





**Item 1. Text of the Proposed Rule Change**

(a) Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> Cboe BYX Exchange, Inc. (the “Exchange” or “BYX”) is filing with the Securities and Exchange Commission (“Commission”) a proposal to modify Rule 11.24 to introduce an Enhanced RPI Order and expand its Retail Price Improvement program to include securities priced below \$1.00.

The text of the proposed rule change is provided in Exhibit 5.

(b) Not applicable.

(c) Not applicable.

**Item 2. Procedures of the Self-Regulatory Organization**

(a) The Exchange’s President pursuant to delegated authority approved the proposed rule change on December 19, 2023.

(b) Please refer questions and comments on the proposed rule change to Pat Sexton, Executive Vice President, General Counsel, and Corporate Secretary, (312) 786-7467, or Courtney Smith, Counsel, (913) 815-7046, Cboe BYX Exchange, Inc., 433 West Van Buren Street, Chicago, Illinois 60607.

**Item 3. Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change**

(a) Purpose

This Amendment No. 2 to SR-CboeBYX-2023-020 amends and replaces in its entirety the proposal as originally submitted on January 10, 2024, and amended pursuant to Amendment No. 1 on March 6, 2024. The Exchange proposes to amend Rule 11.24 to enhance

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

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

the Exchange's Retail Price Improvement Program (the "Program") for the benefit of retail investors. Specifically, the Exchange proposes to introduce a new type of RPI Interest<sup>3</sup> to be known as an "Enhanced RPI Order." The proposed Enhanced RPI Order will allow retail liquidity providers to post orders at their limit price but have the opportunity to provide a greater amount of price improvement as compared to other resting orders on the same side of the BYX Book with higher price-time priority in order to execute with an incoming Retail Order<sup>4</sup> by exercising at a price within their established step-up range. The proposed change is designed to provide retail investors with additional opportunities for meaningful price improvement by introducing a new order type that will "step-up" its price against orders with a higher priority resting on the BYX Book.<sup>5</sup> Additionally, the Exchange proposes to expand the Program to securities priced below \$1.00.<sup>6</sup>

### Background

In November 2012, the Exchange received approval to operate its Program on a pilot basis.<sup>7</sup> The Program operated under a pilot basis until September 30, 2019, when the Program was approved on a permanent basis.<sup>8</sup> In addition, the Exchange was granted a limited

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<sup>3</sup> See proposed Rule 11.24(e). RPI Interest means an order submitted to the Exchange that is designated as either an RPI Order or an Enhanced RPI Order. See also Rule 11.24(a)(3) ("Retail Price Improvement Order").

<sup>4</sup> See Rule 11.24(a)(2) ("Retail Order").

<sup>5</sup> See Rule 1.5(e) ("BYX Book"). The "BYX Book" is the System's electronic file of orders. The "System" shall mean the electronic communications and trading facility designated by the Board through which securities orders of Users are consolidated for ranking, execution, and when applicable, routing away. See Rule 1.5(aa) ("System").

<sup>6</sup> See Rule 11.24(h). The Program is currently limited to trades occurring at prices equal to or greater than \$1.00 per share.

<sup>7</sup> See Securities Exchange Act Release No. 68303 (November 27, 2012), 77 FR 71652 (December 3, 2012), SR-BYX-2012-019 ("Pilot Approval Order").

<sup>8</sup> See Securities Exchange Act Release No. 87154 (September 30, 2019), 84 FR 53183 (October 4, 2019), SR-CboeBYX-2019-014 ("RPI Approval Order").

exemption from the Sub-Penny Rule, as well as Regulation NMS Rule 602 (Quote Rule) No Action relief<sup>9</sup> to operate the Program.<sup>10</sup> The Program is currently designed to attract Retail Orders to the Exchange and allow such order flow to receive potential price improvement. The Program is currently limited to trades occurring at prices equal to or greater than \$1.00 per share.<sup>11</sup> Under the Program, a class of market participant called a Retail Member Organization (“RMO”)<sup>12</sup> is eligible to submit certain retail order flow (“Retail Orders”) to the Exchange. Users<sup>13</sup> are permitted to provide potential price improvement for Retail Orders<sup>14</sup> in the form of non-displayed interest that is better than the national best bid that is a Protected Quotation (“Protected NBB”) or the national best offer that is a Protected Quotation (“Protected NBO”, and together with the Protected NBB, the “Protected NBBO”).<sup>15</sup>

The Exchange developed this Program with the goal of incentivizing RMOs to

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<sup>9</sup> See Letter from David Shillman to Eric Swanson (November 27, 2012) (“No Action Letter”), available at <https://www.sec.gov/divisions/marketreg/mr-noaction/byx-112712-602.pdf>.

<sup>10</sup> *Supra* note 8 at 53185.

<sup>11</sup> *Supra* note 6. The Exchange will periodically notify the membership regarding the securities included in the Program through an information circular. The Exchange is proposing to make the Program available to all securities (discussed *infra*).

<sup>12</sup> See Rule 11.24(a)(1). A “Retail Member Organization” or “RMO” is a Member (or a division thereof) that has been approved by the Exchange under Rule 11.24 to submit Retail Orders.

<sup>13</sup> See Rule 1.5(cc). A “User” is defined as any member or sponsored participant of the Exchange who is authorized to obtain access to the System.

<sup>14</sup> *Supra* note 4. A “Retail Order” is defined as an agency or riskless principal order that originates from a natural person and is submitted to the Exchange by an RMO, provided that no change is made to the terms of the order with respect to price or side of market and the order does not originate from a trading algorithm or any computerized methodology.

<sup>15</sup> See Rule 1.5(t). The term “Protected Quotation” has the same meaning as is set forth in Regulation NMS Rule 600(b)(71). The terms Protected NBB and Protected NBO are defined in BYX Rule 1.5(s). The Protected NBB is the best-priced protected bid and the Protected NBO is the best-priced protected offer. Generally, the Protected NBB and Protected NBO and the national best bid (“NBB”) and national best offer (“NBO”, together with the NBB, the “NBBO”) will be the same. However, a market center is not required to route to the NBB or NBO if that market center is subject to an exception under Regulation NMS Rule 611(b)(1) or if such NBB or NBO is otherwise not available for an automatic execution. In such case, the Protected NBB or Protected NBO would be the best-priced protected bid or offer to which a market center must route interest pursuant to Regulation NMS Rule 611.

execute their Retail Orders on the Exchange, rather than off-exchange venues, by providing Retail Orders with greater access to potential opportunities for price improvement on the Exchange. However, as noted by the Commission, even with the presence of retail liquidity programs (“RLPs”) offered by Cboe and other national securities exchanges,<sup>16</sup> the great majority of marketable orders of retail investors continue to be sent to wholesalers.<sup>17</sup> Indeed, as noted in the Commission’s recent rule proposal related to minimum pricing increments, RLPs have not yet attracted a significant volume of retail order flow.<sup>18</sup> In fact, since RLPs have been adopted, the percentage of on-exchange share volume has continued to decrease from approximately 71% to approximately 56% as of November 2023.<sup>19</sup>

Accordingly, the Exchange now seeks to enhance its current Program by offering retail liquidity providers an optional Enhanced RPI Order type. The Exchange believes the Enhanced Order type will incentivize additional retail liquidity provision by enabling RPI liquidity providers to submit an order that is ranked at a less aggressive price than the step-up range at which the provider is willing to execute, but have the opportunity to “step up” to provide a greater amount of price improvement as compared to other higher priority resting

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<sup>16</sup> See, e.g., NYSE Retail Liquidity program, which promotes cost savings through price improvement for individual investors provided by retail liquidity providers that submit non-displayed interest priced better than the best protected best bid or protected best offer. See also NYSE National Retail Liquidity program, which seeks to attract retail order flow to the Exchange through the potential of price improvement at the midpoint or better. Available at <https://www.nyse.com/markets/liquidity-programs>. See also IEX Retail Program, which incentivizes midpoint liquidity for retail orders through the use of retail liquidity provider orders. Available at <https://www.iexexchange.io/products/retail-program>. See also Nasdaq BX Retail Price Improvement, which allows retail orders to interact with price-improving liquidity. Available at <https://www.nasdaqtrader.com/content/BXRPIfs.pdf>.

<sup>17</sup> See Securities Exchange Act Release No. 96495 (December 14, 2022), 88 FR 128 (January 3, 2023) (“Order Competition Rule”) at 144.

<sup>18</sup> See Securities Exchange Act Release No. 96494 (December 14, 2022), 87 FR 80266 (December 29, 2022) (“Tick Size Proposal”) at 80273.

<sup>19</sup> Source: Cboe internal data.

orders on the same side of the BYX Book in order to execute with an incoming contra-side Retail Order. As discussed in more detail, below, the Enhanced RPI Order type will have price priority over resting orders when its step-up range allows for additional price improvement when a contra-side Retail Order is submitted to the Exchange. With the deeper pool of retail liquidity-providing orders, the Exchange believes that RMOs will see increased opportunities for on-exchange price improvement and seek to execute more of their Retail Orders on the Exchange.

#### Proposal

The Exchange proposes to amend Rule 11.24(a) to include the proposed Enhanced RPI Order, which allows a retail liquidity provider to post a limit order to the Exchange, but also the opportunity to “step-up” its price within their defined step-up range by providing a greater amount of price improvement as compared to orders with higher priority that are resting on the same side of the BYX Book in order to execute against an incoming Retail Order seeking to remove liquidity. An Enhanced RPI Order is designed to be entered with a limit price, but must also include a step-up range, which is the most aggressive price it is willing to execute against a contra-side Retail Order. If the Enhanced RPI Order includes a step-up range that improves against the price of the highest-ranked resting order on the same side of the BYX Book, the Enhanced RPI Order will be given price priority over the highest-ranked resting order. In order for an Enhanced RPI Order to receive price priority, the Enhanced RPI Order must be able to provide a greater amount of price improvement to an incoming contra-side Retail Order than would otherwise be available by stepping up to the

next minimum price increment.<sup>20</sup>

The Exchange believes this proposed change would further the purpose of the Program to attract retail marketable order flow to the Exchange, while also increasing opportunities for price improvement. By offering the Enhanced RPI Order, the Exchange has created an enhancement to its current Program that offers a greater incentive for liquidity providers to provide liquidity eligible to execute against marketable retail order flow on the Exchange. The Enhanced RPI Order would allow Users to post orders at their limit price but step-up to a more aggressive price in order to execute against marketable retail order flow that is less prone to adverse selection. Marketable retail order flow, in turn, would receive price improvement greater than what is currently available under the Program. The Exchange believes that the proposed change will lead to increased participation in the Program by Users seeking to provide liquidity for marketable retail order flow, which in turn will attract additional marketable retail order flow to the Exchange in search of price improvement opportunities.

The Exchange also proposes to introduce Rule 11.24(a)(5) in order to define the term RPI Interest as either RPI Orders or Enhanced RPI Orders. Additionally, the Exchange proposes to amend Rule 11.24(g) in order to describe order priority for Enhanced RPI Orders. The Exchange also proposes to make corresponding changes within Rule 11.24 to replace certain references to RPI Order with the term RPI Interest in order to have language inclusive of both RPI Orders and Enhanced RPI Orders. Further, the Exchange proposes to delete Rule 11.24(h), as the Exchange proposes to expand the Program to sub-dollar securities. The

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<sup>20</sup> The Exchange notes that the minimum amount of required price improvement will vary between \$0.001 and \$0.01, based on the order types resting on the BYX Book (discussed *infra*).



Exchange will announce that the RPI Program has expanded to all securities in a Trade Desk notice, and periodic updates will no longer be required. The Exchange also proposes to renumber Rule 11.24(i) in conjunction with the deletion of Rule 11.24(h). Finally, the Exchange proposes to clarify throughout Rule 11.24 that RPI Orders and Enhanced RPI Orders will be ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO.

Additionally, with the introduction of the Enhanced RPI Order, the Exchange proposes to amend Rule 11.24(a)(2) to permit a Retail Order to be entered as a Mid-Point Peg Order.<sup>21</sup> The Exchange also proposes to amend Rule 11.24(a)(2) to better describe that the time-in-force requirement for all Retail Orders, including those entered as a Mid-Point Peg Order, is required to be Immediate or Cancel (“IOC”). The Exchange believes that allowing the Mid-Point Peg Order instruction on a Retail Order will benefit Users who choose to submit Retail Orders because it will permit a Retail Order to guarantee price improvement at the midpoint or better. The Mid-Point Peg Order instruction will be optional, and not required for Users of Retail Orders.

#### Current RPI Orders

Rule 11.24(a)(3) currently defines an RPI Order as “non-displayed interest on the Exchange that is priced better than the Protected NBB or Protected NBO by at least \$0.001 and that is identified as such.”<sup>22</sup> The Exchange now proposes to amend the definition of RPI

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<sup>21</sup> See Rule 11.9(c)(9). A Mid-Point Peg Order is a limit order that, after entry into the System, the price of the order is automatically adjusted by the System in response to changes in the NBBO to be pegged to the mid-point of the NBBO, or, alternatively, pegged to the less aggressive of the midpoint of the NBBO or one minimum price variation inside the same side of the NBBO as the order.

<sup>22</sup> Supra note 3.

Order to more accurately reflect how an RPI Order may be entered by defining an RPI Order as “non-displayed interest on the Exchange that is eligible to execute at prices better than the Protected NBB or Protected NBO by at least \$0.001 in securities priced at or above \$1.00 and by at least \$0.0001 in securities priced below \$1.00 and that is identified as such.” As the Exchange is also proposing to expand the Program to prices below \$1.00, more specificity is required regarding the minimum pricing increment. Further, the Exchange is clarifying that an RPI Order may be entered at any price but may execute only at prices better than the Protected NBB or Protected NBO.

As stated in Rule 11.24(a)(3), RPI Orders are non-displayed and are ranked in accordance with Rule 11.12(a). Furthermore, under Rule 11.24(g), competing RPI Orders in the same security are ranked and allocated according to price then time of entry into the System. Executions occur in price/time priority in accordance with Rule 11.12. Any remaining unexecuted RPI interest remains available to interact with other incoming Retail Orders if such interest is at an eligible price. Any remaining unexecuted portion of the Retail Order will cancel or execute in accordance with Rule 11.24(f). The following example illustrates this method:

- Protected NBBO for security ABC is \$10.00 – \$10.05
- User 1 enters an RPI Order to buy ABC at \$10.015 for 500 shares
- User 2 then enters an RPI Order to buy ABC at \$10.02 for 500 shares
- User 3 then enters an RPI Order to buy ABC at \$10.035 for 500 shares

An incoming Retail Order to sell ABC for 1,000 shares executes first against User 3’s bid for 500 shares at \$10.035, because it is the best priced bid, then against User 2’s bid for 500 shares at \$10.02, because it is the next best priced bid. User 1 is not filled because the

entire size of the Retail Order to sell 1,000 shares is depleted. The Retail Order executes against RPI Orders in price/time priority.<sup>23</sup>

The Exchange proposes to amend Rule 11.24(g)(1) to provide that RPI Orders are ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO. Currently, a resting RPI Order is eligible to execute against a Type 2-designated Retail Order (a “Type 2 Order”)<sup>24</sup> that has exhausted all price improving liquidity on the BYX Book even if the RPI Order is not providing price improvement, as a Type 2 Order is eligible to execute against all marketable liquidity once the order has interacted with all price improving liquidity. In the event that an RPI Order is ineligible to execute against a Type 2 Order because it is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00, the Exchange will not cancel the resting RPI Order. Rather, the RPI Order will persist on the BYX Book and will become eligible to execute should the Protected NBB or Protected NBO move to a price that permits the RPI Order to provide price improvement. The proposed change to RPI Order behavior is being made in order to limit RPI Orders to only providing executions that provide price improvement to contra-side Retail Orders, consistent with the definition of an RPI Order and the description of RPI Order functionality in the Exchange’s previous Pilot Approval Order and RPI Approval Order.

#### Enhanced RPI Order

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<sup>23</sup> See Rule 11.24(f) for additional examples of priority and order allocation in the current Program.

<sup>24</sup> See Rule 11.24(f)(2). A Type 2-designated Retail Order will interact first with available price improving RPI Orders and other price improving liquidity and then any remaining portion of the Retail Order will be executed as an IOC Order pursuant to Rule 11.9(b)(1). A Type 2-designated Retail Order can either be submitted as a BYX Only Order or as an order eligible for routing pursuant to Rule 11.13(a)(2). The Exchange proposes to make clear in Rule 11.24(f)(2) that the remaining portion of a Type 2-designated Retail Order will be ineligible to execute against contra-side RPI Interest that is not priced better than the Protected NBB or Protected NBO.

The Exchange now proposes to introduce a new type of RPI Order that Users seeking to provide RPI liquidity may utilize on an optional basis. The proposed Enhanced RPI Order will be eligible to obtain price priority over resting orders in the same security on the same side of the BYX Book in order to execute against a Retail Order by including a step-up range when entered. Enhanced RPI Orders will be ranked in accordance with proposed Rule 11.24(g)(2) (discussed *infra*). In order to effect the proposed change, the Exchange proposes to introduce Rule 11.24(a)(4), which would define an Enhanced RPI Order as:

- An “Enhanced Retail Price Improvement Order” or “Enhanced RPI Order” consists of non-displayed interest on the Exchange that is eligible to execute against contra-side Retail Orders. An Enhanced RPI Order will be ranked at its limit price and must also include a step-up range, which is the maximum price (for buy orders) or minimum price (for sell orders) at which the Enhanced RPI Order is willing to execute. An Enhanced RPI Order may execute at: i) its limit price, so long as the limit price is priced better than the Protected NBB or Protected NBO; ii) for securities priced at or above \$1.00, at a price within the step-up range that is able to improve upon the price of a same-side resting order on the BYX Book by stepping up to the next half cent or full cent, and for securities priced below \$1.00 by stepping up to the next minimum price increment; or iii) at a price within the step-up range when the limit price of a contra-side Retail Order is within the step-up range. An Enhanced RPI Order may be a Primary Pegged order or a limit order. An Enhanced RPI Order that is also a Primary Pegged order will have its ranked price determined in accordance with Rule 11.9(c)(8) and the step-up range

will be applied to the resulting ranked price. The System will monitor whether Enhanced RPI interest, including the step-up range, and adjusted by any offset and subject to the ceiling or floor price, is eligible to interact with incoming Retail Orders. An Enhanced RPI Order (the buy or sell interest, the step-up range, the offset, and the ceiling or floor) remains non-displayed in its entirety. Any User is permitted, but not required, to submit Enhanced RPI Orders. An Enhanced RPI Order may be an odd lot, round lot or mixed lot. An Enhanced RPI Order shall have priority as described in Rule 11.24(g)(2). An Enhanced RPI Order is ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO.

