



SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-102657; File No. SR-NYSEARCA-2024-112]

Self-Regulatory Organizations; NYSE Arca, Inc.; Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to Amend Rule 7.31–E to Adopt the Selective Midpoint Order

March 13, 2025.

I. Introduction

On December 18, 2024, NYSE Arca, Inc. (“Exchange” or “NYSE Arca”) filed with the Securities and Exchange Commission (“Commission”), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)¹ and Rule 19b-4 thereunder,² a proposed rule change to amend Exchange Rule 7.31–E to adopt the Selective Midpoint (“SeMi”) Order. The proposed rule change was published for comment in the Federal Register on December 30, 2024.³ The Commission received comment on the proposal.⁴ On February 11, 2025, pursuant to Section 19(b)(2) of the Act,⁵ 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.⁶ The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Act⁷ to determine whether to approve or disapprove the proposed rule change.

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ See Securities Exchange Act Release No. 102005 (Dec. 19, 2024), 89 FR 106630 (Dec. 30, 2024) (“Notice”).

⁴ Comments received on the proposed rule change are available at: <https://www.sec.gov/comments/sr-nysearca-2024-112/srnysearca2024112.htm>.

⁵ 15 U.S.C. 78s(b)(2).

⁶ See Securities Exchange Act Release No. 102401 (Feb. 11, 2025), 90 FR 9782 (Feb. 18, 2025) (designating Mar. 30, 2025, as the date by which the Commission shall either approve, disapprove, or institute proceedings to determine whether to disapprove the proposed rule change).

⁷ 15 U.S.C. 78s(b)(2)(B).

II. Description of the Proposed Rule Change⁸

The Exchange offers the Discretionary Pegged Order (“DPO”), which is a non-displayed order to buy (sell) that is pegged to the same side of the PBBO. Upon entry, a DPO is assigned a working price equal to the lower (higher) of the midpoint of the PBBO (the “Midpoint Price”) or the limit price of the order.⁹ Any untraded shares of such order are assigned a working price equal to the lower (higher) of PBB (PBO) or the order’s limit price, which is automatically adjusted in response to changes to the PBB (PBO) for buy (sell) orders up (down) to the order’s limit price. A DPO exercises the least amount of discretion necessary from its working price to its discretionary price (defined as the lower (higher) of the Midpoint Price or the limit price of the order) to trade with contra-side interest.

The Exchange proposes to modify NYSE Arca Rule 7.31-E(h)(3) to replace the DPO with the SeMi Order. As described in the Notice, the SeMi Order would be similar to the DPO in that the SeMi Order would be a non-displayed order to buy (sell) that is pegged to the same side of the PBBO that is assigned a working price equal to the lower (higher) of the Midpoint Price or the limit price of the order.¹⁰ Any untraded shares of a SeMi Order would be assigned a working price equal to the lower (higher) of the PBB (PBO) or the order’s limit price and automatically adjusted in response to changes to the PBB (PBO) for buy (sell) orders up (down) to the order’s limit price.¹¹ In order to trade with contra-side orders on the NYSE Arca Book,¹² a SeMi Order to buy (sell) would exercise the least amount of price discretion necessary from its working price to its discretionary price, which is defined as the lower (higher) of the Midpoint Price or the

⁸ For a full description of the proposed rule change, refer to the Notice, supra note 3.

⁹ See NYSE Arca Rule 7.31-E(h)(3). As defined in NYSE Arca Rule 1.1, “PBBO” means the Best Protected Bid and the Best Protected Offer. NYSE Arca Rule 1.1 also defines “PBB” as the highest Protected Bid and “PBO” as the lowest Protected Offer.

¹⁰ See proposed NYSE Arca Rule 7.31-E(h)(3).

¹¹ Id.

¹² See NYSE Arca Rule 1.1.

