoption of a priority queue for auction responses would provide customers with additional opportunities for price improvement and enhance the quality of the auctions, thereby removing impediments to and perfecting the mechanism of a free and open market and a national market system, and, in general protecting investors and the public interest.

The Exchange also believes the proposed rule change is not designed to permit unfair discrimination between market participants as all market participants are allowed to submit auction responses. Additionally, the Exchange believes it's reasonable to adopt a priority queue for auction responses as compared to other messages because auction responses are submitted only for the purpose of executing (and possibly providing price improvement) in auctions with short durations, whereas other messages are generally submitted to rest in or execute against the book (and

generally not used to submit liquidity into auctions). As discussed above, the Exchange also believes the benefits that result from the adoption of a priority queue for auction responses would outweigh any potential negative impact to other message traffic, including customer orders, which have an incredibly low chance of being affected by the proposed change and which continue to receive priority allocation in any event.

The Exchange lastly does not believe that the purpose of the proposed rule change to adopt a priority queue for certain message traffic is new or unique. As the Commission is aware, other exchanges offer similar functionality. For example, Miami International Securities Exchange LLC (“MIAX”) makes clear in its current technical specifications that it offers priority mass cancel ports, which similarly provide expedited processing for certain message types by alternating between processing messages from a priority queue (but for mass cancel requests instead of auction responses) and messages from a general queue (for all other message traffic).¹⁵

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

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that the proposed changes will impose any burden on intra-market competition that is not necessary or appropriate in furtherance of the purposes of the Act, as the proposed rule change would apply equally to all TPHs that submit auction responses. As noted above, all market participants are able to submit auction responses. Additionally, the Exchange believes the adoption of a priority queue for auction responses would have little impact to non-

¹⁵ See e.g., MIAX Express Orders Binary Orders for Trading Options MEO Interface Specification, Appendix E, Priority Mass Cancel Ports, at: https://www.miaxoptions.com/sites/default/files/page-files/MIAX_Express_Interface_MEI_v2.8.pdf

auction response message traffic. As discussed, auction response messages account for an incredibly small fraction of message traffic submitted to the Exchange. The Exchange therefore believes the processing of such a small amount of message traffic via a priority queue would have a minimal impact on the processing of non-auction response messages in the general queue. Moreover, the Exchange believes it's reasonable to adopt a priority queue for auction responses as compared to other messages because auction responses are submitted only for the purpose of executing (and possibly providing price improvement) in auctions with short durations, whereas other messages are generally submitted to rest in or execute against the book (and generally not used to submit liquidity into auctions). Lastly, the Exchange does not believe the proposed rule change will impose any burden on inter-market competition that is not necessary or appropriate in furtherance of the purposes of the Act, as the proposed change affects how the System processes auction responses that may only participate in auctions that occur on the Exchange.

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

The Exchange neither solicited nor received comments 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-CBOE-2020-072 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-CBOE-2020-072. 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-CBOE-2020-072, 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.¹⁶

J. Matthew DeLesDernier
Assistant Secretary

¹⁶ 17 CFR 200.30-3(a)(12).