The price of an Enhanced RPI Order will be determined by a User's entry of the following into the Exchange: (1) Enhanced RPI buy or sell interest; (2) the step-up range; (3) an offset, if any; and (4) a ceiling or floor price, if any. The step-up range of an Enhanced RPI Order is the maximum amount above the order's limit price at which a User is willing to execute. If the Enhanced RPI Order can improve upon resting liquidity on the same side of the BYX Book by stepping up to the nearest whole cent tick or half cent midpoint tick, it will receive price priority over the resting liquidity on the BYX Book. An Enhanced RPI Order, however, will not improve upon the price of another resting Enhanced RPI Order to receive price priority.<sup>25</sup>

#### Enhanced RPI Order Priority

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<sup>25</sup> The Exchange plans to submit a request for an exemption under Regulation NMS Rule 612 that would permit it to accept and rank non-displayed RPI Interest. As outlined in the request, the Exchange has received an exemption from Rule 612 for the current Program, but believes it is appropriate to renew its request as the Program seeks to introduce Enhanced RPI Orders even as the fundamental nature of the Program is not changing.

As discussed above, the proposed Enhanced RPI Order will be ranked at its limit price, which is less aggressive than its step-up range. With the introduction of the proposed Enhanced RPI Order, the Exchange proposes to reorganize Rule 11.24(g) into Rule 11.24(g)(1) and (2). Proposed Rule 11.24(g)(1) would contain the existing rule text that describes order priority with respect to RPI Orders, which the Exchange does not propose to amend except to clarify that RPI Orders may not execute at prices that are equal to or inferior to the Protected NBB or Protected NBO. Proposed Rule 11.24(g)(2) would describe order priority with respect to Enhanced RPI Orders.

An Enhanced RPI Order will be ranked and allocated according to its limit price then time of entry into the System. The Exchange proposes, however, that an Enhanced RPI Order will be granted price priority over orders resting on the BYX Book in the event that the Enhanced RPI Order is able to provide a greater amount of price improvement to an incoming contra-side Retail Order by stepping up to the next half cent<sup>26</sup> or full cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00). The step-up range of an Enhanced RPI Order will be utilized to determine price priority when: 1) the range is needed to gain priority over a resting order with higher order book priority that is not an Enhanced RPI Order; 2) in situations where: (a) a contra-side Retail Order is entered at a less aggressive price than the ranked price of the Enhanced RPI Order and all other resting liquidity and (b) the Enhanced RPI Order's step-up range is equal to or more aggressively

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<sup>26</sup> Discussed *infra* Examples 1 and 2. An Enhanced RPI Order may only need to step-up one half cent in order to provide meaningful price improvement in situations where: i) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at the NBBO midpoint, and the Enhanced RPI Order is stepping up to the next full cent; or ii) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at a full cent directly above (below) the NBBO midpoint, and the Enhanced RPI Order is stepping up to the NBBO midpoint.

priced than the Retail Order's limit price; and 3) to determine order book priority when multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders resting on the BYX Book that are not Enhanced RPI Orders. The Exchange notes when multiple Enhanced RPI Orders are resting on the BYX Book, there are no other resting orders on the same side of the BYX Book with higher priority, and a contra-side Retail Order is entered at a price equal to or more aggressive than the highest-priced Enhanced RPI Order resting on the BYX Book, the Enhanced RPI Orders will execute in standard price/time priority according to their limit price rather than utilize the step-up range to determine order book priority.

The Exchange notes that Enhanced RPI Orders similarly will not be eligible to execute against Type 2 Orders if the Enhanced RPI Order is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00. As with RPI Orders, an Enhanced RPI Order that is ineligible to execute against a Type 2 Order because it is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00 will not be cancelled, but rather will persist on the BYX Book so that it may have the opportunity to execute should the Protected NBB or Protected NBO move to a price that permits the RPI Order to provide price improvement.

The Exchange has included the examples below to show how order priority with an Enhanced RPI Order will be determined. In the examples below, the Retail Liquidity Identifier (discussed *infra*) is presumed to be displayed unless stated otherwise. Additionally, all Retail

Orders described in the examples are presumed to be Type 1-designated Retail Orders<sup>27</sup> unless otherwise specified.

**Example 1**<sup>28</sup>

In order to illustrate priority of an Enhanced RPI Order over other non-displayed orders resting on the BYX Book, consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a Mid-Point Peg<sup>29</sup> order to buy ABC at \$10.03 for 100. User 1's order is ranked at \$10.025 as the User elected that the Mid-Point Peg order be pegged to the mid-point of the NBBO.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.01 and is willing to step-up to a maximum price of \$10.03.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.03. While User 1's order is ranked at a higher price (\$10.025) than User 2's order (\$10.01), User 2's order includes a step-up range of \$0.02 and is willing to step up to a maximum price of \$10.03, which provides additional price improvement to User 3's Retail Order than User 1's Mid-Point Peg Order. As User 2's order

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<sup>27</sup> See Rule 11.24(f)(1). A Type 1-designated Retail Order will interact with available contra-side RPI Order and other price improving contra-side interest but will not interact with other available interest in the System that is not offering price improvement or route to other markets. The portion of a Type 1-designated Retail Order that does not execute against contra-side RPI Orders or other price improving liquidity will be immediately and automatically cancelled. The Exchange notes that proposed Rule 11.24(f)(1) will be updated to reflect "contra-side RPI Interest" to capture both RPI Orders and Enhanced RPI Orders.

<sup>28</sup> See proposed Rule 11.24(g)(2)(A).

<sup>29</sup> Supra note 21.



provides an additional \$0.005 of price improvement over User 1's midpoint price, the Exchange gives priority to User 2's Enhanced RPI Order.

**Example 2**<sup>30</sup>

There are two situations in which an Enhanced RPI Order may only need to step-up one-half cent in order to provide meaningful price improvement. First, when the NBBO midpoint is priced in a half cent and the Enhanced RPI Order is stepping up from the half-cent midpoint to the next full cent in order to provide price improvement (see Example 1 above). The second instance occurs when the best-priced resting order on the BYX Book is ranked at a whole cent, and the NBBO midpoint is priced in a half cent increment, the Enhanced RPI Order will only need to step-up to the NBBO midpoint order to provide meaningful price improvement. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.03.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.025. While User 1's order is ranked at a higher price (\$10.02) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.02 on its order and is willing to step up to a maximum price of \$10.03 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though

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See proposed Rule 11.24(g)(2)(A).

User 2's order may execute up to a price of \$10.03, it only needs to provide one-half cent price improvement over User 1's ranked price of \$10.02 in order to provide meaningful price improvement at the midpoint.

**Example 3<sup>31</sup>**

There are instances where an Enhanced RPI Order may need to step-up a full penny in order to provide meaningful price improvement. Consider the following:

- The Protected NBBO for security ABC is \$10.00 x \$10.10.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.04. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.04. While User 1's order is ranked at a higher price (\$10.03) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.04 on its order and is willing to step up to a maximum price of \$10.05 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though User 2's order may execute up to a price of \$10.05, it only needs to provide one penny of price improvement above User 1's ranked price of \$10.03 in order to provide meaningful price improvement.

**Example 4<sup>32</sup>**

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<sup>31</sup> See proposed Rule 11.24(g)(2)(A).

<sup>32</sup> See proposed Rule 11.24(a)(4).

There may be instances where there is no other liquidity resting on the BYX Book against which the Enhanced RPI Order can step up against. In these instances, the Enhanced RPI Order will trade at its ranked price. Consider the following example.

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.015. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.025.
  - User 2 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 2's Retail Order for 100 will execute against User 1's Enhanced RPI Order at \$10.01 as there are no better-priced orders resting on the BYX Book against which User 1 would need to provide greater price improvement to User 2.

**Example 5<sup>33</sup>**

Enhanced RPI Orders will only have priority against other better-priced liquidity resting on the BYX Book in the event that the Enhanced RPI Order can step-up to the next half cent or full cent. In the example below, the Enhanced RPI Order is unable to step up against the best priced order on the BYX Book but is able to step up against an order ranked at the next best price level. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.04 for 100.
  - User 2 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 3 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 3's step-up range is \$0.03. User 3's order is ranked at \$10.01 and is willing to step

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<sup>33</sup> See proposed Rule 11.24(g)(2)(A).

up to a maximum price of \$10.04.

- User 4 enters a Retail Order to sell ABC at \$10.00 for 150.
- **RESULT:** User 4's Retail Order will execute 100 shares first with User 1's non-displayed order as User 1's non-displayed order has price priority over the orders submitted by Users 2 and 3. While User 3's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04, the step-up range does not provide greater price improvement for User 4's Retail Order as compared to User 1's non-displayed order and as such, User 3's Enhanced RPI Order does not have priority over User 1's non-displayed order. Once User 4's Retail Order executes against User 1's non-displayed order, 50 shares remain on User 4's Retail Order. User 4's Retail Order will then execute its remaining 50 shares with User 3's Enhanced RPI Order at a price of \$10.025. While User 2's non-displayed order is ranked at a higher price (\$10.02) than User 3's Enhanced RPI Order (\$10.01), User 3's Enhanced RPI Order has a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04 and User 2's non-displayed order does not contain a step-up range. As User 3's Enhanced RPI Order is willing to provide greater price improvement as compared to a better-priced order resting on the same side of the BYX Book, it is given priority over User 2's non-displayed order. User 3's Enhanced RPI Order executes 50 shares against User 4's non-displayed order at a price of \$10.025 because it provides one-half cent of price improvement over User 2's ranked price of \$10.02.

**Example 6**<sup>34</sup>

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<sup>34</sup> See proposed Rule 11.24(a)(4).

Enhanced RPI Orders will execute within their step-up range when the incoming Retail Order's price is not executable at the Enhanced RPI Order's ranked price. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.03. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
  - User 2 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 2's Retail Order will execute with User 1's Enhanced RPI Order at \$10.03 as the limit price of User 2's Retail Order (\$10.03) is within the maximum price provided by User 1's step-up range.

**Example 7<sup>35</sup>**

When there are multiple Enhanced RPI Orders resting on the BYX Book, no other same side liquidity with higher priority, and the contra-side Retail Order is priced more aggressively than the resting Enhanced RPI Orders, execution priority will be determined by the higher ranked price and not by the step-up ranges of the Enhanced RPI Orders. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.02 for 100. User 2's

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<sup>35</sup> See proposed Rule 11.24(g)(2).

step-up range is \$0.02. User 2's order is ranked at \$10.02 and is willing to step up to a maximum price of \$10.04.

- User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at \$10.02 because User 2's Enhanced RPI Order has price priority over User 1's Enhanced RPI Order due to its higher ranked price of \$10.02. Given that User 3's Retail Order was priced more aggressively than the resting Enhanced RPI Orders at its time of entry, the Exchange believes that priority should be determined by using the ranked price of the Enhanced RPI Orders resting on the BYX Book at the time of User 3's Retail Order entry.

**Example 8**<sup>36</sup>

The step-up range will be used to determine order book priority in situations where:

i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters a non-displayed order to buy ABC at \$10.02 for 100. User 2's order is ranked at \$10.02.

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<sup>36</sup> See proposed Rule 11.24(g)(2)(B).

- User 3 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 3's order will execute with User 1's Enhanced RPI Order at \$10.03 because i) User 3's Retail Order was entered at a less aggressive price than the ranked price of both User 1 and User 2's orders; and ii) the maximum price provided by the step-up range of User 1's Enhanced RPI Order is more aggressively priced (\$10.05) than the limit price of User 3's Retail Order (\$10.03). Even though User 2's ranked price is higher than User 1's ranked price, User 2's order is not marketable against User 3's Retail Order. User 3's Retail Order would otherwise be unable to execute if the Exchange did not look to the price improvement provided by User 1's step-up range to permit an execution between User 1 and User 3.

**Example 9**<sup>37</sup>

The step-up range will be used to determine order book priority in situations where multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders resting on the BYX Book. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.02 and is willing to step up to a maximum price of \$10.04.
  - User 3 enters a non-displayed order to buy ABC at \$10.03 for 100. User 3's

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<sup>37</sup> See proposed Rule 11.24(g)(2)(C).

order is ranked at \$10.03.

- User 4 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 4's Retail Order will execute with User 1's Enhanced RPI Order at \$10.04 because the Exchange looks to the step-up range to determine order book priority when there are multiple Enhanced RPI Orders resting on the BYX Book that are willing to provide additional price improvement as compared to other orders resting on the BYX Book. While both User 1 and User 2 can execute at a price of \$10.04, User 1's Enhanced RPI Order can result in a higher maximum possible execution price (step up range of \$0.04; maximum price of \$10.05) as compared to User 2's Enhanced RPI Order (step up range of \$0.02; maximum price of \$10.04). As such, User 1's Enhanced RPI Order is given priority ahead of User 2's Enhanced RPI Order to execute against User 4's Retail Order. In this instance, when there are multiple Enhanced RPI Orders that can provide price improvement to the contra-side Retail Order, the Exchange believes it is appropriate to grant order book priority to the Enhanced RPI Order containing the step-up range that could result in the highest (in the event of a buy order) or lowest (in the event of a sell order) potential maximum execution price, even if the resulting execution does not occur at the highest (lowest) maximum execution price. By granting execution priority to the User who's Enhanced RPI Order results in the highest (lowest) potential maximum execution price, the Exchange is encouraging Users to submit aggressively priced orders. As such, the Exchange believes it is appropriate to give priority to User 1's Enhanced RPI Order in this instance because User 1's Enhanced RPI Order (step-up range of \$0.04; maximum price of \$10.05) could potentially result in a higher maximum execution



price than User 2's Enhanced RPI Order (step-up range of \$0.02; maximum price of \$10.04) and is therefore willing to provide additional price improvement to Retail Orders as compared to User 2's Enhanced RPI Order.

**Example 10**<sup>38</sup>

Enhanced RPI Orders will have price priority over resting RPI orders (that do not contain a step-up range) on the BYX Book so long as the step-up range of the Enhanced RPI Order is greater than the limit price of the resting RPI order. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an RPI Order to buy ABC at \$10.02.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's Enhanced RPI Order at a price of \$10.025 because User 1's Enhanced RPI Order containing a step-up range allows User 3's Retail Order to receive an additional one-half cent price improvement as compared to the ranked price of User 2's RPI Order. While User 2's RPI Order had a higher ranked price (\$10.02) than User 1's Enhanced RPI Order (\$10.01), User 2's RPI Order did not contain a step-up range. Given that Enhanced RPI Orders are designed to provide meaningful price improvement against all resting orders on the BYX Book, the Exchange believes this factor favors using the price improvement provided by the step-up range in order to determine priority in situations where there

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<sup>38</sup>

See proposed Rule 11.24(g)(2)(A).

are both resting RPI and Enhanced RPI Orders on the BYX Book. While RPI Orders do provide at least \$0.001 of price improvement as compared to the Protected NBBO, Enhanced RPI Orders allow for price improvement to the next valid half cent or full cent as the transaction is priced above \$1.00.<sup>39</sup> Thus, using the step-up range to determine priority when RPI Orders are resting on the BYX Book results in an increased amount of price improvement for the contra-side Retail Order.

**Example 11**<sup>40</sup>

Enhanced RPI Orders may also improve against displayed orders resting on the BYX Book in order to provide price improvement to a contra-side Retail Order. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$9.99 for 100. User 1's step-up range is \$0.06. User 1's order is ranked at \$9.99 and is willing to step up to a maximum price of \$10.05. The Retail Liquidity Identifier is not displayed as the limit price of \$9.99 is below the NBB and the Retail Liquidity Identifier will only display when there is RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO.

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<sup>39</sup> The Exchange notes that there may be situations in which an Enhanced RPI Order that is granted order book priority over an RPI Order will provide only \$0.001 of price improvement over the RPI Order when stepping up to the next half cent or full cent. For example, the Protected NBBO is \$10.00 x \$10.05. Assume that a buy-side Enhanced RPI Order for 100 shares has a step-up range to \$10.04 and is granted order book priority over a buy-side RPI Order for 100 shares with a limit price of \$10.024. A sell-side Retail Order for 100 shares is entered at \$10.00. In this instance, the buy-side Enhanced RPI Order steps-up to a price of \$10.025 to execute against the sell-side Retail Order. While the Enhanced RPI Order is only providing \$0.001 of price improvement as compared to the RPI Order with a limit price of \$10.024, the Enhanced RPI Order provides a total of \$0.025 of price improvement to the Retail Order as compared to the Retail Order's limit price of \$10.00.

<sup>40</sup> See proposed Rule 11.24(g)(2)(A).

