

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-96384; File No. SR-CboeBZX-2022-045)

November 23, 2022

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to Amend the Opening Auction Process Provided Under Rule 11.23(b)(2)(B)

On August 15, 2022, Cboe BZX Exchange, Inc. (“Exchange” or “BZX”) filed with the Securities and Exchange Commission (“Commission”), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> a proposed rule change to amend the Opening Auction process provided under Rule 11.23(b)(2)(B). The proposed rule change was published for comment in the Federal Register on August 31, 2022.<sup>3</sup> On October 12, 2022, pursuant to Section 19(b)(2) of the Act,<sup>4</sup> the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.<sup>5</sup> The Commission has received no comments on the proposed rule change. This order institutes proceedings under Section 19(b)(2)(B) of the Act<sup>6</sup> to determine whether to approve or disapprove the proposed rule change.

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

<sup>3</sup> See Securities Exchange Act Release No. 95601 (Aug. 25, 2022), 87 FR 53514 (“Notice”).

<sup>4</sup> 15 U.S.C. 78s(b)(2).

<sup>5</sup> See Securities Exchange Act Release No. 96038, 87 FR 63115 (Oct. 18, 2022). The Commission designated November 29, 2022 as the date by which the Commission shall approve or disapprove, or institute proceedings to determine whether to disapprove, the proposed rule change.

<sup>6</sup> 15 U.S.C. 78s(b)(2)(B).

I. Summary of the Proposed Rule Change<sup>7</sup>

BZX holds an Opening Auction for each security listed on the Exchange. During an Opening Auction, all executions, if any, occur at a single price, and that price must be within a certain range established by the Exchange. The Exchange proposes to amend its Opening Auction process by, under certain circumstances, delaying the Opening Auction and if necessary gradually widening the bands within which the Opening Auction price must fall. The Exchange also proposes associated changes reflecting the proposed modifications to its process.<sup>8</sup>

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<sup>7</sup> For a full description of all aspects of the proposed rule change, including BZX's justification for it, please see the Notice, supra note 3.

<sup>8</sup> For example, the Exchnage proposes to amend BZX Rules 11.23(b)(1)(A) and (B), to reflect that the Opening Auction may occur at a time other than 9:30 a.m. It also proposes to amend BZX Rule 11.23(b)(1)(B) to provide that Eligible Auction Orders designated for the Opening Auction may not be cancelled or modified from 9:28 a.m. until the Opening Auction has concluded except that Regular Hours Only ("RHO") limit orders designated for the Opening Auction may be modified, but not cancelled, from 9:28 a.m. until the time the Opening Auction has concluded. Any such RHO limit orders modified from 9:28 a.m. until the Opening Auction has concluded would be treated as late-limit-on-open orders.

A. The Current Opening Auction Process

Each Opening Auction price is the price level within the Collar Price Range<sup>9</sup> that maximizes the number of shares executed between the Continuous Book<sup>10</sup> and Auction Book<sup>11</sup> in the Opening Auction.<sup>12</sup> In the event of a volume based tie at multiple price levels, the Opening Auction price is 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 Opening Auction price is the price closest to the Volume Based Tie Breaker.<sup>13</sup> The Volume Based Tie Breaker for an Opening Auction is the midpoint of the NBBO<sup>14</sup> where there is a Valid NBBO<sup>15</sup>; where there is no Valid NBBO, the

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<sup>9</sup> “Collar Price Range” is defined in BZX Rule 11.23(a)(6) as “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. The Collar Midpoint will be the Volume Based Tie Breaker for all applicable auctions, except for IPO Auctions in ETPs (as defined in Rule 11.8, Interpretation and Policy .02(d)(2)), for which the Collar Midpoint will be the issue price. Specifically, the Collar Price Range will be determined as follows: where the Collar Midpoint is \$25.00 or less, the Collar Price Range shall be the range from 10% below the Collar Midpoint to 10% above the Collar Midpoint; where the Collar Midpoint is greater than \$25.00 but less than or equal to \$50.00, the Collar Price Range shall be the range from 5% below the Collar Midpoint to 5% above the Collar Midpoint; and where the Collar Midpoint is greater than \$50.00, the Collar Price Range shall be the range from 3% below the Collar Midpoint to 3% above the Collar Midpoint.”

<sup>10</sup> “Continuous Book” is defined in BZX Rule 11.23(a)(7) as “all orders on the BZX Book that are not Eligible Auction Orders.”

