

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-95154; File No. SR-NYSEArca-2022-13)

June 24, 2022

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing of Amendment No. 2 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 2, to Amend Rule 7.31-E(h)(3) Relating to Discretionary Pegged Orders

**I. Introduction**

On March 9, 2022, NYSE Arca, Inc. (“NYSE Arca” or the “Exchange”) 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 NYSE Arca Rule 7.31-E(h)(3) to modify certain factors relevant to the quote instability calculation for Discretionary Pegged Orders. The proposed rule change was published for comment in the Federal Register on March 28, 2022.<sup>3</sup> On May 9, 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> On May 10, 2022, the Exchange filed Amendment No. 1 to the proposed rule change,<sup>6</sup> and on June 15, 2022, the Exchange filed

---

<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. 94490 (Mar. 22, 2022), 87 FR 17376 (Mar. 28, 2022) (“Notice”).

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

<sup>5</sup> See Securities Exchange Act Release No. 94869 (May 9, 2022), 87 FR 29417 (May 13, 2022). The Commission designated June 26, 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> Amendment No. 1 is available on the Commission’s website at <https://www.sec.gov/comments/sr-nysearca-2022-13/srnysearca202213-20128473-292032.pdf>.

Amendment No. 2 to the proposed rule change, which replaced and superseded in their entirety both the original filing and Amendment No. 1. The Commission has received no comments on the proposed rule change.

The Commission is publishing this notice to solicit comments on the proposed rule change, as modified by Amendment No. 2, from interested persons and is approving the proposed rule change, as modified by Amendment No. 2, on an accelerated basis.

## **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 self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those 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 parts of such statements.

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

#### **1. Purpose**

The Exchange proposes to amend Rule 7.31-E(h)(3) to modify certain factors relevant to the quote instability calculation for Discretionary Pegged Orders. The Discretionary Pegged Order is a non-displayed order type that is pegged to the same side of the PBBO.<sup>7</sup> The price of a Discretionary Pegged Order automatically adjusts as the PBBO moves, and a Discretionary Pegged Order will exercise the least amount of discretion necessary to trade with contra-side interest. A Discretionary Pegged Order will not exercise discretion if the PBBO is determined to

---

<sup>7</sup> As defined in NYSE Arca Rule 1.1, “PBBO” means the Best Protected Bid and the Best Protected Offer. Rule 1.1 also defines “PBB” as the highest Protected Bid and “PBO” as the lowest Protected Offer.

be unstable via a quote instability calculation that assesses the probability of a change to the PBB or PBO (as described in further detail below), thereby offering protection against unfavorable executions during periods of quote instability.

Specifically, the Exchange proposes to amend Rule 7.31-E(h)(3)(D)(i)(D)(1)(a), which sets forth the quote stability coefficients. Under Rule 7.31-E(h)(3)(D)(i)(D)(3), the Exchange may modify the quote stability coefficients at any time, subject to a filing of a proposed rule change. The Exchange proposes such changes in this rule filing.

#### *Discretionary Pegged Orders*

Rule 7.31-E(h)(3) provides for Discretionary Pegged Orders, which are Pegged Orders<sup>8</sup> that may exercise price discretion from their working price to a discretionary price in order to trade with contra-side orders on the NYSE Arca Book, except during periods of quote instability as defined in Rule 7.31-E(h)(3)(D).

Rule 7.31-E(h)(3)(D) provides that the Exchange uses a quote instability calculation to assess a security's "quote instability factor," or the probability of an imminent change to the current PBB to a lower price or PBO to a higher price. When quoting activity in a security meets predefined criteria and the quote instability factor calculated is greater than the Exchange's defined "quote instability threshold," the Exchange treats the quote as unstable ("quote instability" or a "crumbling quote").

Rule 7.31-E(h)(3)(D)(i) provides that the Exchange determines a quote to be unstable when, among other factors, the quote instability factor result from the quote stability calculation

---

<sup>8</sup> A Pegged Order is a Limit Order that does not route with a working price that is pegged to a dynamic reference price. If the designated reference price is higher (lower) than the limit price of a Pegged Order to buy (sell), the working price will be the limit price of the order. See Rule 7.31-E(h).

is greater than the quote instability threshold. To perform the quote stability calculation and determine the quote instability factor, the Exchange employs a fixed formula utilizing the quote stability coefficients and quote stability variables set forth in Rule 7.31-E(h)(3)(D)(i)(D)(1)(a) and Rule 7.31-E(h)(3)(D)(i)(D)(1)(b), respectively.