- User 2 enters a displayed order to buy ABC at \$10.00 for 100.
- User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's Enhanced RPI Order at a price of \$10.01. While User 2's displayed order is displayed and ranked at a higher price (\$10.00) than User 1's Enhanced RPI Order (\$9.99), User 1's Enhanced RPI Order includes a step-up range of \$0.06 on its order, which permits the order to execute up to a maximum price of \$10.05. In this instance, executing User 2's displayed order at \$10.00 does not provide any price improvement to the Retail Order when User 1's Enhanced RPI Order is resting on the BYX Book and is willing to provide additional price improvement to Order 3 than Order 2 is willing to provide. User 1's Enhanced RPI Order is willing to step up to the next full cent above \$10.00 (in this case, \$10.01), which provides a full penny of price improvement to User 3's Retail Order. As such, this is the price at which User 3's Retail Order executes with User 1's Enhanced RPI Order.

**Example 12<sup>41</sup>**

An Enhanced RPI Order that is also a Primary Pegged Order<sup>42</sup> without an offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.

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<sup>41</sup> See proposed Rule 11.24(g)(2)(A).

<sup>42</sup> See Rules 11.9(c)(8) and 11.9(c)(8)(A). A Pegged Order is a limit order that after entry into the System, the price of the order is automatically adjusted by the System in response to changes in the NBBO. A Primary Pegged Order is a type of Pegged Order where a User includes a limit priced and a predetermined amount by which the User is willing to improve the Protected NBBO, subject to a ceiling or floor price. The ceiling or floor price is the amount above or below which the User does not wish to trade.

- User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
- User 2 enters an Enhanced RPI Order that is also Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order does not include an offset. User 2's order is ranked at \$10.00 and is willing to step up to a maximum price of \$10.03.
- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.
  - User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
  - User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at a price of \$10.04 because User 2's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04 (based on the Protected NBBO at the time User 3's order is entered) in order to provide additional price improvement as compared to other orders resting on the BYX Book. While User 1's order has a higher limit price (\$10.03) than User 2's Enhanced RPI Order (\$10.01, based on the Protected NBBO at the time User 3's order is entered), User 2's Enhanced RPI Order is given queue priority due to its ability to provide \$0.01 of price improvement over User 1's order.

**Example 13<sup>43</sup>**

An Enhanced RPI Order that is also a Primary Pegged Order that contains a positive offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction, except that the offset amount will determine where the

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<sup>43</sup> See proposed Rule 11.24(g)(2)(A).

order is ranked. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order that is also a Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order includes an offset of \$0.01. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.
  - User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.02 and is willing to step up to a maximum price of \$10.05.
  - User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at a price of \$10.04 because User 2's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.05 (based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered) in order to provide additional price improvement as compared to other orders resting on the BYX Book. While User 1's order has a higher limit price (\$10.03) than User 2's Enhanced RPI Order (\$10.02, based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered), User 2's Enhanced RPI Order is given queue priority due to its ability to provide \$0.01 of price improvement over User 1's order.

**Example 14<sup>44</sup>**

An Enhanced RPI Order that is also a Primary Pegged Order that contains a negative

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<sup>44</sup> See proposed Rule 11.24(g)(2)(A).

offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction, except that the offset amount will determine where the order is ranked. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order that is also a Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order includes an offset of (\$0.01). User 2's order is ranked at \$9.99 and is willing to step up to a maximum price of \$10.02.
- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.
  - User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.00 and is willing to step up to a maximum price of \$10.03.
  - User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's hidden order at a price of \$10.03. As User 2's Enhanced RPI Order is unable to provide additional price improvement to User 1's hidden order, User 1's order retains priority and executes with User 3's Retail Order. The negative offset of \$0.01 causes User 2's order to be ranked at \$10.00 after the Protected NBBO changed from \$10.00 x \$10.05 to \$10.01 x \$10.05, and User 2's step-up range of \$0.03 was unable to provide the minimum amount of price improvement in order to gain queue priority ahead of User 1's hidden order.

**Example 15<sup>45</sup>**

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<sup>45</sup> See proposed Rule 11.24(g)(2)(A).

Enhanced RPI Orders may also improve upon resting orders that are BYX Post Only Orders in order to provide price improvement to contra-side Retail Orders. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters BYX Post Only Order to buy ABC at \$10.02 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.04. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 2's Enhanced RPI Order executes against User 3's Retail Order at \$10.03. While User 1's BYX Post Only Order is ranked at a higher price (\$10.02) than User 2's order, User 2's Enhanced RPI Order is willing to step-up \$0.04 over the best-priced resting order to gain queue priority. While User 2 can step-up to a price of \$10.05, User 2's Enhanced RPI Order only needs to step-up to a price of \$10.03 in order to gain queue priority over User 1's BYX Post Only Order.

**Example 16**<sup>46</sup>

Enhanced RPI Orders will also be available for securities priced below \$1.00. In order for an Enhanced RPI Order in a security priced below \$1.00 to gain queue priority over a same-side resting order, the Enhanced RPI Order must be able to step up to the next minimum price increment. Consider the following example:

- The Protected NBBO for security ABC is \$0.2001 x \$0.2025.
  - User 1 enters a non-displayed order to buy ABC at \$0.2003 for 100.

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<sup>46</sup> See proposed Rule 11.24(g)(2)(A).

- User 2 enters an Enhanced RPI Order to buy ABC at \$0.2002 for 100. User 2's step-up range is \$0.001. User 2's order is ranked at \$0.2002 and is willing to step up to a maximum price of \$0.2012.
- User 3 enters a Retail Order to sell ABC at \$0.2001.
- **RESULT:** User 2's Enhanced RPI Order executes against User 3's Retail Order at a price of \$0.2004. While User 1's non-displayed order is ranked at a higher price (\$0.2003) than User 2's Enhanced RPI Order (\$0.2002), User 2's Enhanced RPI Order included a step-up range of \$0.001 and is willing to execute at a price up to \$0.2012 in order to gain queue priority. The next minimum price increment above \$0.2003 is \$0.2004, which is inside User 2's step-up range and as such, User 2's order will have queue priority over User 1's order.

**Example 17<sup>47</sup>**

The below example is included to show the proposed change to Rule 11.24(f)(2) that does not permit a Type 2-designated Retail Order to execute against resting RPI Interest that is priced equal to the Protected NBB or Protected NBO.

- The Protected NBBO for security ABC is \$10.00 x \$10.05
  - User 1 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.00 for 100. User 2's step-up range is \$0.03. User 2's order is ranked at \$10.00 and is willing to step up to a maximum price of \$10.03. The Retail Liquidity Identifier is not displayed because the limit price of User 2's order is not priced at least \$0.001 better than the Protected NBB.

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<sup>47</sup>

See proposed Rule 11.24(f)(2); see also proposed Rule 11.24(g)(1).



- User 3 enters an RPI Order to buy ABC at \$10.00 for 100.
- User 4 enters a non-displayed order to buy ABC at \$10.00 for 100.
- User 5 enters a Type 2-designated Retail Order to sell ABC at \$10.00 for 400.
- **RESULT:** User 2's Enhanced RPI Order executes against User 5's Type 2 Order for 100 at a price of \$10.025 because the best-priced resting order on the BYX Book is ranked at a whole cent (\$10.02), and the NBBO midpoint is priced in a half cent increment.<sup>48</sup> User 1's non-displayed order then executes against User 5's Type 2 Order for 100 at a price of \$10.02 because User 1's order is priced better than the NBBO.<sup>49</sup> User 4's non-displayed order then executes against 5's Type 2 Order for 100 at a price of \$10.00.<sup>50</sup> The remaining 100 shares of User 5's Type 2 Order are then cancelled or routed to an away market based on User 5's instruction. This example demonstrates proposed order priority where a Type 2 Order has a remaining quantity after executing against all price improving liquidity. Under current Rule 11.24(f)(2), order priority would differ in that User 5's Type 2 Order would execute against User 3's RPI Order at \$10.00 prior to executing against User 4's non-displayed order due to price/time priority and would leave no remaining quantity to either cancel back or route to an away market.

As demonstrated in the examples above, the Exchange is proposing to grant an Enhanced RPI Order price priority over equal-priced or better-priced resting orders on the BYX Book so long as the Enhanced RPI Order can provide meaningful price improvement

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<sup>48</sup> See proposed Rule 11.24(g)(2)(A).

<sup>49</sup> See Rule 11.12(a)(1).

<sup>50</sup> See proposed Rule 11.24(a)(3) and proposed Rule 11.24(f)(2).

over such resting orders. The Exchange believes that allowing liquidity providers to post orders outside of the range at which they are willing to execute yet maintain the opportunity to step-up against resting orders on the same side of the BYX Book in exchange for price priority will incentivize these liquidity providers to provide additional liquidity on the Exchange. As a result of additional, aggressively priced liquidity submitted to the Exchange designed specifically to interact with Retail Orders, RMOs will therefore be incentivized to submit additional retail order flow to the Exchange which has the potential to interact with an Enhanced RPI Order and receive meaningful price improvement.

#### Retail Liquidity Identifier

The Exchange currently disseminates an identifier pursuant to Rule 11.24(e) when RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO for a particular security priced at or above \$1.00 is available in the System (“Retail Liquidity Identifier” or “Identifier”). When there is RPI Interest on the BYX Book that is priced at or below (above) the Protected NBB or Protected NBO, no Retail Liquidity Identifier is disseminated by the Exchange.<sup>51</sup> The Identifier is disseminated through consolidated data streams (i.e., pursuant to the Consolidated Tape Association Plan/Consolidated Quotation Plan, or CTA/CQ, for Tape A and Tape B securities, and the Nasdaq UTP Plan for Tape C securities) as well as through proprietary Exchange data feeds.<sup>52</sup> The Identifier reflects the

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<sup>51</sup> The Exchange notes that RPI Interest may not execute unless it is priced at least \$0.001 better than the Protected NBB or Protected NBO in securities priced at or above \$1.00 or priced at least \$0.0001 better than the Protected NBB or Protected NBO in securities priced below \$1.00, as proposed *infra*.

<sup>52</sup> The Exchange notes that the Retail Liquidity Identifier for Tape A and Tape B securities are disseminated pursuant to the CTA/CQ Plan. The identifier is also available through the consolidated public market data stream for Tape C securities. The processor for the Nasdaq UTP disseminates the Retail Liquidity Identifier and analogous identifiers from other market centers that operate programs similar to the RPI Program.

symbol and the side (buy or sell) of the RPI Interest, but does not include the price or size of the RPI Interest. In particular, CQ and UTP quoting outputs include a field for codes related to the Retail Liquidity Identifier. The codes indicate RPI Interest that is priced better than the Protected NBB or Protected NBO by at least the minimum level of price improvement as required by the Program. The Exchange notes that the Identifier can shift from being disseminated to not disseminated (or vice versa) based on movement in the Protected NBB or Protected NBO without new RPI Interest being entered on the Exchange.

The Exchange proposes to continue to disseminate the Retail Liquidity Identifier in its current form should the Enhanced RPI Order be approved.<sup>53</sup> For Enhanced RPI Orders, the indicator will be based off of the ranked price only and the step-up range will not be used. The purpose of the Identifier is to provide relevant market information to RMOs that there is available RPI interest available on the Exchange, thereby incentivizing RMOs to send Retail Orders to the Exchange. The Exchange proposes to make clear in Rule 11.24(e) that both RPI Orders and Enhanced RPI Orders constitute RPI Interest and that the Retail Liquidity Identifier shall be disseminated when RPI Interest (as defined in proposed Rule 11.24(e)) priced at least \$0.001 better than the Protected NBB or Protected NBO for a particular security is available in the System for securities priced at or above \$1.00. A separate liquidity identifier that identifies Enhanced RPI Order interest will not be disseminated. For securities priced at or above \$1.00, displaying the Retail Liquidity Identifier will provide an indication to RMOs that *at least* \$0.001 of price improvement is available in the System, with the opportunity of

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<sup>53</sup> The Exchange plans on submitting a letter requesting assurance from staff of the Division of Trading and Markets that it will not recommend enforcement action to the Commission pursuant to Rule 602 of Regulation NMS (the "Quote Rule") with respect to: (1) the Exchange with respect to collecting, processing, and making available to vendors the best bid, best offer, and quotation sizes communicated by members of the Exchange, or (2) liquidity providers entering RPI Interest under the Program.

potentially receiving additional price improvement should the available RPI Interest be in the form of an Enhanced RPI Order.

As discussed below, the Exchange proposes to expand the Program to include securities priced below \$1.00. Given that the minimum price variation (“MPV”) of a sub-dollar security is \$0.0001,<sup>54</sup> the Exchange is proposing that the Identifier for sub-dollar securities will be displayed when there is at least \$0.0001 of price improvement over the Protected NBB or Protected NBO. Similarly, the Identifier for sub-dollar securities will not be displayed if there is RPI Interest on the BYX Book priced at or below (above) the Protected NBB or Protected NBO. The Exchange will continue to display the Identifier for securities priced at or above \$1.00 when there is RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO. The Exchange will not make any other changes to the display of the Identifier from its current form for sub-dollar securities other than the minimum amount of price improvement required to display the Identifier.

#### Securities Priced Below \$1.00

Rule 11.24(h) currently limits the Program to trades occurring at prices equal to or greater than \$1.00 per share and the Exchange periodically notifies Members<sup>55</sup> regarding securities included in the Program through an information circular.<sup>56</sup> Now, the Exchange proposes to expand the Program to all securities, including those priced below \$1.00. The

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<sup>54</sup> See 17 CFR 242.612 (“Minimum pricing increment”).

<sup>55</sup> See Rule 1.5(n). The term “Member” shall mean any registered broker or dealer that has been admitted to membership in the Exchange. A Member will have the status of a “member” of the Exchange as that term is defined in Section 3(a)(3) of the Act. Membership may be granted to a sole proprietor, partnership, corporation, limited liability company or other organization which is a registered broker or dealer pursuant to Section 15 of the Act, and which has been approved by the Exchange.

<sup>56</sup> Supra note 6.

rationale behind expanding the Program to all securities regardless of execution price stems from the growth of sub-dollar trading (i.e., trading at prices below \$1.00), both on- and off-exchange. As of March 2023, an analysis of SIP<sup>57</sup> data by the Exchange found that sub-dollar average daily volume has increased 313% as compared to first quarter 2019.<sup>58</sup> In this period, sub-dollar on-exchange average daily volume grew from 442 million shares per day to 1.8 billion shares per day.<sup>59</sup> An analysis of SIP and FINRA Trade Reporting Facility (“TRF”),<sup>60</sup> data indicates that exchanges represented approximately 39.8% market share in sub-dollar securities, with a total of 1,638 securities trading below \$1.00.<sup>61</sup> As an exchange group, Cboe had approximately 13.3% of market share of sub-dollar securities in the first quarter of 2023.<sup>62</sup>

As trading in sub-dollar securities has grown steadily since 2020, the Exchange believes it is appropriate to expand the Program to include securities priced below \$1.00. The Exchange notes, however, that the MPV for sub-dollar securities differs from the MPV for securities priced at or above \$1.00. As provided for by Regulation NMS Rule 612, for securities priced below \$1.00, the MPV is \$0.0001, whereas for securities priced at or above \$1.00 the MPV is \$0.01.<sup>63</sup> The Exchange proposes that in order for an Enhanced RPI Order to gain queue priority ahead of resting orders on the same side of the BYX Book, the Enhanced RPI Order will be stepped-up to the nearest MPV (\$0.0001) for securities priced below \$1.00.

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<sup>57</sup> The “SIP” refers to the centralized securities information processors.

<sup>58</sup> See “How Subdollar Securities are Trading Now” (March 16, 2023). Available at <https://www.cboe.com/insights/posts/how-subdollar-securities-are-trading-now/>.

<sup>59</sup> Id.

<sup>60</sup> Trade Reporting Facilities are facilities through which FINRA members report off-exchange transactions in NMS stocks, as defined in SEC Rule 600(b)(47) of Regulation NMS. See Tick Size Proposal at 80315.

<sup>61</sup> Supra note 58.

<sup>62</sup> Id.

<sup>63</sup> Supra note 54.

This differs from the treatment of Enhanced RPI Orders for securities priced at or above \$1.00, which are proposed to be stepped-up to the nearest half-cent midpoint or whole cent tick ahead of resting orders on the same side of the BYX Book. The Exchange believes that the different treatment of Enhanced RPI Orders for securities priced below \$1.00 is appropriate given that the MPV for securities priced below \$1.00 is significantly less than the MPV for securities priced at or above \$1.00. Currently, all Regulation NMS securities traded on the Exchange priced at or above \$1.00 are eligible for inclusion in the Program. The Exchange will announce to its Members via a Trade Desk Notice that the Exchange will no longer provide periodic updates of securities included in the Program as the Program is being expanded to include all Regulation NMS securities traded on the Exchange, regardless of price.

#### Implementation

The Exchange plans to implement the proposed rule change during the second half of 2024 and will announce the implementation date via Trade Desk Notice.

#### (b) 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.<sup>64</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>65</sup> 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,

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<sup>64</sup> 15 U.S.C. 78f(b).

<sup>65</sup> 15 U.S.C. 78f(b)(5).

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)<sup>66</sup> requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Commission has repeatedly emphasized that the U.S. capital markets should be structured with the interests of retail investors in mind<sup>67</sup> and has recently proposed a series of rules designed, in part, to attempt to bring order flow back to the exchanges from off-exchange trading venues.<sup>68</sup> The Exchange believes its proposed enhancements to the Program are consistent with the Commission's goal of ensuring that the equities markets continue to serve the needs of the investing public. Specifically, introducing the Enhanced RPI Order type would protect investors and the public interest by providing retail investors the ability to obtain meaningful price improvement on BYX, a national securities exchange. The Exchange is committed to innovation that improves the quality of the equities markets and believes that the proposed Enhanced RPI Order may increase the attractiveness of the Exchange for the execution of Retail Orders submitted on behalf of the millions of ordinary investors that rely on these markets for their investment needs.

The Exchange believes the proposed Enhanced RPI Order promotes just and

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<sup>66</sup> Id.