<sup>11</sup> “Auction Book” is defined in BZX Rule 11.23(a)(1) as “all Eligible Auction Orders on the BZX Book.”

<sup>12</sup> See BZX Rule 11.23(b)(2)(B) (governing the determination of the BZX Official Opening Price).

<sup>13</sup> Volume Based Tie Breaker is defined in BZX Rule 11.23(a)(23).

<sup>14</sup> NBBO is defined in BZX Rule 1.5(o) as “the national best bid or offer.”

<sup>15</sup> Valid NBBO is defined in BZX Rule 11.23(a)(23) as an 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.” The Maximum Percentage will be determined by the Exchange and will be published in a circular distributed to Members with reasonable advance notice. Id.

Volume Based Tie Breaker is the Final Last Sale Eligible Trade (“FLSET”).<sup>16</sup> The Exchange estimates that there is no Valid NBBO for approximately 5.81% of Opening Auctions.<sup>17</sup>

According to the Exchange, because the FLSET is typically based on the most recent execution in a security during Regular Trading Hours,<sup>18</sup> its value may be significantly away from the Indicative Price<sup>19</sup> at the time of the Opening Auction Process, especially in more thinly traded securities.<sup>20</sup> The Exchange states that it: (1) has observed instances where auction eligible orders priced in-line with the Indicative Price were not executed in the Opening Auction because they were outside the Collar Price Range established using the FLSET; and (2) believes that certain of these instances resulted in orders not receiving executions in the Opening Auction that would have otherwise occurred at prices that would have been acceptable to both parties.<sup>21</sup> To support this, BZX states that, from January 1, 2022 through July 12, 2022, across 73,927 total

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<sup>16</sup> FLSET is defined in BZX Rule 11.23(a)(9) as “the last round lot trade occurring during Regular Trading Hours on the Exchange if the trade was executed within the last one second prior to either the Closing Auction or, for Halt Auctions, trading in the security being halted. Where the trade was not executed within the last one second, the last round lot trade reported to the consolidated tape received by the Exchange during Regular Trading Hours and, where applicable, prior to trading in the security being halted will be used. If there is no qualifying trade for the current day, the BZX Official Closing Price from the previous trading day will be used.”

<sup>17</sup> See Notice, supra note 3, 87 FR at 53515, n.12.

<sup>18</sup> Regular Trading Hours is defined in BZX Rule 1.5(w) as “the time between 9:30 a.m. and 4:00 p.m. Eastern Time.”

<sup>19</sup> Indicative Price is defined in BZX Rule 11.23(a)(10) as “the price at which the most shares from the Auction Book and the Continuous Book would match. In the event of a volume based tie at multiple price levels, the Indicative Price will be the price which 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 Indicative Price will be the price closest to the Volume Based Tie Breaker.”

<sup>20</sup> See id. at 53515.

<sup>21</sup> See id.

Opening Auctions in BZX-listed securities, (1) there were 324 instances in which Market-On-Open (“MOO”) orders<sup>22</sup> did not receive an execution in the Opening Auction and were thus cancelled; (2) in 168 of those instances, the Opening Auction would have been extended under the proposed changes to the BZX Opening Process; and (3) 10,936 shares could have potentially received an execution.<sup>23</sup>

B. Proposed Changes to the Opening Auction Process

The Exchange proposes to change its Opening Auction functionality only in the following circumstances: where (1) there is an Indicative Price, (2) there is not a Valid NBBO, and (3) the Indicative Price is not within the FLSET-established Collar Price Range.<sup>24</sup> In these circumstances, BZX proposes to delay the Opening Auction as follows.

1. BZX would delay the Opening Auction for one second. If after that delay there is a Valid NBBO or the Indicative Price is within the Collar Price Range, the Opening Auction price would be established pursuant to the Standard Opening Auction Process.<sup>25</sup> If there is no Valid NBBO and the Indicative Price is not within the Collar Price Range after the one-second delay, the Opening Auction would be delayed by one additional second, at which point if there is a Valid NBBO or the Indicative Price is within the Collar Price Range, the Opening Auction price would be established pursuant to the Standard Opening Process. If after the additional one-second delay there is no Valid NBBO or the Indicative Price is not within the Collar

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<sup>22</sup> For reasons explained in the Notice, BZX uses unexecuted MOO orders in Opening Auctions as a proxy for crossed-interest that went unexecuted.