*Proposed Rule Change*

The Exchange proposes to update the quote stability coefficients used in the quote instability calculation, which have not been modified since Rule 7.31-E(h)(3) was adopted.<sup>9</sup> The proposed changes are intended to update the quote stability coefficients so that they are based on current market data and better calibrated to function on an exchange without an intentional delay mechanism and with deeper liquidity than other exchanges that offer similar functionality.<sup>10</sup>

The Exchange reviewed NYSE Arca market data from randomly selected days in the fourth quarter of 2021 to analyze the effectiveness of the quote stability coefficients in predicting changes to the PBBO. Specifically, the Exchange reviewed PBBO data, on a nanosecond level,

---

<sup>9</sup> The Exchange adopted Rule 7.31-E(h)(3) governing Discretionary Pegged Orders in 2016. See Securities Exchange Act Release No. 78181 (June 28, 2016), 81 FR 43297 (July 1, 2016) (SR-NYSEArca-2016-44) (Notice of Filing of Amendment No. 1, and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 1, to Add a New Discretionary Pegged Order). Discretionary Pegged Orders (with the current quote stability coefficients set forth in current Rules 7.31-E(h)(3)(D)(i)(D)(1)(a)(i) through (v)) have been available for use on the Exchange since March 21, 2022. See <https://www.nyse.com/trader-update/history#110000415898>.

<sup>10</sup> The Exchange notes that its rules governing the Discretionary Pegged Order, including the formula for the quote instability calculation, are based on the Investors Exchange LLC (“IEX”) Discretionary Peg Order (“D-Peg Order”), which functions in conjunction with IEX’s speed bump. See id. The Exchange does not anticipate any issues in connection with the introduction of the order type, including because such orders would be processed similarly to Discretionary Pegged Orders on its affiliated exchange, NYSE American LLC (“NYSE American”). NYSE American, which also does not currently function with any intentional delay, offers a Discretionary Pegged Order as set forth in NYSE American Rule 7.31E(h)(3), which is substantially the same as NYSE Arca Rule 7.31-E(h)(3).

for certain intervals throughout each randomly selected day to track changes to quotes on NYSE Arca and away markets. The Exchange used this data to generate and then test the effectiveness of the proposed quote stability coefficients, and based on its analysis, believes that modifying the quote stability coefficients would enable the Exchange to evaluate the quality of the PBBO more effectively. Specifically, the Exchange sampled market activity from randomly selected days in the fourth quarter of 2021 to simulate the performance of the quote instability calculation using both the current quote stability coefficients and the proposed quote stability coefficients. The Exchange observed that, in situations where the market price moved against the same side of the quote (i.e., the PBB fell or the PBO rose) 10 milliseconds later, the proposed quote stability coefficients, when incorporated into the quote instability calculation, correctly predicted the price change approximately 17% more often than the current quote stability coefficients were able to predict the price change (i.e., the current quote stability coefficients under-predicted when a price change would occur).

Accordingly, the Exchange believes that the proposed quote stability coefficients would be more accurate than the current quote stability coefficients in identifying changes to the PBBO and thus more effective in protecting Discretionary Pegged Orders from unfavorable executions. The Exchange thus proposes to modify the quote stability coefficients set forth in Rule 7.31-E(h)(3)(D)(i)(D)(1)(a)(i) through (v) as follows:

<b>Quote Stability Coefficient</b>	<b>Current Value</b>	<b>Proposed Value</b>
C0	-2.39515	-1.793885
C1	-0.76504	-0.600796
C2	0.07599	0.0776515
C3	0.38374	0.492649
C4	0.14466	0.1631485

The Exchange believes that its proposed modification of the quote stability coefficients, based on the market data analysis described above, would improve the accuracy of the fixed

formula used to perform the quote instability calculation. Specifically, the Exchange believes that the proposed quote stability coefficients, which have been adjusted to reflect more recent activity on the Exchange, would improve the calibration of the quote instability calculation to activity on the Exchange, thereby improving the Exchange's ability to predict whether there is quote instability and protect Discretionary Pegged Orders from exercising discretion when the PBBO is unstable.

Because of the technology changes associated with this proposed rule change, the Exchange will announce the implementation date by Trader Update. Subject to approval of this proposed rule change, the Exchange anticipates that it will implement the proposed quote stability coefficients no later than in the third quarter of 2022.

## 2. Statutory Basis

The proposed rule change is consistent with Section 6(b) of the Act,<sup>11</sup> in general, and furthers the objectives of Section 6(b)(5),<sup>12</sup> in particular, because it is 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 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.