<sup>67</sup> See U.S. Securities and Exchange Commission, Strategic Plan, Fiscal Years 2018-2022, available at [https://www.sec.gov/files/SEC\\_Strategic\\_Plan\\_FY18-FY22\\_FINAL\\_0.pdf](https://www.sec.gov/files/SEC_Strategic_Plan_FY18-FY22_FINAL_0.pdf)

<sup>68</sup> Supra notes 17 – 18. See also, Securities Exchange Act Release No. 96496 (December 14, 2022), 88 FR 5440 (January 27, 2023) (“Regulation Best Execution”); Securities Exchange Act Release No. 96493 (December 14, 2022), 88 FR 3786 (January 20, 2023) (“Disclosure of Order Execution Information”).

equitable principles of trade and is not unfairly discriminatory because the order type will be available for all Users, and is not limited to a certain subset of market participants. Even though Enhanced RPI Orders may be entered by any market participant, the Exchange believes that the majority of Enhanced RPI Orders will be entered by or on behalf of institutional investors that are willing to provide additional price improvement as a way to minimize their adverse selection costs.<sup>69</sup> The Exchange does not believe that such segmentation is inconsistent with section 6(b)(5) of the Act, as it does not permit *unfair* discrimination. The Commission has previously stated that the markets generally distinguish between retail investors, whose orders are considered desirable by liquidity providers because such retail investors are presumed to be less informed about short-term price movements, and professional traders, whose orders are presumed to be more informed.<sup>70</sup> The Commission has further stated that without opportunities for price improvement, retail investors may encounter wider spreads that are a consequence of liquidity providers interacting with more informed order flow.<sup>71</sup> The Exchange believes that its proposed Enhanced RPI Order is reasonably designed to attract marketable retail order flow to the exchange as it will help to ensure that retail investors benefit from the better price that liquidity providers are willing to provide to retail orders in exchange for minimizing their adverse selection costs.

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<sup>69</sup> Adverse selection is the phenomenon where the price of a stock drops right after a liquidity provider purchases the stock. Marketable retail order flow is generally seen as more desirable by institutional liquidity providers as executions against retail orders are less prone to adverse selection. The Commission has previously opined that retail liquidity programs may be beneficial to institutional investors as they may be able to reduce their possible adverse selection costs by interacting with retail order flow. See Pilot Approval Order at 71656.

<sup>70</sup> Id.

<sup>71</sup> Id.



Additionally, the Exchange believes that the proposed Enhanced RPI Order type is not unfairly discriminatory to institutional investors as it rewards the User that enters the most aggressively priced Enhanced RPI Order, based on a combination of the order's limit price and step-up range, with order book priority. Ultimately, execution priority amongst orders resting on the BYX Book will be determined by the step-up range entered on each Enhanced RPI Order. If the step-up range for an Enhanced RPI Order provides a marketable, contra-side Retail Order with greater price improvement than would otherwise be available from other resting orders by stepping up to the next half cent or full cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00), then the Enhanced RPI Order will be granted order book priority. In the event that multiple Enhanced RPI Orders are resting on the BYX Book, the Enhanced RPI Order with the highest step-up range will be given order book priority. The Exchange believes rewarding the most aggressively priced step-up range will encourage Users to submit Enhanced RPI Orders with step-up ranges that are likely to provide meaningful price improvement to Retail Orders, which ultimately benefits both retail investors, who will receive price improvement over the NBBO, and the User entering the Enhanced RPI Order, who is able to execute against a marketable Retail Order to minimize its adverse selection costs and interact with retail order flow that they are currently unable to access on the Exchange given that such order flow is largely executed off-exchange.

As noted in the Exchange's initial RPI filings,<sup>72</sup> most equities exchanges, including

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<sup>72</sup> Supra notes 7 – 8.

BYX, determine priority based on a price/time/display allocation model.<sup>73</sup> This has contributed to deep and liquid markets for equity securities as liquidity providers compete to be the first to establish a particular price. While the price/time/display allocation model generally works well for institutional investors, retail investors are traditionally not able to compete with market makers and other automated liquidity providers to set an aggressive price on orders submitted to the Exchange. Importantly, retail investors, in contrast to institutional investors, tend to have longer investment time horizons, which means they are not in the business of optimizing queue placement under a time-based allocation model. Therefore, in order to facilitate the needs of retail investors, the Exchange believes an alternative approach - such as this Enhanced RPI Order proposal - would benefit the retail investor community.

As discussed earlier, the proposed introduction of the Enhanced RPI Order is designed to provide retail investors with enhanced opportunities to obtain meaningful price improvement by providing them with potential opportunities to execute versus non-displayed Enhanced RPI Orders that offer price improvement beyond that offered by resting orders on the Exchange. Marketable retail order flow is routinely executed in full on entry at the national best bid or offer or better,<sup>74</sup> but many retail liquidity programs, including the Exchange's current Program, are designed to offer at least \$0.001 of price

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<sup>73</sup> Nasdaq PSX, however, offers a price setter pro rata model that rewards liquidity providers that set the best price and then rewards other market participants that enter larger sized orders. See Securities Exchange Act Release No. 72250 (May 23, 2014), 79 FR 31147 (May 30, 2014) (SR-Phlx-2014-24).

<sup>74</sup> A review of internal Exchange data found that 60% of retail orders across the Exchange and its affiliates executed at the NBBO year-to-date in 2023. Similarly, 59% of retail orders across the Exchange and its affiliates executed at the NBBO in calendar year 2022.

improvement over the Protected NBB or Protected NBO to Retail Orders.<sup>75</sup> By introducing Enhanced RPI Orders, the Exchange is proposing to prioritize Enhanced RPI Orders ahead of other resting orders on the same side of the BYX Book in exchange for the Enhanced RPI Order offering meaningful price improvement to Retail Orders by stepping up to the next half cent or whole cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00). The Exchange believes the ability to post an order at a price outside of the range at which it is willing to execute with the ability to gain priority in exchange for executing at a more aggressive price will 1) encourage Users to submit aggressively priced Enhanced RPI Orders, and 2) attract Retail Order flow to the Exchange, both of which will benefit all investors. Increased order flow will create a deeper pool of liquidity on the Exchange, which provides for greater execution opportunities for all Users and provides for overall enhanced price discovery and price improvement opportunities on the Exchange. If successful, the proposed rule change would benefit market participants by increasing the diversity of order flow with which they can interact on a national securities exchange, thereby increasing order interaction and contributing to price formation.

Giving queue priority to certain order types is not a novel concept in the securities markets. In fact, on the Exchange's affiliate, Cboe EDGX Exchange, Inc. ("EDGX"), the displayed portion of Retail Priority Orders are given allocation priority ahead of all other available interest on the EDGX Book ("EDGX Retail Priority").<sup>76</sup> The Commission found that EDGX Retail Priority represented a reasonable effort to enhance the ability of bona

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<sup>75</sup> See, e.g., IEX Rule 11.232; Nasdaq BX Rule 4780; NYSE National Rule 7.44-E; NYSE Rule 7.44.

<sup>76</sup> See EDGX Rule 11.9(a)(2)(A).

vide retail trading interest to compete for executions with orders entered by other market participants that may be better equipped to optimize their place in the intermarket queue.<sup>77</sup>

The Exchange believes that granting queue priority to an Enhanced RPI Order as discussed in the Purpose section similarly reflects a reasonable effort by the Exchange to create additional price improvement opportunities for retail investors, as has been the standard identified by the Commission in several approval orders written in regards to RLPs.<sup>78</sup>

While the Exchange is not proposing to prioritize Retail Orders as EDGX has done, it is proposing to prioritize Enhanced RPI Orders that provide price improvement and may only interact with contra-side Retail Orders. The Exchange's proposal to prohibit RPI Orders and Enhanced RPI Orders from executing with contra-side Type 2-designated Retail Orders when the RPI Order or Enhanced RPI Order is not priced better than the Protected NBB or Protected NBO similarly reflects an attempt to create additional price improvement opportunities for retail investors by making RPI Orders and Enhanced RPI Orders ineligible from executing when these orders are not providing price improvement to contra-side Type 2-designated Retail Orders. While the Exchange is forgoing an execution at a marketable price in situations where an RPI Order or Enhanced RPI Order is priced equal to the Protected NBB or Protected NBO and there is resting contra-side Type 2 Order interest available, the Exchange believes that limiting RPI Order and Enhanced RPI Order executions to situations where price improvement is offered properly reflects the main purpose of the RPI Order and Enhanced RPI Order – that is, to create additional price

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<sup>77</sup> See Securities Exchange Act Release No. 87200 (October 2, 2019), 84 FR 53788 (October 8, 2019), SR-CboeEDGX-2019-012 (“EDGX Retail Priority Approval Order”).

<sup>78</sup> Supra note 8. See also Securities Exchange Act Release No. 67347 (July 3, 2012), 77 FR 40673 (July 10, 2012) (SR-NYSE-2011-55; SR-NYSEAmex-2011-84) (“RLP Approval Order”) at 40679.

improvement opportunities for retail investors.

The Exchange believes that the prioritization of Enhanced RPI Orders that offer meaningful price improvement over other resting orders on the same side of the BYX Book promotes just and equitable principles of trade and is consistent with Section 6(b)(5) of the Act as it encourages Users to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges in exchange for queue priority ahead of all resting orders on the same side of the BYX Book so long as meaningful price improvement is provided to a contra-side Retail Order. The Exchange proposes to provide queue priority for Enhanced RPI Orders over all other types of orders and is not limiting queue priority to a certain subset of order types. As previously stated, all Users are eligible to submit Enhanced RPI Orders. And while the Exchange believes that most Enhanced RPI Orders will be submitted by or on behalf of professional traders, retail investors will have the opportunity to receive better-priced executions should their executing broker choose to submit a marketable Retail Order to the Exchange. The Exchange believes the introduction of Enhanced RPI Orders will deepen the Exchange's pool of available liquidity, increase marketable retail order flow to the Exchange and provide additional competition for marketable retail order flow, most of which is currently executed off-exchange in the OTC markets. Promoting competition for retail order flow among execution venues stands to benefit retail investors, who may be eligible to receive greater price improvement on the Exchange by interacting with an Enhanced RPI Order than they would if their order was internalized by a broker-dealer on the OTC market.

Furthermore, the Exchange believes that its proposal to limit the use of the step-up range to determine order book priority is consistent with Section 6(b)(5) of the Act because

the use of the step-up range rather than limit price to determine order priority is limited to the following: 1) the range is needed to gain priority over a resting order with higher order book priority; 2) in situations where i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price; and 3) to determine order book priority when multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders. The primary use case of the Enhanced RPI Order identified in the first scenario listed above is to provide price improvement to marketable retail order flow. As previously discussed in the Statutory Basis section, the Exchange believes allowing the use of a step-up range in order to provide an additional, more aggressive price at which an Enhanced RPI Order may execute is essential in order to deepen the pool of liquidity available to retail investors. In exchange for providing orders with aggressive limit prices and/or step-up ranges, these liquidity providers will be rewarded with executions against marketable retail order flow, which is generally preferred over more informed order flow. Retail investors, on the other hand, will receive meaningful price improvement should their order execute against an Enhanced RPI Order.

In the situation where i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the limit price of the Retail Order, the Exchange believes using the step-up range to determine order priority promotes just and equitable principles of trade because it rewards the Enhanced RPI Order with the most aggressive step-up range rather than forego

an execution due to the limit price of all orders resting on the BYX Book being ineligible to trade with the contra-side Retail Order. The intent of the Enhanced RPI Order is to reward those Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges with queue priority while simultaneously providing price improvement to Retail Orders. The Exchange believes that determining order priority using the step-up range in this limited situation is aligned with the intent of liquidity providers that choose to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges and also emphasizes a benefit of using the Enhanced RPI Order – the ability to enter an order at a less aggressive price but also provide a step-up range within which the liquidity provider is willing to execute in order to execute against retail order flow rather than forego an execution and remain on the BYX Book. The Exchange seeks to encourage liquidity providers to submit order flow designed to interact with marketable retail order flow in an effort to increase the amount of Retail Order executions occurring on-exchange. By rewarding Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges in situations where the order would otherwise not execute, the Exchange believes its pool of liquidity available to marketable retail order flow will deepen, thus incentivizing RMOs to submit additional marketable retail order flow to the Exchange.

Likewise, using the step-up range rather than the limit price of an Enhanced RPI Order in situations where multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders promotes the use of the Enhanced RPI Order type as the Exchange seeks to encourage RMOs to submit marketable Retail Orders to the Exchange. Determining order priority of Enhanced Orders based on their step-up range over the limit price of all other higher priority orders rewards the Enhanced RPI

Order that provides the most aggressive step-up range. The Exchange believes that using the step-up range rather than the limit price in situations where there are multiple Enhanced RPI Orders will encourage Users to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges to the Exchange, as they will be given priority to interact with more desirable marketable retail order flow based on their step-up range. Additionally, the Exchange believes that RMOs will be encouraged to direct marketable retail order flow to the Exchange knowing that the *worst* price they will receive is \$0.001 better than the Protected NBB or Protected NBO for securities priced at or above \$1.00<sup>79</sup> and there is potential to receive more meaningful price improvement should an Enhanced RPI Order be present on the opposite side of the BYX Book.<sup>80</sup>

An analysis of internal Exchange data found that the current Program provided approximately \$33 million in price improvement to retail investors during calendar year 2022, which is a substantial increase from the 4.5 million provided to retail investors between January 2016 and June 2018.<sup>81</sup> It is reasonable to believe that the proposed Enhanced RPI Order, by virtue of providing at least \$0.005 of price improvement in exchange for execution priority, would only add to the Exchange's ability to provide price improvement to retail investors. The Exchange does not believe that offering additional price improvement to retail investors through Enhanced RPI Orders would cause harm to

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<sup>79</sup> For securities priced below \$1.00, the minimum amount of price improvement as compared to the Protected NBB or Protected NBO is \$0.0001.

<sup>80</sup> Retail Orders may only receive \$0.001 price improvement in certain situations, including where an Enhanced RPI Order steps up against the limit price of an RPI Order priced in sub-pennies. An Enhanced RPI Order would be given order book priority over RPI Orders in the event that the Enhanced RPI Order was priced equal to or less aggressive than the limit price of a resting RPI Order but had a step-up range that was priced more aggressive than the limit price of the resting RPI Order (supra note 20).

<sup>81</sup> See RPI Approval Order at 53184.



the broader market. On the contrary, the Exchange believes that rewarding Enhanced RPI Orders with order book priority in exchange for price improvement would further the Commission's goal of providing additional opportunities for retail investors to interact directly with a large volume of individual investor orders. The Exchange created the Enhanced RPI Order with the goal of encouraging liquidity providers to submit orders eligible to interact with marketable retail order flow with the competition from these liquidity providers resulting in a reasonable alternative for marketable retail order flow to receive executions at a price better than the Protected NBBO. As the Commission noted in its Order Competition Rule proposal, over 90% of marketable NMS retail stock orders are routed to wholesalers where the orders are not exposed to order-by-order competition.<sup>82</sup> While wholesalers generally achieve price improvement relative to the NBBO, the Commission has indicated that exchanges often have liquidity available at the NBBO midpoint, which would be a more favorable price than a retail order receives when executed by a wholesaler.<sup>83</sup> Here, the Exchange is proposing price improvement of at least \$0.005, and in some cases \$0.01, which the Exchange believes would further the Commission's goal of "increasing competition and enhancing the direct exposure of individual investor orders to a broader spectrum of market participants" as set forth in section 11A of the Exchange Act.<sup>84</sup>

In addition to the proposed introduction of the Enhanced RPI Order, the Exchange also believes that expanding the Program to include securities priced below \$1.00 is

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<sup>82</sup> Supra note 17 at 178.

<sup>83</sup> Id.

<sup>84</sup> Id.

consistent with Section 6(b)(5) of the Act because it promotes just and equitable principles of trade by allowing liquidity providers to submit orders designed to interact with retail order flow in all securities, rather than only in securities priced at or above \$1.00. As stated above, a significant majority of the increased volume in sub-dollar securities comes from executions occurring off-exchange.<sup>85</sup> By permitting the Exchange to expand its Program to include securities priced below \$1.00, the Exchange would be a more attractive venue for liquidity providers seeking to interact with retail order flow, which furthers the Commission's goal of bringing retail order executions back on-exchange. Further, the proposal to expand the Program to include securities priced below \$1.00 is not unfairly discriminatory because all Users will be able to submit RPI Orders or Enhanced RPI Orders at prices below \$1.00. As noted above, the Exchange, along with its affiliates, maintained a market share of 13.3% in sub-dollar securities during the first quarter of 2023.<sup>86</sup> The Exchange believes that its expansion of the Program to include sub-dollar securities would lead to more liquidity providers submitting order flow to the Exchange in an attempt to execute against Retail Orders. In turn, RMOs would submit additional Retail Order flow to the Exchange to interact with RPI Orders and Enhanced RPI Orders as there would be additional opportunities for price improvement in sub-dollar securities. The proposal removes impediments to and perfect the mechanism of a free and open market and a national market system and protects investors and the public interest by allowing executions in Retail Orders priced below \$1.00 to receive price improvement by executing against RPI Orders or Enhanced RPI Orders, which are currently only available at prices

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<sup>85</sup> Supra note 58.