<sup>23</sup> See *id.* at 53519.

<sup>24</sup> See *id.* at 53516.

<sup>25</sup> Proposed Rule 11.23(b)(2)(B)(i) defines the “Standard Opening Process,” which mirrors the existing process described in Rule 11.23(b)(2)(B).

Price Range, the process would continue to be applied in one-second increments until either the Opening Auction occurs or until five seconds has lapsed (i.e., 9:30:05 a.m.).

2. If the Opening Auction has not occurred by 9:30:05, the System would widen the Collar Price Range in the direction of the Indicative Price by 5% of the Volume Based Tie Breaker, which would be the FLSET as of 9:30:05 a.m. (“Widening Amount”).<sup>26</sup> The System would check to see whether the Indicative Price is inside the widened Collar Price Range every second between 9:30:05 and 9:30:30 a.m.
  - a. If the Indicative Price is within the widened Collar Price Range, the Opening Auction price would be established pursuant to the Standard Opening Auction Process.
  - b. If the Indicative Price is not within the widened Collar Price Range, the Opening Auction would be further delayed, as discussed below.
3. If by 9:30:30 a.m. the Indicative Price is not within the widened Collar Price Range, the Collar Price Range would again widen by the Widening Amount. The System would check to see whether the Indicative Price is inside the widened Collar Price Range every second between 9:30:30 and 9:31:30 a.m.
  - a. If an Indicative Price is inside the widened Collar Price Range during a check, the Opening Auction price would be established pursuant to the Standard Opening Auction Process.

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<sup>26</sup> The Widening Amount would be locked-in as of 9:30:05, and will not change between 9:30:05 and 9:34:30 even in the event that a round lot trade reported to the consolidated tape was received by the Exchange during that time (i.e., a FLSET).

- b. If the Indicative Price is not within the widened Collar Price Range, the Opening Auction would be further delayed, as discussed below.
- 4. If by 9:31:30 a.m. the Indicative Price is not within the widened Collar Price Range, the System will check to see whether the Indicative Price is inside the widened Collar Price Range every second between 9:31:30 and 9:34:30 a.m.
  - a. If an Indicative Price is inside the widened Collar Price Range during a check, the Opening Auction price would be established pursuant to the Standard Opening Auction Process.
  - b. Unless the Opening Auction has occurred, the Collar Price Range would widen in the direction of the Indicative Price by the Widening Amount each minute from 9:31:30 to 9:34:30.
- 5. If no Opening Auction has occurred by 9:34:30 a.m., the Opening Auction would occur pursuant to the Standard Opening Auction Process using the expanded Collar Price Range as of 9:34:30.

In summary, the Opening Auction would be delayed until either: (1) the NBBO becomes a Valid NBBO; (2) the Indicative Price is within the Collar Price Range (i.e., if the Opening Auction occurred between 9:30:01 and 9:30:05) or within the widened Collar Price Range (i.e., if the Opening Auction occurred between 9:30:06 and 9:34:30); (3) there no longer is an Indicative Price;<sup>27</sup> or (4) four minutes and 30 seconds elapsed.

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<sup>27</sup> If after each one-second delay there is no longer an Indicative Price (i.e., there is no longer crossed interest), the Opening Auction would occur immediately pursuant to proposed Rule 11.23(2)(B)(v), which would result in the BZX Official Opening Price being the FLSET, which would be the previous BZX Official Closing Price unless a FLSET occurred after 9:30:00.

BZX states that these modifications are designed to prevent the cancellation of auction eligible orders priced equally or more aggressive than the Indicative Price, which the Exchange believes would facilitate the presence of sufficient liquidity and information to make the Opening Auction a meaningful price formation event in BZX-listed securities.<sup>28</sup>

C. The BZX Official Opening Price and Limit Up Limit Down Bands

The Exchange states that ending the Opening Auction Process at or before 9:34:30 a.m. would ensure that the Exchange is able to disseminate the BZX Official Opening Price with sufficient time to be used to calculate the initial limit up-limit down (“LULD”) bands, and that the price of executions occurring during the proposed delay price would provide a better foundation for the initial LULD bands.<sup>29</sup>

BZX asserts that the expected benefit of allowing crossed auction interest to execute at the best possible price outweighs the minimal and finite delay (up to four minutes and 30 seconds) in the dissemination of the BZX Opening Price and LULD bands. BZX argues that this tradeoff currently exists in the national market system: the New York Stock Exchange LLC (“NYSE”) may delay its opening process indefinitely.<sup>30</sup> Further, the Exchange states that the possible risks resulting from delaying dissemination of the LULD bands would be mitigated by the infrequency with which LULD halts occur within the first four minutes and 30 seconds of the trading day.<sup>31</sup>

II. Proceedings to Determine Whether to Approve or Disapprove SR-CboeBZX-2022-045 and Grounds for Disapproval Under Consideration

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<sup>28</sup> See id. at 53516.