SeMi Order's limit price.¹³ When exercising discretion, SeMi Orders (like DPOs) would maintain their time priority at their working price as Priority 3 - Non-Display Orders and be prioritized behind Priority 3 - Non-Display Orders with a working price equal to the discretionary price of a SeMi Order at the time of execution.¹⁴ If multiple SeMi Orders are exercising price discretion during the same book processing action, they would maintain their relative time priority at the discretionary price.¹⁵

The Exchange is proposing to adopt new NYSE Arca Rule 7.31-E(h)(3)(D) to allow SeMi Orders to be optionally designated as Liquidity Providing.¹⁶ This functionality is not available for DPOs. An incoming SeMi Order designated as Liquidity Providing would only execute against resting orders that include a Non-Display Remove Modifier and are priced within the discretionary range of the Liquidity Providing SeMi Order. If a resting contra-side order without a Non-Display Remove Modifier is priced within an arriving Liquidity Providing SeMi Order's discretionary range, the Liquidity Providing SeMi Order would be placed on the NYSE Arca Book, and its discretionary range would be adjusted to equal the resting price of the non-displayed contra-side order or one minimum price variation ("MPV") less aggressive than the resting price of the displayed contra-side order.¹⁷ Further, a resting Liquidity Providing SeMi Order would not trade with an arriving contra-side order that cannot remove liquidity.¹⁸ Once such arriving contra-side order is placed on the NYSE Arca Book, the discretionary range of the Liquidity Providing SeMi Order would be adjusted to equal the resting price of a non-displayed contra-side order or to one MPV less aggressive than the resting price of a displayed contra-side

¹³ Id.

¹⁴ See proposed NYSE Arca Rule 7.31-E(h)(3)(B).

¹⁵ Id.

¹⁶ See proposed NYSE Arca Rule 7.31-E(h)(3)(D).

¹⁷ See proposed NYSE Arca Rule 7.31-E(h)(3)(D)(ii). The Exchange states that allowing Liquidity Providing SeMi Orders to trade with resting orders with a Non-Display Remove Modifier, as well as adjusting the discretionary range of such orders, would be consistent with the operation of discretionary order types on other equities exchanges. See Notice, supra note 3 at 106631.

¹⁸ See proposed NYSE Arca Rule 7.31-E(h)(3)(D)(iii). The Exchange states that this proposed handling is also consistent with the handling of similar discretionary order types by other equities exchanges.

order. Once resting on the NYSE Arca Book, the discretionary range of a Liquidity Providing SeMi Order would be adjusted based on resting contra-side interest.¹⁹ A Liquidity Providing SeMi Order to buy (sell) would not be eligible to trade at a price equal to or above (below) any sell (buy) orders that are displayed and have a working price equal to or below (above) the working price of such Liquidity Providing SeMi Order, or at a price above (below) any sell (buy) orders that are not displayed and that have a working price below (above) the working price of such Liquidity Providing SeMi Order.²⁰

The Exchange also proposes to add new NYSE Arca Rule 7.31-E(h)(3)(C) to provide that the SeMi Order would be ineligible to trade during unstable market conditions, as identified by the Selective Midpoint Indicator (“SMI”) (as discussed in further detail below), and would remain ineligible to trade at any price until market conditions stabilize, as determined by the SMI. The Exchange previously calculated quote stability and, when in operation, only restricted the execution of a DPO within its discretionary price range; DPOs remained eligible to execute at their working price during times determined to be unstable.²¹ If the SMI determines the PBB (PBO) for a particular security to be an unstable quote, both an arriving and resting SeMi Order would be ineligible to trade until there is a stable PBB (PBO) at which point the order’s working price would be adjusted. As described by the Exchange in the Notice, this functionality is designed to prevent potentially undesirable executions during volatile or unstable market conditions.

As discussed above, in the past, the DPO relied on a static logistical regression model to forecast market instability and only prevented DPOs in any symbol from exercising discretion to

¹⁹ See proposed NYSE Arca Rule 7.31-E(h)(3)(D)(iv).

²⁰ See proposed NYSE Arca Rule 7.31-E(h)(3)(D)(iv)(a) and (b).