<sup>86</sup> Id.

at or above \$1.00. In addition to the changes described above, the Exchange believes that the changes to certain existing rule text within Rule 11.24 is consistent with Section 6(b)(5) of the Act because it provides additional certainty as to how Rule 11.24 is to be applied. The proposed revised definition of RPI Interest in Rule 11.24(a)(5) is necessary in order to capture the proposed Enhanced RPI Order type, in addition to the existing RPI Order. Additionally, amending Rule 11.24(e) and Rule 11.24(f)(1) – (2) to reflect the changes made in Rule 11.24(a)(5) is necessary in order to ensure that RPI Interest is properly defined throughout Rule 11.24. The deletion of Rule 11.24(h) and renumbering of Rule 11.24(i) are consistent with the Exchange’s proposal to expand the Program to securities priced below \$1.00. The proposed changes to Rule 11.24(a)(2) are intended to: i) clarify that a Retail Order must be submitted with a time-in-force of IOC; and ii) introduce the ability for Users to submit Retail Orders as Mid-Point Peg Orders, both of which changes serve to provide additional guidance to Users of Retail Orders about the order modifiers permitted by the Exchange. The Exchange believes these changes are ministerial in nature and serve to ensure that Rule 11.24 is properly describing order behavior after the proposed introduction of the Enhanced RPI Order and proposed expansion of the Program to securities priced below \$1.00.

**Item 4. 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 proposal does not impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. Rather, the proposed rule change is designed to increase intramarket

competition for retail order flow by introducing a new order type that is designed to provide price improvement to Retail Orders in exchange for price priority over resting orders on the same side of the BYX Book. The proposal, which seeks to provide an innovative form of price improvement to Retail Orders through the creation of the Enhanced RPI Order, represents an effort by the Exchange to encourage on-exchange liquidity and incentivize the trading of Retail Orders on a national securities exchange.

The Exchange also believes the proposed rule change does not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the Act. As discussed above, IEX, NYSE, NYSE National, and Nasdaq BX each operate RLPs and the Exchange believes that its proposed rule change will allow it to compete for additional retail order flow with the aforementioned exchanges.<sup>87</sup> Furthermore, the Exchange's proposal will promote competition between the Exchange and off-exchange trading venues where the majority of retail order flow trades today. The proposed Enhanced RPI Order is designed to foster innovation within the market and increase the quality of the national market system by allowing national securities exchanges to compete both with each other and with off-exchange venues for order flow. Expanding the program to include securities priced below \$1.00 similarly would not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the Act. The Exchange's proposal is designed to increase competition for trading in all securities, including but not limited to securities priced below \$1.00. Given the growth of trading in sub-dollar securities since 2020, the Exchange believes that expanding the Program to include sub-dollar securities will make the Program an attractive option for retail investors seeking to trade in lower-

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<sup>87</sup> Supra note 75.

priced securities, and as such is a competitive measure designed to compete directly with other exchanges for order flow.

**Item 5. 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.

**Item 6. Extension of Time Period for Commission Action**

The Exchange does not consent to an extension of the time period for Securities and Exchange Commission (the “Commission”) action on the proposed rule change specified in Section 19(b)(2) of the Act.<sup>88</sup>

**Item 7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2) or Section 19(b)(7)(D)**

Not applicable.

**Item 8. Proposed Rule Change Based on Rules of Another Self-Regulatory Organization or of the Commission**

The proposed rule change is not based on a rule either of another self-regulatory organization or of the Commission.

**Item 9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act**

Not applicable.

**Item 10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act**

Not applicable.

**Item 11. Exhibits**

Exhibit 1. Completed Notice of Proposed Rule Change for publication in the Federal Register.

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<sup>88</sup> 15 U.S.C. 78s(b)(2).

Exhibit 2 - 4. Not applicable.

Exhibit 5. Proposed rule text.

EXHIBIT 1**SECURITIES AND EXCHANGE COMMISSION**

[Release No. 34- ; File No. SR-CboeBYX-2023-020]

[Insert date]

Self-Regulatory Organizations; Cboe BYX Exchange, Inc.; Notice of Filing of a Proposed Rule Change Relating to Modify Rule 11.24 to Introduce an Enhanced RPI Order and Expand its Retail Price Improvement Program to Include Securities Priced Below \$1.00

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>89</sup> and Rule 19b-4 thereunder,<sup>90</sup> notice is hereby given that on [insert date], 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. (the “Exchange” or “BYX”) is filing with the Securities and Exchange Commission (“Commission”) a proposal to modify Rule 11.24 to introduce an Enhanced RPI Order and expand its Retail Price Improvement program to include securities priced below \$1.00. 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/](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.

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<sup>89</sup> 15 U.S.C. 78s(b)(1).

<sup>90</sup> 17 CFR 240.19b-4.

## **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 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**

This Amendment No. 2 to SR-CboeBYX-2023-020 amends and replaces in its entirety the proposal as originally submitted on January 10, 2024, and amended pursuant to Amendment No. 1 on March 6, 2024. The Exchange proposes to amend Rule 11.24 to enhance the Exchange's Retail Price Improvement Program (the "Program") for the benefit of retail investors. Specifically, the Exchange proposes to introduce a new type of RPI Interest<sup>91</sup> to be known as an "Enhanced RPI Order." The proposed Enhanced RPI Order will allow retail liquidity providers to post orders at their limit price but have the opportunity to provide a greater amount of price improvement as compared to other resting orders on the same side of the BYX Book with higher price-time priority in order to execute with an incoming Retail Order<sup>92</sup> by exercising at a price within their established step-up range. The proposed change is designed to provide retail investors with additional opportunities for meaningful price improvement by introducing a new order type that will

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<sup>91</sup> See proposed Rule 11.24(e). RPI Interest means an order submitted to the Exchange that is designated as either an RPI Order or an Enhanced RPI Order. See also Rule 11.24(a)(3) ("Retail Price Improvement Order").

<sup>92</sup> See Rule 11.24(a)(2) ("Retail Order").



“step-up” its price against orders with a higher priority resting on the BYX Book.<sup>93</sup> Additionally, the Exchange proposes to expand the Program to securities priced below \$1.00.<sup>94</sup>

### Background

In November 2012, the Exchange received approval to operate its Program on a pilot basis.<sup>95</sup> The Program operated under a pilot basis until September 30, 2019, when the Program was approved on a permanent basis.<sup>96</sup> In addition, the Exchange was granted a limited exemption from the Sub-Penny Rule, as well as Regulation NMS Rule 602 (Quote Rule) No Action relief<sup>97</sup> to operate the Program.<sup>98</sup> The Program is currently designed to attract Retail Orders to the Exchange and allow such order flow to receive potential price improvement. The Program is currently limited to trades occurring at prices equal to or greater than \$1.00 per share.<sup>99</sup> Under the Program, a class of market participant called a Retail Member Organization (“RMO”)<sup>100</sup> is eligible to submit certain retail order flow

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<sup>93</sup> See Rule 1.5(e) (“BYX Book”). The “BYX Book” is the System’s electronic file of orders. The “System” shall mean the electronic communications and trading facility designated by the Board through which securities orders of Users are consolidated for ranking, execution, and when applicable, routing away. See Rule 1.5(aa) (“System”).

<sup>94</sup> See Rule 11.24(h). The Program is currently limited to trades occurring at prices equal to or greater than \$1.00 per share.

<sup>95</sup> See Securities Exchange Act Release No. 68303 (November 27, 2012), 77 FR 71652 (December 3, 2012), SR-BYX-2012-019 (“Pilot Approval Order”).

<sup>96</sup> See Securities Exchange Act Release No. 87154 (September 30, 2019), 84 FR 53183 (October 4, 2019), SR-CboeBYX-2019-014 (“RPI Approval Order”).

<sup>97</sup> See Letter from David Shillman to Eric Swanson (November 27, 2012) (“No Action Letter”), available at <https://www.sec.gov/divisions/marketreg/mr-noaction/byx-112712-602.pdf>.

<sup>98</sup> *Supra* note 96 at 53185.

<sup>99</sup> *Supra* note 94. The Exchange will periodically notify the membership regarding the securities included in the Program through an information circular. The Exchange is proposing to make the Program available to all securities (discussed *infra*).

<sup>100</sup> See Rule 11.24(a)(1). A “Retail Member Organization” or “RMO” is a Member (or a division thereof) that has been approved by the Exchange under Rule 11.24 to submit Retail Orders.

(“Retail Orders”) to the Exchange. Users<sup>101</sup> are permitted to provide potential price improvement for Retail Orders<sup>102</sup> in the form of non-displayed interest that is better than the national best bid that is a Protected Quotation (“Protected NBB”) or the national best offer that is a Protected Quotation (“Protected NBO”, and together with the Protected NBB, the “Protected NBBO”).<sup>103</sup>

The Exchange developed this Program with the goal of incentivizing RMOs to execute their Retail Orders on the Exchange, rather than off-exchange venues, by providing Retail Orders with greater access to potential opportunities for price improvement on the Exchange. However, as noted by the Commission, even with the presence of retail liquidity programs (“RLPs”) offered by Cboe and other national securities exchanges,<sup>104</sup> the great

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<sup>101</sup> See Rule 1.5(cc). A “User” is defined as any member or sponsored participant of the Exchange who is authorized to obtain access to the System.

<sup>102</sup> Supra note 92. A “Retail Order” is defined as an agency or riskless principal order that originates from a natural person and is submitted to the Exchange by an RMO, provided that no change is made to the terms of the order with respect to price or side of market and the order does not originate from a trading algorithm or any computerized methodology.

<sup>103</sup> See Rule 1.5(t). The term “Protected Quotation” has the same meaning as is set forth in Regulation NMS Rule 600(b)(71). The terms Protected NBB and Protected NBO are defined in BYX Rule 1.5(s). The Protected NBB is the best-priced protected bid and the Protected NBO is the best-priced protected offer. Generally, the Protected NBB and Protected NBO and the national best bid (“NBB”) and national best offer (“NBO”, together with the NBB, the “NBBO”) will be the same. However, a market center is not required to route to the NBB or NBO if that market center is subject to an exception under Regulation NMS Rule 611(b)(1) or if such NBB or NBO is otherwise not available for an automatic execution. In such case, the Protected NBB or Protected NBO would be the best-priced protected bid or offer to which a market center must route interest pursuant to Regulation NMS Rule 611.

<sup>104</sup> See, e.g., NYSE Retail Liquidity program, which promotes cost savings through price improvement for individual investors provided by retail liquidity providers that submit non-displayed interest priced better than the best protected best bid or protected best offer. See also NYSE National Retail Liquidity program, which seeks to attract retail order flow to the Exchange through the potential of price improvement at the midpoint or better. Available at <https://www.nyse.com/markets/liquidity-programs>. See also IEX Retail Program, which incentivizes midpoint liquidity for retail orders through the use of retail liquidity provider orders. Available at <https://www.iexexchange.io/products/retail-program>. See also Nasdaq BX Retail Price Improvement, which allows retail orders to interact with price-improving liquidity. Available at <https://www.nasdaqtrader.com/content/BXRPIfs.pdf>.

majority of marketable orders of retail investors continue to be sent to wholesalers.<sup>105</sup> Indeed, as noted in the Commission’s recent rule proposal related to minimum pricing increments, RLPs have not yet attracted a significant volume of retail order flow.<sup>106</sup> In fact, since RLPs have been adopted, the percentage of on-exchange share volume has continued to decrease from approximately 71% to approximately 56% as of November 2023.<sup>107</sup>

Accordingly, the Exchange now seeks to enhance its current Program by offering retail liquidity providers an optional Enhanced RPI Order type. The Exchange believes the Enhanced Order type will incentivize additional retail liquidity provision by enabling RPI liquidity providers to submit an order that is ranked at a less aggressive price than the step-up range at which the provider is willing to execute, but have the opportunity to “step up” to provide a greater amount of price improvement as compared to other higher priority resting orders on the same side of the BYX Book in order to execute with an incoming contra-side Retail Order. As discussed in more detail, below, the Enhanced RPI Order type will have price priority over resting orders when its step-up range allows for additional price improvement when a contra-side Retail Order is submitted to the Exchange. With the deeper pool of retail liquidity-providing orders, the Exchange believes that RMOs will see increased opportunities for on-exchange price improvement and seek to execute more of their Retail Orders on the Exchange.

### Proposal

The Exchange proposes to amend Rule 11.24(a) to include the proposed Enhanced

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<sup>105</sup> See Securities Exchange Act Release No. 96495 (December 14, 2022), 88 FR 128 (January 3, 2023) (“Order Competition Rule”) at 144.

<sup>106</sup> See Securities Exchange Act Release No. 96494 (December 14, 2022), 87 FR 80266 (December 29, 2022) (“Tick Size Proposal”) at 80273.

<sup>107</sup> Source: Cboe internal data.

RPI Order, which allows a retail liquidity provider to post a limit order to the Exchange, but also the opportunity to “step-up” its price within their defined step-up range by providing a greater amount of price improvement as compared to orders with higher priority that are resting on the same side of the BYX Book in order to execute against an incoming Retail Order seeking to remove liquidity. An Enhanced RPI Order is designed to be entered with a limit price, but must also include a step-up range, which is the most aggressive price it is willing to execute against a contra-side Retail Order. If the Enhanced RPI Order includes a step-up range that improves against the price of the highest-ranked resting order on the same side of the BYX Book, the Enhanced RPI Order will be given price priority over the highest-ranked resting order. In order for an Enhanced RPI Order to receive price priority, the Enhanced RPI Order must be able to provide a greater amount of price improvement to an incoming contra-side Retail Order than would otherwise be available by stepping up to the next minimum price increment.<sup>108</sup>

The Exchange believes this proposed change would further the purpose of the Program to attract retail marketable order flow to the Exchange, while also increasing opportunities for price improvement. By offering the Enhanced RPI Order, the Exchange has created an enhancement to its current Program that offers a greater incentive for liquidity providers to provide liquidity eligible to execute against marketable retail order flow on the Exchange. The Enhanced RPI Order would allow Users to post orders at their limit price but step-up to a more aggressive price in order to execute against marketable retail order flow that is less prone to adverse selection. Marketable retail order flow, in

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<sup>108</sup> The Exchange notes that the minimum amount of required price improvement will vary between \$0.001 and \$0.01, based on the order types resting on the BYX Book (discussed *infra*).

turn, would receive price improvement greater than what is currently available under the Program. The Exchange believes that the proposed change will lead to increased participation in the Program by Users seeking to provide liquidity for marketable retail order flow, which in turn will attract additional marketable retail order flow to the Exchange in search of price improvement opportunities.

The Exchange also proposes to introduce Rule 11.24(a)(5) in order to define the term RPI Interest as either RPI Orders or Enhanced RPI Orders. Additionally, the Exchange proposes to amend Rule 11.24(g) in order to describe order priority for Enhanced RPI Orders. The Exchange also proposes to make corresponding changes within Rule 11.24 to replace certain references to RPI Order with the term RPI Interest in order to have language inclusive of both RPI Orders and Enhanced RPI Orders. Further, the Exchange proposes to delete Rule 11.24(h), as the Exchange proposes to expand the Program to sub-dollar securities. The Exchange will announce that the RPI Program has expanded to all securities in a Trade Desk notice, and periodic updates will no longer be required. The Exchange also proposes to renumber Rule 11.24(i) in conjunction with the deletion of Rule 11.24(h). Finally, the Exchange proposes to clarify throughout Rule 11.24 that RPI Orders and Enhanced RPI Orders will be ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO.

Additionally, with the introduction of the Enhanced RPI Order, the Exchange proposes to amend Rule 11.24(a)(2) to permit a Retail Order to be entered as a Mid-Point Peg Order.<sup>109</sup> The Exchange also proposes to amend Rule 11.24(a)(2) to better describe

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<sup>109</sup> See Rule 11.9(c)(9). A Mid-Point Peg Order is a limit order that, after entry into the System, the price of the order is automatically adjusted by the System in response to changes in the NBBO to be pegged to the mid-point of the NBBO, or, alternatively, pegged to the less aggressive of the midpoint of the NBBO or one minimum price variation inside the same side of the NBBO as the

that the time-in-force requirement for all Retail Orders, including those entered as a Mid-Point Peg Order, is required to be Immediate or Cancel (“IOC”). The Exchange believes that allowing the Mid-Point Peg Order instruction on a Retail Order will benefit Users who choose to submit Retail Orders because it will permit a Retail Order to guarantee price improvement at the midpoint or better. The Mid-Point Peg Order instruction will be optional, and not required for Users of Retail Orders.

#### Current RPI Orders

Rule 11.24(a)(3) currently defines an RPI Order as “non-displayed interest on the Exchange that is priced better than the Protected NBB or Protected NBO by at least \$0.001 and that is identified as such.”<sup>110</sup> The Exchange now proposes to amend the definition of RPI Order to more accurately reflect how an RPI Order may be entered by defining an RPI Order as “non-displayed interest on the Exchange that is eligible to execute at prices better than the Protected NBB or Protected NBO by at least \$0.001 in securities priced at or above \$1.00 and by at least \$0.0001 in securities priced below \$1.00 and that is identified as such.” As the Exchange is also proposing to expand the Program to prices below \$1.00, more specificity is required regarding the minimum pricing increment. Further, the Exchange is clarifying that an RPI Order may be entered at any price but may execute only at prices better than the Protected NBB or Protected NBO.

As stated in Rule 11.24(a)(3), RPI Orders are non-displayed and are ranked in accordance with Rule 11.12(a). Furthermore, under Rule 11.24(g), competing RPI Orders in the same security are ranked and allocated according to price then time of entry into the

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order.

<sup>110</sup> Supra note 91.