The Exchange believes that the proposed change would promote just and equitable principles of trade, remove impediments to, and perfect the mechanism of, a free and open market and a national market system, and protect investors and the public interest because it is designed to increase the effectiveness of the quote instability calculation used to determine

---

<sup>11</sup> 15 U.S.C. 78f(b).

<sup>12</sup> 15 U.S.C. 78f(b)(5).

whether a crumbling quote exists. As discussed above, the proposed change is based on the Exchange's analysis of market data, which supports that the proposed quote stability coefficients would accurately identify changes to the PBBO more frequently than the current quote stability coefficients and, accordingly, that the proposed change would improve the accuracy of the Exchange's quote instability calculation. Accordingly, the Exchange believes that the proposed change would remove impediments to, and perfect the mechanism of, a free and open market and a national market system, as well as protect investors and the public interest, by enhancing the Exchange's protection of Discretionary Pegged Orders. Specifically, because the proposed quote stability coefficients were derived through an analysis of more recent market data and are calibrated to reflect current activity on the Exchange (including to adapt them to function on an exchange without an intentional delay mechanism and with deeper liquidity than other exchanges that offer similar functionality), the Exchange believes that the proposed change would improve the effectiveness of the quote instability calculation in predicting periods of quote instability and thus enhance the extent to which Discretionary Pegged Orders would be protected from unfavorable executions.

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 believes that the proposed change would promote competition by improving the accuracy of the quote instability calculation, thereby enhancing the protection of Discretionary Pegged Orders from unfavorable executions during periods of quote instability.

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 with respect to the proposed rule change.

### III. Discussion and Commission Findings

After careful review, the Commission finds that the proposed rule change, as modified by Amendment No. 2, is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange.<sup>13</sup> In particular, the Commission finds that the proposal is consistent with Section 6(b)(5) of the Act,<sup>14</sup> which requires 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.

As described above, the Exchange represents that the proposed coefficients were calibrated to reflect the Exchange's current activity and market structure and are based on an analysis of recent market data and on backtesting that indicates that the proposed quote stability coefficients and resulting updated quote stability formula would more accurately identify if the PBBO is "crumbling" compared to the current quote stability coefficients. The Commission finds that the proposed rule change is consistent with the protection of investors and the public interest because it will modify the coefficients of the quote instability formula in a way that is reasonably designed to improve the effectiveness of the quote instability calculation in predicting periods of quote instability and to thereby enhance the effectiveness of Discretionary Pegged Orders against unfavorable executions during periods of quote instability.

---

<sup>13</sup> In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

<sup>14</sup> 15 U.S.C. 78f(b)(5).



For the reasons discussed above, the Commission finds that this proposed rule change, as modified by Amendment No. 2, is consistent with the requirements of the Act.

#### **IV. Solicitation of Comments on Amendment No. 2**

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether Amendment No. 2 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](mailto:rule-comments@sec.gov). Please include File No. SR-NYSEArca-2022-13 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-NYSEArca-2022-13. The file numbers 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 will also 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 publicly available. All submissions should refer to File No. SR-NYSEArca-2022-13 and should be submitted on or before [insert date 21 days from date of publication in the Federal Register].

**V. Accelerated Approval of Proposed Rule Change, as Modified by Amendment No. 2**

The Commission finds good cause to approve the proposed rule change, as modified by Amendment No. 2, prior to the thirtieth day after the date of publication of notice of the amended proposal in the Federal Register. In Amendment No. 2, the Exchange amended the proposal to: (1) provide additional explanation of and rationale for using Discretionary Pegged Orders; (2) provide additional explanation of the purpose of the proposed rule change; and (3) provide additional explanation regarding how the proposed quote instability coefficients were formulated and tested; and (4) state when the Exchange expects to implement the proposed change to the quote instability coefficients. Amendment No. 2 adds clarity and justification to the proposal and does not substantively alter the proposed rule change as described in the Notice. Accordingly, the Commission finds good cause, pursuant to Section 19(b)(2) of the Act,<sup>15</sup> to approve the proposed rule change, as modified by Amendment No. 2, on an accelerated basis.

---

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

## VI. Conclusion

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Act,<sup>16</sup> that the proposed rule change (SR-NYSEArca-2022-13), as modified by Amendment No. 2, be, and hereby is, approved on an accelerated basis.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>17</sup>

J. Matthew DeLesDernier,  
Assistant Secretary.

---

<sup>16</sup> Id.

<sup>17</sup> 17 CFR 200.30-3(a)(12).