²¹ See Securities Exchange Act Release No. 96322 (Nov. 15, 2022), 87 FR 69376 (Nov. 18, 2022) (SR-NYSEARCA-2022-76) (Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Amend Rule 7.31-E). Following a temporary suspension of the order type, the Exchange amended Rule 7.31-E(h)(3) in order to resume the use of the DPO and eliminate the functionality that calculated quote stability and potentially restricted the use of DPO discretionary range during periods of instability.

trade when the model anticipated an unstable market.²² As proposed, the SeMi Order would rely on the SMI, a gradient-boosting machine learning model,²³ to predict market instability and, if the SMI determined the market unstable, SeMi Orders would be prevented from trading at any price (as opposed to only suspending the ability to execute within price discretion). According to the Exchange, the SMI would facilitate the SeMi Order's ability to provide protection against potentially unfavorable executions. The Exchange developed the SMI to predict market instability, which is defined by the Exchange as relatively large price moves during a relatively short time frame using PBBO updates as the fundamental data points.²⁴

The Exchange proposes to use two types of SMI models: (1) an individualized model for more active stocks, and (2) a market model for less active stocks that are not assigned to the individual SMI. As proposed, the Exchange would identify at least 200 (and up to 1,000) symbols that have the highest volume and quote updates and evaluate whether an individualized SMI or the market model SMI would yield better performance for those symbols. As described by the Exchange in the Notice, the symbols that would have an individual SMI model would be published on the Exchange website.

The SMI would use NYSE Arca Book data, and the 83 Exchange-selected features described in the Exchange's white paper.²⁵ The SMI models would be retrained on a nightly basis using the data from the previous three trading days. As described in the Notice, the SMI models will use the feature weights determined from the previous night's training and the features will be calculated using real-time intraday data.

²² The Exchange eliminated its quote stability calculation in Nov. 2022. Accordingly, DPOs exercise discretion during periods that may have been considered unstable. See Notice at 102005 for a description of the Exchange's previous use of quote instability calculations. See also supra note 19.

²³ The Exchange filed a white paper as Exhibit 3 to the proposed rule change that discusses details of the SMI, which is available at <https://www.sec.gov/files/rules/sro/nysearca/2024/34-102005-ex3.pdf>.

²⁴ See Notice, supra note 3 at 106632.

²⁵ See id.

As proposed, the SMI would be integrated into the Pillar Trading platform and would have access to real-time trading data to evaluate whether the market is stable or unstable. Generally, a SeMi Order would be allowed to trade unless the SMI determines that the market is unstable, in which case a SeMi Order would be prevented from trading at any price for as long as the SMI predicts the market to be unstable. The SeMi Order would remain ineligible to trade at any price until the SMI determines that there is a return to market stability. The Exchange states that the models underlying the SMI are objective and designed to avoid bias and discrimination, and use of the SeMi Order (like use of the DPO) would be voluntary for all market participants.

III. Proceedings to Determine Whether to Approve or Disapprove SR-NYSEARCA-2024-112, and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Act²⁶ to determine whether the proposed rule change should be approved or disapproved. Institution of such proceedings is appropriate at this time in view of the legal and policy issues raised by the proposed rule change and the comment received thereon. 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 to inform the Commission's analysis of whether to approve or disapprove the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Act,²⁷ the Commission is providing notice of the grounds for possible disapproval under consideration. As described above, the Exchange has proposed to (i) replace the DPO with the SeMi Order, (ii) implement the SMI to identify periods of market instability using machine learning methods, (iii) prevent SeMi Orders from trading during such periods of instability, and (iv) permit SeMi Orders to be optionally designated as Liquidity Providing.

²⁶ 15 U.S.C. 78s(b)(2)(B).

²⁷ Id.