System. Executions occur in price/time priority in accordance with Rule 11.12. Any remaining unexecuted RPI interest remains available to interact with other incoming Retail Orders if such interest is at an eligible price. Any remaining unexecuted portion of the Retail Order will cancel or execute in accordance with Rule 11.24(f). The following example illustrates this method:

- Protected NBBO for security ABC is \$10.00 – \$10.05
- User 1 enters an RPI Order to buy ABC at \$10.015 for 500 shares
- User 2 then enters an RPI Order to buy ABC at \$10.02 for 500 shares
- User 3 then enters an RPI Order to buy ABC at \$10.035 for 500 shares

An incoming Retail Order to sell ABC for 1,000 shares executes first against User 3's bid for 500 shares at \$10.035, because it is the best priced bid, then against User 2's bid for 500 shares at \$10.02, because it is the next best priced bid. User 1 is not filled because the entire size of the Retail Order to sell 1,000 shares is depleted. The Retail Order executes against RPI Orders in price/time priority.<sup>111</sup>

The Exchange proposes to amend Rule 11.24(g)(1) to provide that RPI Orders are ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO. Currently, a resting RPI Order is eligible to execute against a Type 2-designated Retail Order (a "Type 2 Order")<sup>112</sup> that has exhausted all price improving liquidity on the BYX Book even if the RPI Order is not providing price improvement, as a Type 2 Order is

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<sup>111</sup> See Rule 11.24(f) for additional examples of priority and order allocation in the current Program.

<sup>112</sup> See Rule 11.24(f)(2). A Type 2-designated Retail Order will interact first with available price improving RPI Orders and other price improving liquidity and then any remaining portion of the Retail Order will be executed as an IOC Order pursuant to Rule 11.9(b)(1). A Type 2-designated Retail Order can either be submitted as a BYX Only Order or as an order eligible for routing pursuant to Rule 11.13(a)(2). The Exchange proposes to make clear in Rule 11.24(f)(2) that the remaining portion of a Type 2-designated Retail Order will be ineligible to execute against contra-side RPI Interest that is not priced better than the Protected NBB or Protected NBO.

eligible to execute against all marketable liquidity once the order has interacted with all price improving liquidity. In the event that an RPI Order is ineligible to execute against a Type 2 Order because it is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00, the Exchange will not cancel the resting RPI Order. Rather, the RPI Order will persist on the BYX Book and will become eligible to execute should the Protected NBB or Protected NBO move to a price that permits the RPI Order to provide price improvement. The proposed change to RPI Order behavior is being made in order to limit RPI Orders to only providing executions that provide price improvement to contra-side Retail Orders, consistent with the definition of an RPI Order and the description of RPI Order functionality in the Exchange's previous Pilot Approval Order and RPI Approval Order.

#### Enhanced RPI Order

The Exchange now proposes to introduce a new type of RPI Order that Users seeking to provide RPI liquidity may utilize on an optional basis. The proposed Enhanced RPI Order will be eligible to obtain price priority over resting orders in the same security on the same side of the BYX Book in order to execute against a Retail Order by including a step-up range when entered. Enhanced RPI Orders will be ranked in accordance with proposed Rule 11.24(g)(2) (discussed *infra*). In order to effect the proposed change, the Exchange proposes to introduce Rule 11.24(a)(4), which would define an Enhanced RPI Order as:

- An “Enhanced Retail Price Improvement Order” or “Enhanced RPI Order” consists of non-displayed interest on the Exchange that is eligible to execute against contra-side Retail Orders. An Enhanced RPI Order will be ranked



at its limit price and must also include a step-up range, which is the maximum price (for buy orders) or minimum price (for sell orders) at which the Enhanced RPI Order is willing to execute. An Enhanced RPI Order may execute at: i) its limit price, so long as the limit price is priced better than the Protected NBB or Protected NBO; ii) for securities priced at or above \$1.00, at a price within the step-up range that is able to improve upon the price of a same-side resting order on the BYX Book by stepping up to the next half cent or full cent, and for securities priced below \$1.00 by stepping up to the next minimum price increment; or iii) at a price within the step-up range when the limit price of a contra-side Retail Order is within the step-up range. An Enhanced RPI Order may be a Primary Pegged order or a limit order. An Enhanced RPI Order that is also a Primary Pegged order will have its ranked price determined in accordance with Rule 11.9(c)(8) and the step-up range will be applied to the resulting ranked price. The System will monitor whether Enhanced RPI interest, including the step-up range, and adjusted by any offset and subject to the ceiling or floor price, is eligible to interact with incoming Retail Orders. An Enhanced RPI Order (the buy or sell interest, the step-up range, the offset, and the ceiling or floor) remains non-displayed in its entirety. Any User is permitted, but not required, to submit Enhanced RPI Orders. An Enhanced RPI Order may be an odd lot, round lot or mixed lot. An Enhanced RPI Order shall have priority as described in Rule 11.24(g)(2). An Enhanced RPI Order is ineligible to execute at prices equal to or inferior to the Protected NBB or Protected

NBO.

The price of an Enhanced RPI Order will be determined by a User's entry of the following into the Exchange: (1) Enhanced RPI buy or sell interest; (2) the step-up range; (3) an offset, if any; and (4) a ceiling or floor price, if any. The step-up range of an Enhanced RPI Order is the maximum amount above the order's limit price at which a User is willing to execute. If the Enhanced RPI Order can improve upon resting liquidity on the same side of the BYX Book by stepping up to the nearest whole cent tick or half cent midpoint tick, it will receive price priority over the resting liquidity on the BYX Book. An Enhanced RPI Order, however, will not improve upon the price of another resting Enhanced RPI Order to receive price priority.<sup>113</sup>

#### Enhanced RPI Order Priority

As discussed above, the proposed Enhanced RPI Order will be ranked at its limit price, which is less aggressive than its step-up range. With the introduction of the proposed Enhanced RPI Order, the Exchange proposes to reorganize Rule 11.24(g) into Rule 11.24(g)(1) and (2). Proposed Rule 11.24(g)(1) would contain the existing rule text that describes order priority with respect to RPI Orders, which the Exchange does not propose to amend except to clarify that RPI Orders may not execute at prices that are equal to or inferior to the Protected NBB or Protected NBO. Proposed Rule 11.24(g)(2) would describe order priority with respect to Enhanced RPI Orders.

An Enhanced RPI Order will be ranked and allocated according to its limit price

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<sup>113</sup> The Exchange plans to submit a request for an exemption under Regulation NMS Rule 612 that would permit it to accept and rank non-displayed RPI Interest. As outlined in the request, the Exchange has received an exemption from Rule 612 for the current Program, but believes it is appropriate to renew its request as the Program seeks to introduce Enhanced RPI Orders even as the fundamental nature of the Program is not changing.

then time of entry into the System. The Exchange proposes, however, that an Enhanced RPI Order will be granted price priority over orders resting on the BYX Book in the event that the Enhanced RPI Order is able to provide a greater amount of price improvement to an incoming contra-side Retail Order by stepping up to the next half cent<sup>114</sup> or full cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00). The step-up range of an Enhanced RPI Order will be utilized to determine price priority when: 1) the range is needed to gain priority over a resting order with higher order book priority that is not an Enhanced RPI Order; 2) in situations where: (a) a contra-side Retail Order is entered at a less aggressive price than the ranked price of the Enhanced RPI Order and all other resting liquidity and (b) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price; and 3) to determine order book priority when multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders resting on the BYX Book that are not Enhanced RPI Orders. The Exchange notes when multiple Enhanced RPI Orders are resting on the BYX Book, there are no other resting orders on the same side of the BYX Book with higher priority, and a contra-side Retail Order is entered at a price equal to or more aggressive than the highest-priced Enhanced RPI Order resting on the BYX Book, the Enhanced RPI Orders will execute in standard price/time priority according to their limit price rather than utilize the step-up range to determine order book priority.

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<sup>114</sup> Discussed *infra* Examples 1 and 2. An Enhanced RPI Order may only need to step-up one half cent in order to provide meaningful price improvement in situations where: i) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at the NBBO midpoint, and the Enhanced RPI Order is stepping up to the next full cent; or ii) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at a full cent directly above (below) the NBBO midpoint, and the Enhanced RPI Order is stepping up to the NBBO midpoint.

The Exchange notes that Enhanced RPI Orders similarly will not be eligible to execute against Type 2 Orders if the Enhanced RPI Order is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00. As with RPI Orders, an Enhanced RPI Order that is ineligible to execute against a Type 2 Order because it is not providing at least \$0.001 of price improvement in securities priced at or above \$1.00 or at least \$0.0001 of price improvement in securities priced below \$1.00 will not be cancelled, but rather will persist on the BYX Book so that it may have the opportunity to execute should the Protected NBB or Protected NBO move to a price that permits the RPI Order to provide price improvement.

The Exchange has included the examples below to show how order priority with an Enhanced RPI Order will be determined. In the examples below, the Retail Liquidity Identifier (discussed *infra*) is presumed to be displayed unless stated otherwise. Additionally, all Retail Orders described in the examples are presumed to be Type 1-designated Retail Orders<sup>115</sup> unless otherwise specified.

**Example 1**<sup>116</sup>

In order to illustrate priority of an Enhanced RPI Order over other non-displayed orders resting on the BYX Book, consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.

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<sup>115</sup> See Rule 11.24(f)(1). A Type 1-designated Retail Order will interact with available contra-side RPI Order and other price improving contra-side interest but will not interact with other available interest in the System that is not offering price improvement or route to other markets. The portion of a Type 1-designated Retail Order that does not execute against contra-side RPI Orders or other price improving liquidity will be immediately and automatically cancelled. The Exchange notes that proposed Rule 11.24(f)(1) will be updated to reflect “contra-side RPI Interest” to capture both RPI Orders and Enhanced RPI Orders.

<sup>116</sup> See proposed Rule 11.24(g)(2)(A).

- User 1 enters a Mid-Point Peg<sup>117</sup> order to buy ABC at \$10.03 for 100. User 1's order is ranked at \$10.025 as the User elected that the Mid-Point Peg order be pegged to the mid-point of the NBBO.
- User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.01 and is willing to step-up to a maximum price of \$10.03.
- User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.03. While User 1's order is ranked at a higher price (\$10.025) than User 2's order (\$10.01), User 2's order includes a step-up range of \$0.02 and is willing to step up to a maximum price of \$10.03, which provides additional price improvement to User 3's Retail Order than User 1's Mid-Point Peg Order. As User 2's order provides an additional \$0.005 of price improvement over User 1's midpoint price, the Exchange gives priority to User 2's Enhanced RPI Order.

**Example 2<sup>118</sup>**

There are two situations in which an Enhanced RPI Order may only need to step-up one-half cent in order to provide meaningful price improvement. First, when the NBBO midpoint is priced in a half cent and the Enhanced RPI Order is stepping up from the half-cent midpoint to the next full cent in order to provide price improvement (see Example 1 above). The second instance occurs when the best-priced resting order on the BYX Book is ranked at a whole cent, and the NBBO midpoint is priced in a half cent increment, the

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<sup>117</sup> Supra note 109.

<sup>118</sup> See proposed Rule 11.24(g)(2)(A).

Enhanced RPI Order will only need to step-up to the NBBO midpoint order to provide meaningful price improvement. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.03.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.025. While User 1's order is ranked at a higher price (\$10.02) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.02 on its order and is willing to step up to a maximum price of \$10.03 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though User 2's order may execute up to a price of \$10.03, it only needs to provide one-half cent price improvement over User 1's ranked price of \$10.02 in order to provide meaningful price improvement at the midpoint.

**Example 3<sup>119</sup>**

There are instances where an Enhanced RPI Order may need to step-up a full penny in order to provide meaningful price improvement. Consider the following:

- The Protected NBBO for security ABC is \$10.00 x \$10.10.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User

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<sup>119</sup> See proposed Rule 11.24(g)(2)(A).

2's step-up range is \$0.04. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.

- User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.04. While User 1's order is ranked at a higher price (\$10.03) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.04 on its order and is willing to step up to a maximum price of \$10.05 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though User 2's order may execute up to a price of \$10.05, it only needs to provide one penny of price improvement above User 1's ranked price of \$10.03 in order to provide meaningful price improvement.

**Example 4<sup>120</sup>**

There may be instances where there is no other liquidity resting on the BYX Book against which the Enhanced RPI Order can step up against. In these instances, the Enhanced RPI Order will trade at its ranked price. Consider the following example.

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.015. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.025.
  - User 2 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 2's Retail Order for 100 will execute against User 1's Enhanced RPI Order at \$10.01 as there are no better-priced orders resting on the BYX Book

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<sup>120</sup> See proposed Rule 11.24(a)(4).

against which User 1 would need to provide greater price improvement to User 2.

**Example 5<sup>121</sup>**

Enhanced RPI Orders will only have priority against other better-priced liquidity resting on the BYX Book in the event that the Enhanced RPI Order can step-up to the next half cent or full cent. In the example below, the Enhanced RPI Order is unable to step up against the best priced order on the BYX Book but is able to step up against an order ranked at the next best price level. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.04 for 100.
  - User 2 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 3 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 3's step-up range is \$0.03. User 3's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
  - User 4 enters a Retail Order to sell ABC at \$10.00 for 150.
- **RESULT:** User 4's Retail Order will execute 100 shares first with User 1's non-displayed order as User 1's non-displayed order has price priority over the orders submitted by Users 2 and 3. While User 3's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04, the step-up range does not provide greater price improvement for User 4's Retail Order as compared to User 1's non-displayed order and as such, User 3's Enhanced RPI Order does not have priority over User 1's non-displayed order. Once User 4's Retail Order executes against User 1's non-displayed order, 50 shares remain on

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<sup>121</sup> See proposed Rule 11.24(g)(2)(A).



User 4's Retail Order. User 4's Retail Order will then execute its remaining 50 shares with User 3's Enhanced RPI Order at a price of \$10.025. While User 2's non-displayed order is ranked at a higher price (\$10.02) than User 3's Enhanced RPI Order (\$10.01), User 3's Enhanced RPI Order has a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04 and User 2's non-displayed order does not contain a step-up range. As User 3's Enhanced RPI Order is willing to provide greater price improvement as compared to a better-priced order resting on the same side of the BYX Book, it is given priority over User 2's non-displayed order. User 3's Enhanced RPI Order executes 50 shares against User 4's non-displayed order at a price of \$10.025 because it provides one-half cent of price improvement over User 2's ranked price of \$10.02.

**Example 6**<sup>122</sup>

Enhanced RPI Orders will execute within their step-up range when the incoming Retail Order's price is not executable at the Enhanced RPI Order's ranked price. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.03. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
  - User 2 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 2's Retail Order will execute with User 1's Enhanced RPI Order at \$10.03 as the limit price of User 2's Retail Order (\$10.03) is within the maximum

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<sup>122</sup> See proposed Rule 11.24(a)(4).

price provided by User 1's step-up range.

**Example 7<sup>123</sup>**

When there are multiple Enhanced RPI Orders resting on the BYX Book, no other same side liquidity with higher priority, and the contra-side Retail Order is priced more aggressively than the resting Enhanced RPI Orders, execution priority will be determined by the higher ranked price and not by the step-up ranges of the Enhanced RPI Orders. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.02 and is willing to step up to a maximum price of \$10.04.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at \$10.02 because User 2's Enhanced RPI Order has price priority over User 1's Enhanced RPI Order due to its higher ranked price of \$10.02. Given that User 3's Retail Order was priced more aggressively than the resting Enhanced RPI Orders at its time of entry, the Exchange believes that priority should be determined by using the ranked price of the Enhanced RPI Orders resting on the BYX Book at the time of User 3's Retail Order entry.

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<sup>123</sup> See proposed Rule 11.24(g)(2).

**Example 8**<sup>124</sup>

The step-up range will be used to determine order book priority in situations where:

i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters a non-displayed order to buy ABC at \$10.02 for 100. User 2's order is ranked at \$10.02.
  - User 3 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 3's order will execute with User 1's Enhanced RPI Order at \$10.03 because i) User 3's Retail Order was entered at a less aggressive price than the ranked price of both User 1 and User 2's orders; and ii) the maximum price provided by the step-up range of User 1's Enhanced RPI Order is more aggressively priced (\$10.05) than the limit price of User 3's Retail Order (\$10.03). Even though User 2's ranked price is higher than User 1's ranked price, User 2's order is not marketable against User 3's Retail Order. User 3's Retail Order would otherwise be unable to execute if the Exchange did not look to the price improvement provided by User 1's step-up range to permit an execution between User 1 and User

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See proposed Rule 11.24(g)(2)(B).

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**Example 9<sup>125</sup>**

The step-up range will be used to determine order book priority in situations where multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders resting on the BYX Book. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.02 and is willing to step up to a maximum price of \$10.04.
  - User 3 enters a non-displayed order to buy ABC at \$10.03 for 100. User 3's order is ranked at \$10.03.
  - User 4 enters a Retail Order to sell ABC at \$10.03 for 100.
- **RESULT:** User 4's Retail Order will execute with User 1's Enhanced RPI Order at \$10.04 because the Exchange looks to the step-up range to determine order book priority when there are multiple Enhanced RPI Orders resting on the BYX Book that are willing to provide additional price improvement as compared to other orders resting on the BYX Book. While both User 1 and User 2 can execute at a price of \$10.04, User 1's Enhanced RPI Order can result in a higher maximum possible execution price (step up range of \$0.04; maximum price of \$10.05) as

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<sup>125</sup> See proposed Rule 11.24(g)(2)(C).

compared to User 2's Enhanced RPI Order (step up range of \$0.02; maximum price of \$10.04). As such, User 1's Enhanced RPI Order is given priority ahead of User 2's Enhanced RPI Order to execute against User 4's Retail Order. In this instance, when there are multiple Enhanced RPI Orders that can provide price improvement to the contra-side Retail Order, the Exchange believes it is appropriate to grant order book priority to the Enhanced RPI Order containing the step-up range that could result in the highest (in the event of a buy order) or lowest (in the event of a sell order) potential maximum execution price, even if the resulting execution does not occur at the highest (lowest) maximum execution price. By granting execution priority to the User who's Enhanced RPI Order results in the highest (lowest) potential maximum execution price, the Exchange is encouraging Users to submit aggressively priced orders. As such, the Exchange believes it is appropriate to give priority to User 1's Enhanced RPI Order in this instance because User 1's Enhanced RPI Order (step-up range of \$0.04; maximum price of \$10.05) could potentially result in a higher maximum execution price than User 2's Enhanced RPI Order (step-up range of \$0.02; maximum price of \$10.04) and is therefore willing to provide additional price improvement to Retail Orders as compared to User 2's Enhanced RPI Order.