<sup>29</sup> See id. at 53517, 53520.

<sup>30</sup> See id. at 53515.

<sup>31</sup> According to the Exchange, during the period of June 1, 2021 through May 31, 2022, a LULD halt occurred in BZX-listed symbols during the first four minutes and 30 seconds of the trading day roughly 0.01% of the time (15/134,615). See id. at 53519, 53520, n.38.



The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Act<sup>32</sup> to determine whether the proposed rule change should be approved or disapproved. Institution of proceedings is appropriate at this time in view of the legal and policy issues raised by the proposal. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, as described below, the Commission seeks and encourages interested persons to provide additional comment on the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Act,<sup>33</sup> the Commission is providing notice of the grounds for disapproval under consideration. As described above, the Exchange has proposed to amend the Opening Auction Process Provided Under Rule 11.23(b)(2)(B). In certain cases, the proposed Opening Auction Process would result in a delay in the calculation of the BZX Official Opening Price, which in most cases is the reference price for initial LULD price bands for BZX-listed securities.

The Commission is instituting proceedings to allow for additional analysis of, and input from commenters with respect to, the consistency of the proposal with Sections 6(b)(5)<sup>34</sup> and 6(b)(8)<sup>35</sup> of the Act. Section 6(b)(5) of the Act requires that the rules of a national securities exchange be designed, among other things, to promote just and equitable principles of trade, 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, and not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers. Section 6(b)(8) of

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<sup>32</sup> 15 U.S.C. 78s(b)(2)(B).

<sup>33</sup> Id.

<sup>34</sup> 15 U.S.C. 78f(b)(5).

<sup>35</sup> 15 U.S.C. 78f(b)(8).

the Act requires that the rules of a national securities exchange not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

### III. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their data, views, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal. In particular, the Commission invites the written views of interested persons concerning whether the proposed rule change is consistent with Section 6(b)(5), 6(b)(8), or any other provision of the Act, or the rules and regulations thereunder. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of data, views, and arguments, the Commission will consider, pursuant to Rule 19b-4 under the Act,<sup>36</sup> any request for an opportunity to make an oral presentation.<sup>37</sup>

Interested persons are invited to submit written data, views, and arguments regarding whether the proposed rule change should be approved or disapproved by [insert date 21 days from publication in the Federal Register]. Any person who wishes to file a rebuttal to any other person's submission must file that rebuttal by [insert date 35 days from publication in the Federal Register].

The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal and any other issues raised by the proposed rule change

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<sup>36</sup> 17 CFR 240.19b-4.

<sup>37</sup> Section 19(b)(2) of the Act, as amended by the Securities Acts Amendments of 1975, Pub. L. 94-29 (June 4, 1975), grants to the Commission flexibility to determine what type of proceeding – either oral or notice and opportunity for written comments – is appropriate for consideration of a particular proposal by a self-regulatory organization. See Securities Acts Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).

under the Act. In this regard, the Commission seeks commenters' views regarding whether a delay in the calculation of the BZX Official Opening Price would affect the trading of BZX-listed securities or would impact any processes that rely on the calculation of the BZX Official Opening Price, including the calculation and dissemination of initial LULD price bands. The Commission also seeks comment on the sufficiency of the Exchange's quantitative support for the proposal (including any interpretations thereof) and whether any additional data would be useful in evaluating the consistency of the proposed rule change 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](mailto:rule-comments@sec.gov). Please include File No. SR-CboeBZX-2022-045 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 No. SR-CboeBZX-2022-045. The 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 No. SR-CboeBZX-2022-045 and should be submitted by [insert date 21 days from date of publication in the Federal Register]. Rebuttal comments should be submitted by [insert date 35 days from date of publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>38</sup>

Sherry R. Haywood,  
Assistant Secretary.

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<sup>38</sup> 17 CFR 200.30-3(a)(57).