The Commission received comment on the proposal.²⁸ The commenter stated that “machine learning technology is not an ‘established, non-discretionary method’ under 3b-16.”²⁹ The commenter questioned how the SMI’s use of immediate-or-cancel (“IOC”) orders and book data in its calculations is consistent with Sections 6(b)(5) and 6(b)(8) of the Act.³⁰ The commenter stated that “not only will data from (a) an unrelated and non-displayed order type, but orders dictated by (b) a regulatory mandate, will be used as fuel in a commercial offering” and that “[t]o my knowledge something like that hasn’t been done before.”³¹ The commenter also stated that self-regulatory organizations should provide more specificity when using the terms “price” or “volume” in a proposed rule change as to whether the terms considered displayed or non-displayed information so that “the public has all the information it needs to provide meaningful comment.”³² The commenter also stated that the use of book data “includes non-displayed prices and volumes from all participants” for commercial purposes “even if that commercial use is of no benefit to and could be adverse to the participant itself.”³³ In this regard, the commenter stated that “a threshold question for any exchange method that mines past or present non-displayed behavior to affect its market” to advantage unrelated participants would be “how is that consistent with 6(b)(5) and 6(b)(8)?”³⁴

Further, the commenter raised questions about the Exchange proposal to suspend some SeMi Orders but not others.³⁵ The commenter stated that “[i]f exchanges can make their own indeterminate and undisclosed judgements about market conditions and direction using any participant data they like – related or unrelated, displayed or non-displayed, whether with a

²⁸ See letter from R.T. Leuchtkafer dated Jan. 16, 2025 (“Leuchtkafer Letter”).

²⁹ See Leuchtkafer Letter at 1.

³⁰ See Leuchtkafer Letter at 2.

³¹ Id.

³² See Leuchtkafer Letter at 3.

³³ See Leuchtkafer Letter at 2.

³⁴ Id.

³⁵ See Leuchtkafer Letter at 3.

commercial or regulatory purpose – from any time period they like to (a) change an order’s material terms . . . or if exchanges can make their own indeterminate and undisclosed judgements about market direction using any data they like to (b) work some orders and not others in a stock (as with SeMi), in what sense are they still exchanges?”³⁶ In this regard, the commenter questioned the effect of the proposal on competition. The commenter also raised questions about (1) how the Exchange would assign the individual SMI models; (2) whether the Exchange would be able to use other indices or exchange-traded funds for the market model; and (3) “what principles, if any- distinguish permissible factors in these calculations from impermissible factors?”³⁷ Finally, the commenter stated that the proposal described that the Exchange would make changes to parameters in the SMI and decisions about whether to “implement a retrained model in production.”³⁸ The commenter questioned “how these apparently staff-made, indeterminate, and unqualified decisions are ‘established, nondiscretionary methods.’”³⁹

The Commission is instituting proceedings to allow for additional analysis of, and input from commenters with respect to, the proposed rule change’s consistency with the Act, and in particular, Section 6(b)(5) and 6(b)(8) of the Act. Section 6(b)(5) of the Act requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, 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.⁴⁰ Section 6(b)(8) of the Act

³⁶ Id.

³⁷ Id.

³⁸ Id.

³⁹ Id.

⁴⁰ 15 U.S.C. 78f(b)(5).

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.⁴¹

The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal, which are set forth in the Notice, in addition to any other comments they may wish to submit about the proposed rule change.

IV. 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 Sections 6(b)(5) and 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,⁴² any request for an opportunity to make an oral presentation.⁴³

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 AFTER DATE OF 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 AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. The Commission asks that commenters address the sufficiency of the Exchange's statements in

⁴¹ 15 U.S.C. 78f(b)(8).

⁴² 17 CFR 240.19b-4.

⁴³ Section 19(b)(2) of the Act, as amended by the Securities Acts Amendments of 1975, Public Law 94-29 (Jun. 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).

support of the proposal, in addition to any other comments they may wish to submit about the proposed rule change.

Comments may be submitted by any of the following methods:

Electronic Comments:

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include file number SR-NYSEARCA-2024-112 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-NYSEARCA-2024-112. This file number should be included on the subject line if email 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 (<https://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 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-NYSEARCA-2024-112 and should

be submitted by [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Rebuttal comments should be submitted by [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁴⁴

Vanessa A. Countryman,
Secretary.

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⁴⁴ 17 CFR 200.30-3(a)(57).