**Example 10**<sup>126</sup>

Enhanced RPI Orders will have price priority over resting RPI orders (that do not contain a step-up range) on the BYX Book so long as the step-up range of the Enhanced RPI Order is greater than the limit price of the resting RPI order. Consider the following

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<sup>126</sup> See proposed Rule 11.24(g)(2)(A).

example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
  - User 2 enters an RPI Order to buy ABC at \$10.02.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's Enhanced RPI Order at a price of \$10.025 because User 1's Enhanced RPI Order containing a step-up range allows User 3's Retail Order to receive an additional one-half cent price improvement as compared to the ranked price of User 2's RPI Order. While User 2's RPI Order had a higher ranked price (\$10.02) than User 1's Enhanced RPI Order (\$10.01), User 2's RPI Order did not contain a step-up range. Given that Enhanced RPI Orders are designed to provide meaningful price improvement against all resting orders on the BYX Book, the Exchange believes this factor favors using the price improvement provided by the step-up range in order to determine priority in situations where there are both resting RPI and Enhanced RPI Orders on the BYX Book. While RPI Orders do provide at least \$0.001 of price improvement as compared to the Protected NBBO, Enhanced RPI Orders allow for price improvement to the next valid half cent or full cent as the transaction is priced above \$1.00.<sup>127</sup> Thus, using the step-up range to determine priority when RPI Orders are

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<sup>127</sup> The Exchange notes that there may be situations in which an Enhanced RPI Order that is granted order book priority over an RPI Order will provide only \$0.001 of price improvement over the RPI Order when stepping up to the next half cent or full cent. For example, the Protected NBBO is \$10.00 x \$10.05. Assume that a buy-side Enhanced RPI Order for 100 shares has a step-up range to

resting on the BYX Book results in an increased amount of price improvement for the contra-side Retail Order.

**Example 11**<sup>128</sup>

Enhanced RPI Orders may also improve against displayed orders resting on the BYX Book in order to provide price improvement to a contra-side Retail Order. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters an Enhanced RPI Order to buy ABC at \$9.99 for 100. User 1's step-up range is \$0.06. User 1's order is ranked at \$9.99 and is willing to step up to a maximum price of \$10.05. The Retail Liquidity Identifier is not displayed as the limit price of \$9.99 is below the NBB and the Retail Liquidity Identifier will only display when there is RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO.
  - User 2 enters a displayed order to buy ABC at \$10.00 for 100.
  - User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's Enhanced RPI Order at a price of \$10.01. While User 2's displayed order is displayed and ranked at a higher price (\$10.00) than User 1's Enhanced RPI Order (\$9.99), User 1's Enhanced RPI Order includes a step-up range of \$0.06 on its order, which permits

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\$10.04 and is granted order book priority over a buy-side RPI Order for 100 shares with a limit price of \$10.024. A sell-side Retail Order for 100 shares is entered at \$10.00. In this instance, the buy-side Enhanced RPI Order steps-up to a price of \$10.025 to execute against the sell-side Retail Order. While the Enhanced RPI Order is only providing \$0.001 of price improvement as compared to the RPI Order with a limit price of \$10.024, the Enhanced RPI Order provides a total of \$0.025 of price improvement to the Retail Order as compared to the Retail Order's limit price of \$10.00.

<sup>128</sup>

See proposed Rule 11.24(g)(2)(A).

the order to execute up to a maximum price of \$10.05. In this instance, executing User 2's displayed order at \$10.00 does not provide any price improvement to the Retail Order when User 1's Enhanced RPI Order is resting on the BYX Book and is willing to provide additional price improvement to Order 3 than Order 2 is willing to provide. User 1's Enhanced RPI Order is willing to step up to the next full cent above \$10.00 (in this case, \$10.01), which provides a full penny of price improvement to User 3's Retail Order. As such, this is the price at which User 3's Retail Order executes with User 1's Enhanced RPI Order.

**Example 12**<sup>129</sup>

An Enhanced RPI Order that is also a Primary Pegged Order<sup>130</sup> without an offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order that is also Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order does not include an offset. User 2's order is ranked at \$10.00 and is willing to step up to a maximum price of \$10.03.
- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.

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<sup>129</sup> See proposed Rule 11.24(g)(2)(A).

<sup>130</sup> See Rules 11.9(c)(8) and 11.9(c)(8)(A). A Pegged Order is a limit order that after entry into the System, the price of the order is automatically adjusted by the System in response to changes in the NBBO. A Primary Pegged Order is a type of Pegged Order where a User includes a limit priced and a predetermined amount by which the User is willing to improve the Protected NBBO, subject to a ceiling or floor price. The ceiling or floor price is the amount above or below which the User does not wish to trade.



- User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.
- User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at a price of \$10.04 because User 2's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.04 (based on the Protected NBBO at the time User 3's order is entered) in order to provide additional price improvement as compared to other orders resting on the BYX Book. While User 1's order has a higher limit price (\$10.03) than User 2's Enhanced RPI Order (\$10.01, based on the Protected NBBO at the time User 3's order is entered), User 2's Enhanced RPI Order is given queue priority due to its ability to provide \$0.01 of price improvement over User 1's order.

**Example 13<sup>131</sup>**

An Enhanced RPI Order that is also a Primary Pegged Order that contains a positive offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction, except that the offset amount will determine where the order is ranked. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.
  - User 2 enters an Enhanced RPI Order that is also a Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order includes an offset of \$0.01. User 2's order is ranked at \$10.01 and is

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<sup>131</sup> See proposed Rule 11.24(g)(2)(A).

willing to step up to a maximum price of \$10.04.

- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.
  - User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.02 and is willing to step up to a maximum price of \$10.05.
  - User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 2's Enhanced RPI Order at a price of \$10.04 because User 2's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.05 (based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered) in order to provide additional price improvement as compared to other orders resting on the BYX Book. While User 1's order has a higher limit price (\$10.03) than User 2's Enhanced RPI Order (\$10.02, based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered), User 2's Enhanced RPI Order is given queue priority due to its ability to provide \$0.01 of price improvement over User 1's order.

**Example 14**<sup>132</sup>

An Enhanced RPI Order that is also a Primary Pegged Order that contains a negative offset will behave in the same manner as an Enhanced RPI Order that is entered without a Primary Pegged Order instruction, except that the offset amount will determine where the order is ranked. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.

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<sup>132</sup> See proposed Rule 11.24(g)(2)(A).

- User 2 enters an Enhanced RPI Order that is also a Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order includes an offset of (\$0.01). User 2's order is ranked at \$9.99 and is willing to step up to a maximum price of \$10.02.
- The Protected NBBO for security ABC changes to \$10.01 x \$10.05.
  - User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.00 and is willing to step up to a maximum price of \$10.03.
  - User 3 enters a Retail Order to sell ABC at \$10.01 for 100.
- **RESULT:** User 3's Retail Order will execute with User 1's hidden order at a price of \$10.03. As User 2's Enhanced RPI Order is unable to provide additional price improvement to User 1's hidden order, User 1's order retains priority and executes with User 3's Retail Order. The negative offset of \$0.01 causes User 2's order to be ranked at \$10.00 after the Protected NBBO changed from \$10.00 x \$10.05 to \$10.01 x \$10.05, and User 2's step-up range of \$0.03 was unable to provide the minimum amount of price improvement in order to gain queue priority ahead of User 1's hidden order.

**Example 15**<sup>133</sup>

Enhanced RPI Orders may also improve upon resting orders that are BYX Post Only Orders in order to provide price improvement to contra-side Retail Orders. Consider the following example:

- The Protected NBBO for security ABC is \$10.00 x \$10.05.
  - User 1 enters BYX Post Only Order to buy ABC at \$10.02 for 100.

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<sup>133</sup> See proposed Rule 11.24(g)(2)(A).

- User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.04. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.
- User 3 enters a Retail Order to sell ABC at \$10.00 for 100.
- **RESULT:** User 2's Enhanced RPI Order executes against User 3's Retail Order at \$10.03. While User 1's BYX Post Only Order is ranked at a higher price (\$10.02) than User 2's order, User 2's Enhanced RPI Order is willing to step-up \$0.04 over the best-priced resting order to gain queue priority. While User 2 can step-up to a price of \$10.05, User 2's Enhanced RPI Order only needs to step-up to a price of \$10.03 in order to gain queue priority over User 1's BYX Post Only Order.

**Example 16**<sup>134</sup>

Enhanced RPI Orders will also be available for securities priced below \$1.00. In order for an Enhanced RPI Order in a security priced below \$1.00 to gain queue priority over a same-side resting order, the Enhanced RPI Order must be able to step up to the next minimum price increment. Consider the following example:

- The Protected NBBO for security ABC is \$0.2001 x \$0.2025.
  - User 1 enters a non-displayed order to buy ABC at \$0.2003 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$0.2002 for 100. User 2's step-up range is \$0.001. User 2's order is ranked at \$0.2002 and is willing to step up to a maximum price of \$0.2012.
  - User 3 enters a Retail Order to sell ABC at \$0.2001.
- **RESULT:** User 2's Enhanced RPI Order executes against User 3's Retail Order at

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<sup>134</sup> See proposed Rule 11.24(g)(2)(A).

a price of \$0.2004. While User 1's non-displayed order is ranked at a higher price (\$0.2003) than User 2's Enhanced RPI Order (\$0.2002), User 2's Enhanced RPI Order included a step-up range of \$0.001 and is willing to execute at a price up to \$0.2012 in order to gain queue priority. The next minimum price increment above \$0.2003 is \$0.2004, which is inside User 2's step-up range and as such, User 2's order will have queue priority over User 1's order.

**Example 17**<sup>135</sup>

The below example is included to show the proposed change to Rule 11.24(f)(2) that does not permit a Type 2-designated Retail Order to execute against resting RPI Interest that is priced equal to the Protected NBB or Protected NBO.

- The Protected NBBO for security ABC is \$10.00 x \$10.05
  - User 1 enters a non-displayed order to buy ABC at \$10.02 for 100.
  - User 2 enters an Enhanced RPI Order to buy ABC at \$10.00 for 100. User 2's step-up range is \$0.03. User 2's order is ranked at \$10.00 and is willing to step up to a maximum price of \$10.03. The Retail Liquidity Identifier is not displayed because the limit price of User 2's order is not priced at least \$0.001 better than the Protected NBB.
  - User 3 enters an RPI Order to buy ABC at \$10.00 for 100.
  - User 4 enters a non-displayed order to buy ABC at \$10.00 for 100.
  - User 5 enters a Type 2-designated Retail Order to sell ABC at \$10.00 for 400.
- **RESULT:** User 2's Enhanced RPI Order executes against User 5's Type 2 Order for 100 at a price of \$10.025 because the best-priced resting order on the BYX Book

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<sup>135</sup> See proposed Rule 11.24(f)(2); see also proposed Rule 11.24(g)(1).

is ranked at a whole cent (\$10.02), and the NBBO midpoint is priced in a half cent increment.<sup>136</sup> User 1's non-displayed order then executes against User 5's Type 2 Order for 100 at a price of \$10.02 because User 1's order is priced better than the NBBO.<sup>137</sup> User 4's non-displayed order then executes against 5's Type 2 Order for 100 at a price of \$10.00.<sup>138</sup> The remaining 100 shares of User 5's Type 2 Order are then cancelled or routed to an away market based on User 5's instruction. This example demonstrates proposed order priority where a Type 2 Order has a remaining quantity after executing against all price improving liquidity. Under current Rule 11.24(f)(2), order priority would differ in that User 5's Type 2 Order would execute against User 3's RPI Order at \$10.00 prior to executing against User 4's non-displayed order due to price/time priority and would leave no remaining quantity to either cancel back or route to an away market.

As demonstrated in the examples above, the Exchange is proposing to grant an Enhanced RPI Order price priority over equal-priced or better-priced resting orders on the BYX Book so long as the Enhanced RPI Order can provide meaningful price improvement over such resting orders. The Exchange believes that allowing liquidity providers to post orders outside of the range at which they are willing to execute yet maintain the opportunity to step-up against resting orders on the same side of the BYX Book in exchange for price priority will incentivize these liquidity providers to provide additional liquidity on the Exchange. As a result of additional, aggressively priced liquidity submitted to the Exchange designed specifically to interact with Retail Orders, RMOs will therefore be

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<sup>136</sup> See proposed Rule 11.24(g)(2)(A).

<sup>137</sup> See Rule 11.12(a)(1).

<sup>138</sup> See proposed Rule 11.24(a)(3) and proposed Rule 11.24(f)(2).

incentivized to submit additional retail order flow to the Exchange which has the potential to interact with an Enhanced RPI Order and receive meaningful price improvement.

#### Retail Liquidity Identifier

The Exchange currently disseminates an identifier pursuant to Rule 11.24(e) when RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO for a particular security priced at or above \$1.00 is available in the System (“Retail Liquidity Identifier” or “Identifier”). When there is RPI Interest on the BYX Book that is priced at or below (above) the Protected NBB or Protected NBO, no Retail Liquidity Identifier is disseminated by the Exchange.<sup>139</sup> The Identifier is disseminated through consolidated data streams (i.e., pursuant to the Consolidated Tape Association Plan/Consolidated Quotation Plan, or CTA/CQ, for Tape A and Tape B securities, and the Nasdaq UTP Plan for Tape C securities) as well as through proprietary Exchange data feeds.<sup>140</sup> The Identifier reflects the symbol and the side (buy or sell) of the RPI Interest, but does not include the price or size of the RPI Interest. In particular, CQ and UTP quoting outputs include a field for codes related to the Retail Liquidity Identifier. The codes indicate RPI Interest that is priced better than the Protected NBB or Protected NBO by at least the minimum level of price improvement as required by the Program. The Exchange notes that the Identifier can shift from being disseminated to not disseminated (or vice versa) based on movement in the Protected NBB or Protected NBO without new RPI Interest being entered on the Exchange.

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<sup>139</sup> The Exchange notes that RPI Interest may not execute unless it is priced at least \$0.001 better than the Protected NBB or Protected NBO in securities priced at or above \$1.00 or priced at least \$0.0001 better than the Protected NBB or Protected NBO in securities priced below \$1.00, as proposed *infra*.

<sup>140</sup> The Exchange notes that the Retail Liquidity Identifier for Tape A and Tape B securities are disseminated pursuant to the CTA/CQ Plan. The identifier is also available through the consolidated public market data stream for Tape C securities. The processor for the Nasdaq UTP disseminates the Retail Liquidity Identifier and analogous identifiers from other market centers that operate programs similar to the RPI Program.

The Exchange proposes to continue to disseminate the Retail Liquidity Identifier in its current form should the Enhanced RPI Order be approved.<sup>141</sup> For Enhanced RPI Orders, the indicator will be based off of the ranked price only and the step-up range will not be used. The purpose of the Identifier is to provide relevant market information to RMOs that there is available RPI interest available on the Exchange, thereby incentivizing RMOs to send Retail Orders to the Exchange. The Exchange proposes to make clear in Rule 11.24(e) that both RPI Orders and Enhanced RPI Orders constitute RPI Interest and that the Retail Liquidity Identifier shall be disseminated when RPI Interest (as defined in proposed Rule 11.24(e)) priced at least \$0.001 better than the Protected NBB or Protected NBO for a particular security is available in the System for securities priced at or above \$1.00. A separate liquidity identifier that identifies Enhanced RPI Order interest will not be disseminated. For securities priced at or above \$1.00, displaying the Retail Liquidity Identifier will provide an indication to RMOs that *at least* \$0.001 of price improvement is available in the System, with the opportunity of potentially receiving additional price improvement should the available RPI Interest be in the form of an Enhanced RPI Order.

As discussed below, the Exchange proposes to expand the Program to include securities priced below \$1.00. Given that the minimum price variation (“MPV”) of a sub-dollar security is \$0.0001,<sup>142</sup> the Exchange is proposing that the Identifier for sub-dollar securities will be displayed when there is at least \$0.0001 of price improvement over the

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<sup>141</sup> The Exchange plans on submitting a letter requesting assurance from staff of the Division of Trading and Markets that it will not recommend enforcement action to the Commission pursuant to Rule 602 of Regulation NMS (the “Quote Rule”) with respect to: (1) the Exchange with respect to collecting, processing, and making available to vendors the best bid, best offer, and quotation sizes communicated by members of the Exchange, or (2) liquidity providers entering RPI Interest under the Program.

<sup>142</sup> See 17 CFR 242.612 (“Minimum pricing increment”).



Protected NBB or Protected NBO. Similarly, the Identifier for sub-dollar securities will not be displayed if there is RPI Interest on the BYX Book priced at or below (above) the Protected NBB or Protected NBO. The Exchange will continue to display the Identifier for securities priced at or above \$1.00 when there is RPI Interest priced at least \$0.001 better than the Protected NBB or Protected NBO. The Exchange will not make any other changes to the display of the Identifier from its current form for sub-dollar securities other than the minimum amount of price improvement required to display the Identifier.

#### Securities Priced Below \$1.00

Rule 11.24(h) currently limits the Program to trades occurring at prices equal to or greater than \$1.00 per share and the Exchange periodically notifies Members<sup>143</sup> regarding securities included in the Program through an information circular.<sup>144</sup> Now, the Exchange proposes to expand the Program to all securities, including those priced below \$1.00. The rationale behind expanding the Program to all securities regardless of execution price stems from the growth of sub-dollar trading (i.e., trading at prices below \$1.00), both on- and off-exchange. As of March 2023, an analysis of SIP<sup>145</sup> data by the Exchange found that sub-dollar average daily volume has increased 313% as compared to first quarter 2019.<sup>146</sup> In this period, sub-dollar on-exchange average daily volume grew from 442 million shares

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<sup>143</sup> See Rule 1.5(n). The term “Member” shall mean any registered broker or dealer that has been admitted to membership in the Exchange. A Member will have the status of a “member” of the Exchange as that term is defined in Section 3(a)(3) of the Act. Membership may be granted to a sole proprietor, partnership, corporation, limited liability company or other organization which is a registered broker or dealer pursuant to Section 15 of the Act, and which has been approved by the Exchange.

<sup>144</sup> Supra note 94.

<sup>145</sup> The “SIP” refers to the centralized securities information processors.

<sup>146</sup> See “How Subdollar Securities are Trading Now” (March 16, 2023). Available at <https://www.cboe.com/insights/posts/how-subdollar-securities-are-trading-now/>.

per day to 1.8 billion shares per day.<sup>147</sup> An analysis of SIP and FINRA Trade Reporting Facility (“TRF”),<sup>148</sup> data indicates that exchanges represented approximately 39.8% market share in sub-dollar securities, with a total of 1,638 securities trading below \$1.00.<sup>149</sup> As an exchange group, Cboe had approximately 13.3% of market share of sub-dollar securities in the first quarter of 2023.<sup>150</sup>

As trading in sub-dollar securities has grown steadily since 2020, the Exchange believes it is appropriate to expand the Program to include securities priced below \$1.00. The Exchange notes, however, that the MPV for sub-dollar securities differs from the MPV for securities priced at or above \$1.00. As provided for by Regulation NMS Rule 612, for securities priced below \$1.00, the MPV is \$0.0001, whereas for securities priced at or above \$1.00 the MPV is \$0.01.<sup>151</sup> The Exchange proposes that in order for an Enhanced RPI Order to gain queue priority ahead of resting orders on the same side of the BYX Book, the Enhanced RPI Order will be stepped-up to the nearest MPV (\$0.0001) for securities priced below \$1.00. This differs from the treatment of Enhanced RPI Orders for securities priced at or above \$1.00, which are proposed to be stepped-up to the nearest half-cent midpoint or whole cent tick ahead of resting orders on the same side of the BYX Book. The Exchange believes that the different treatment of Enhanced RPI Orders for securities priced below \$1.00 is appropriate given that the MPV for securities priced below \$1.00 is

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<sup>147</sup> Id.

<sup>148</sup> Trade Reporting Facilities are facilities through which FINRA members report off-exchange transactions in NMS stocks, as defined in SEC Rule 600(b)(47) of Regulation NMS. See Tick Size Proposal at 80315.

<sup>149</sup> Supra note 146.

<sup>150</sup> Id.

<sup>151</sup> Supra note 142.

significantly less than the MPV for securities priced at or above \$1.00. Currently, all Regulation NMS securities traded on the Exchange priced at or above \$1.00 are eligible for inclusion in the Program. The Exchange will announce to its Members via a Trade Desk Notice that the Exchange will no longer provide periodic updates of securities included in the Program as the Program is being expanded to include all Regulation NMS securities traded on the Exchange, regardless of price.

### Implementation

The Exchange plans to implement the proposed rule change during the second half of 2024 and will announce the implementation date via Trade Desk Notice.

### 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.<sup>152</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>153</sup> 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)<sup>154</sup>

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<sup>152</sup> 15 U.S.C. 78f(b).

<sup>153</sup> 15 U.S.C. 78f(b)(5).

<sup>154</sup> Id.

requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Commission has repeatedly emphasized that the U.S. capital markets should be structured with the interests of retail investors in mind<sup>155</sup> and has recently proposed a series of rules designed, in part, to attempt to bring order flow back to the exchanges from off-exchange trading venues.<sup>156</sup> The Exchange believes its proposed enhancements to the Program are consistent with the Commission's goal of ensuring that the equities markets continue to serve the needs of the investing public. Specifically, introducing the Enhanced RPI Order type would protect investors and the public interest by providing retail investors the ability to obtain meaningful price improvement on BYX, a national securities exchange. The Exchange is committed to innovation that improves the quality of the equities markets and believes that the proposed Enhanced RPI Order may increase the attractiveness of the Exchange for the execution of Retail Orders submitted on behalf of the millions of ordinary investors that rely on these markets for their investment needs.

The Exchange believes the proposed Enhanced RPI Order promotes just and equitable principles of trade and is not unfairly discriminatory because the order type will be available for all Users, and is not limited to a certain subset of market participants. Even though Enhanced RPI Orders may be entered by any market participant, the Exchange believes that the majority of Enhanced RPI Orders will be entered by or on behalf of institutional investors that are willing to provide additional price improvement as a way to

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<sup>155</sup> See U.S. Securities and Exchange Commission, Strategic Plan, Fiscal Years 2018-2022, available at [https://www.sec.gov/files/SEC\\_Strategic\\_Plan\\_FY18-FY22\\_FINAL\\_0.pdf](https://www.sec.gov/files/SEC_Strategic_Plan_FY18-FY22_FINAL_0.pdf)

<sup>156</sup> *Supra* notes 105 – 106. See also, Securities Exchange Act Release No. 96496 (December 14, 2022), 88 FR 5440 (January 27, 2023) (“Regulation Best Execution”); Securities Exchange Act Release No. 96493 (December 14, 2022), 88 FR 3786 (January 20, 2023) (“Disclosure of Order Execution Information”).

minimize their adverse selection costs.<sup>157</sup> The Exchange does not believe that such segmentation is inconsistent with section 6(b)(5) of the Act, as it does not permit *unfair* discrimination. The Commission has previously stated that the markets generally distinguish between retail investors, whose orders are considered desirable by liquidity providers because such retail investors are presumed to be less informed about short-term price movements, and professional traders, whose orders are presumed to be more informed.<sup>158</sup> The Commission has further stated that without opportunities for price improvement, retail investors may encounter wider spreads that are a consequence of liquidity providers interacting with more informed order flow.<sup>159</sup> The Exchange believes that its proposed Enhanced RPI Order is reasonably designed to attract marketable retail order flow to the exchange as it will help to ensure that retail investors benefit from the better price that liquidity providers are willing to provide to retail orders in exchange for minimizing their adverse selection costs.

Additionally, the Exchange believes that the proposed Enhanced RPI Order type is not unfairly discriminatory to institutional investors as it rewards the User that enters the most aggressively priced Enhanced RPI Order, based on a combination of the order's limit price and step-up range, with order book priority. Ultimately, execution priority amongst orders resting on the BYX Book will be determined by the step-up range entered on each

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<sup>157</sup> Adverse selection is the phenomenon where the price of a stock drops right after a liquidity provider purchases the stock. Marketable retail order flow is generally seen as more desirable by institutional liquidity providers as executions against retail orders are less prone to adverse selection. The Commission has previously opined that retail liquidity programs may be beneficial to institutional investors as they may be able to reduce their possible adverse selection costs by interacting with retail order flow. See Pilot Approval Order at 71656.

<sup>158</sup> Id.

<sup>159</sup> Id.

Enhanced RPI Order. If the step-up range for an Enhanced RPI Order provides a marketable, contra-side Retail Order with greater price improvement than would otherwise be available from other resting orders by stepping up to the next half cent or full cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00), then the Enhanced RPI Order will be granted order book priority. In the event that multiple Enhanced RPI Orders are resting on the BYX Book, the Enhanced RPI Order with the highest step-up range will be given order book priority. The Exchange believes rewarding the most aggressively priced step-up range will encourage Users to submit Enhanced RPI Orders with step-up ranges that are likely to provide meaningful price improvement to Retail Orders, which ultimately benefits both retail investors, who will receive price improvement over the NBBO, and the User entering the Enhanced RPI Order, who is able to execute against a marketable Retail Order to minimize its adverse selection costs and interact with retail order flow that they are currently unable to access on the Exchange given that such order flow is largely executed off-exchange.

As noted in the Exchange's initial RPI filings,<sup>160</sup> most equities exchanges, including BYX, determine priority based on a price/time/display allocation model.<sup>161</sup> This has contributed to deep and liquid markets for equity securities as liquidity providers compete to be the first to establish a particular price. While the price/time/display allocation model generally works well for institutional investors, retail investors are traditionally not able to compete with market makers and other automated liquidity

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<sup>160</sup> Supra notes 95 – 96.

<sup>161</sup> Nasdaq PSX, however, offers a price setter pro rata model that rewards liquidity providers that set the best price and then rewards other market participants that enter larger sized orders. See Securities Exchange Act Release No. 72250 (May 23, 2014), 79 FR 31147 (May 30, 2014) (SR-Phlx-2014-24).

providers to set an aggressive price on orders submitted to the Exchange. Importantly, retail investors, in contrast to institutional investors, tend to have longer investment time horizons, which means they are not in the business of optimizing queue placement under a time-based allocation model. Therefore, in order to facilitate the needs of retail investors, the Exchange believes an alternative approach - such as this Enhanced RPI Order proposal - would benefit the retail investor community.

As discussed earlier, the proposed introduction of the Enhanced RPI Order is designed to provide retail investors with enhanced opportunities to obtain meaningful price improvement by providing them with potential opportunities to execute versus non-displayed Enhanced RPI Orders that offer price improvement beyond that offered by resting orders on the Exchange. Marketable retail order flow is routinely executed in full on entry at the national best bid or offer or better,<sup>162</sup> but many retail liquidity programs, including the Exchange's current Program, are designed to offer at least \$0.001 of price improvement over the Protected NBB or Protected NBO to Retail Orders.<sup>163</sup> By introducing Enhanced RPI Orders, the Exchange is proposing to prioritize Enhanced RPI Orders ahead of other resting orders on the same side of the BYX Book in exchange for the Enhanced RPI Order offering meaningful price improvement to Retail Orders by stepping up to the next half cent or whole cent (for securities priced at or above \$1.00) or the next minimum price increment (for securities priced below \$1.00). The Exchange believes the ability to post an order at a price outside of the range at which it is willing to

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<sup>162</sup> A review of internal Exchange data found that 60% of retail orders across the Exchange and its affiliates executed at the NBBO year-to-date in 2023. Similarly, 59% of retail orders across the Exchange and its affiliates executed at the NBBO in calendar year 2022.

<sup>163</sup> See, e.g., IEX Rule 11.232; Nasdaq BX Rule 4780; NYSE National Rule 7.44-E; NYSE Rule 7.44.

execute with the ability to gain priority in exchange for executing at a more aggressive price will 1) encourage Users to submit aggressively priced Enhanced RPI Orders, and 2) attract Retail Order flow to the Exchange, both of which will benefit all investors. Increased order flow will create a deeper pool of liquidity on the Exchange, which provides for greater execution opportunities for all Users and provides for overall enhanced price discovery and price improvement opportunities on the Exchange. If successful, the proposed rule change would benefit market participants by increasing the diversity of order flow with which they can interact on a national securities exchange, thereby increasing order interaction and contributing to price formation.

Giving queue priority to certain order types is not a novel concept in the securities markets. In fact, on the Exchange's affiliate, Cboe EDGX Exchange, Inc. ("EDGX"), the displayed portion of Retail Priority Orders are given allocation priority ahead of all other available interest on the EDGX Book ("EDGX Retail Priority").<sup>164</sup> The Commission found that EDGX Retail Priority represented a reasonable effort to enhance the ability of bona fide retail trading interest to compete for executions with orders entered by other market participants that may be better equipped to optimize their place in the intermarket queue.<sup>165</sup> The Exchange believes that granting queue priority to an Enhanced RPI Order as discussed in the Purpose section similarly reflects a reasonable effort by the Exchange to create additional price improvement opportunities for retail investors, as has been the standard identified by the Commission in several approval orders written in regards to RLPs.<sup>166</sup>

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<sup>164</sup> See EDGX Rule 11.9(a)(2)(A).

<sup>165</sup> See Securities Exchange Act Release No. 87200 (October 2, 2019), 84 FR 53788 (October 8, 2019), SR-CboeEDGX-2019-012 ("EDGX Retail Priority Approval Order").

<sup>166</sup> Supra note 96. See also Securities Exchange Act Release No. 67347 (July 3, 2012), 77 FR 40673 (July 10, 2012) (SR-NYSE-2011-55; SR-NYSEAmex-2011-84) ("RLP Approval Order") at 40679.



While the Exchange is not proposing to prioritize Retail Orders as EDGX has done, it is proposing to prioritize Enhanced RPI Orders that provide price improvement and may only interact with contra-side Retail Orders. The Exchange's proposal to prohibit RPI Orders and Enhanced RPI Orders from executing with contra-side Type 2-designated Retail Orders when the RPI Order or Enhanced RPI Order is not priced better than the Protected NBB or Protected NBO similarly reflects an attempt to create additional price improvement opportunities for retail investors by making RPI Orders and Enhanced RPI Orders ineligible from executing when these orders are not providing price improvement to contra-side Type 2-designated Retail Orders. While the Exchange is forgoing an execution at a marketable price in situations where an RPI Order or Enhanced RPI Order is priced equal to the Protected NBB or Protected NBO and there is resting contra-side Type 2 Order interest available, the Exchange believes that limiting RPI Order and Enhanced RPI Order executions to situations where price improvement is offered properly reflects the main purpose of the RPI Order and Enhanced RPI Order – that is, to create additional price improvement opportunities for retail investors.

The Exchange believes that the prioritization of Enhanced RPI Orders that offer meaningful price improvement over other resting orders on the same side of the BYX Book promotes just and equitable principles of trade and is consistent with Section 6(b)(5) of the Act as it encourages Users to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges in exchange for queue priority ahead of all resting orders on the same side of the BYX Book so long as meaningful price improvement is provided to a contra-side Retail Order. The Exchange proposes to provide queue priority for Enhanced RPI Orders over all other types of orders and is not limiting queue priority to a certain

subset of order types. As previously stated, all Users are eligible to submit Enhanced RPI Orders. And while the Exchange believes that most Enhanced RPI Orders will be submitted by or on behalf of professional traders, retail investors will have the opportunity to receive better-priced executions should their executing broker choose to submit a marketable Retail Order to the Exchange. The Exchange believes the introduction of Enhanced RPI Orders will deepen the Exchange's pool of available liquidity, increase marketable retail order flow to the Exchange and provide additional competition for marketable retail order flow, most of which is currently executed off-exchange in the OTC markets. Promoting competition for retail order flow among execution venues stands to benefit retail investors, who may be eligible to receive greater price improvement on the Exchange by interacting with an Enhanced RPI Order than they would if their order was internalized by a broker-dealer on the OTC market.

Furthermore, the Exchange believes that its proposal to limit the use of the step-up range to determine order book priority is consistent with Section 6(b)(5) of the Act because the use of the step-up range rather than limit price to determine order priority is limited to the following: 1) the range is needed to gain priority over a resting order with higher order book priority; 2) in situations where i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price; and 3) to determine order book priority when multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders. The primary use case of the Enhanced RPI Order identified in the first scenario listed above is to provide price improvement to marketable

retail order flow. As previously discussed in the Statutory Basis section, the Exchange believes allowing the use of a step-up range in order to provide an additional, more aggressive price at which an Enhanced RPI Order may execute is essential in order to deepen the pool of liquidity available to retail investors. In exchange for providing orders with aggressive limit prices and/or step-up ranges, these liquidity providers will be rewarded with executions against marketable retail order flow, which is generally preferred over more informed order flow. Retail investors, on the other hand, will receive meaningful price improvement should their order execute against an Enhanced RPI Order.

In the situation where i) a contra-side Retail Order is entered at a less aggressive price than the Enhanced RPI Order's limit price and all other resting liquidity in the same security and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the limit price of the Retail Order, the Exchange believes using the step-up range to determine order priority promotes just and equitable principles of trade because it rewards the Enhanced RPI Order with the most aggressive step-up range rather than forego an execution due to the limit price of all orders resting on the BYX Book being ineligible to trade with the contra-side Retail Order. The intent of the Enhanced RPI Order is to reward those Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges with queue priority while simultaneously providing price improvement to Retail Orders. The Exchange believes that determining order priority using the step-up range in this limited situation is aligned with the intent of liquidity providers that choose to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges and also emphasizes a benefit of using the Enhanced RPI Order – the ability to enter an order at a less aggressive price but also provide a step-up range within which the liquidity provider

is willing to execute in order to execute against retail order flow rather than forego an execution and remain on the BYX Book. The Exchange seeks to encourage liquidity providers to submit order flow designed to interact with marketable retail order flow in an effort to increase the amount of Retail Order executions occurring on-exchange. By rewarding Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges in situations where the order would otherwise not execute, the Exchange believes its pool of liquidity available to marketable retail order flow will deepen, thus incentivizing RMOs to submit additional marketable retail order flow to the Exchange.

Likewise, using the step-up range rather than the limit price of an Enhanced RPI Order in situations where multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders promotes the use of the Enhanced RPI Order type as the Exchange seeks to encourage RMOs to submit marketable Retail Orders to the Exchange. Determining order priority of Enhanced Orders based on their step-up range over the limit price of all other higher priority orders rewards the Enhanced RPI Order that provides the most aggressive step-up range. The Exchange believes that using the step-up range rather than the limit price in situations where there are multiple Enhanced RPI Orders will encourage Users to submit Enhanced RPI Orders containing aggressive limit prices and/or step-up ranges to the Exchange, as they will be given priority to interact with more desirable marketable retail order flow based on their step-up range. Additionally, the Exchange believes that RMOs will be encouraged to direct marketable retail order flow to the Exchange knowing that the *worst* price they will receive is \$0.001 better than the Protected NBB or Protected NBO for securities priced at or above \$1.00<sup>167</sup> and there is

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<sup>167</sup> For securities priced below \$1.00, the minimum amount of price improvement as compared to the

potential to receive more meaningful price improvement should an Enhanced RPI Order be present on the opposite side of the BYX Book.<sup>168</sup>

An analysis of internal Exchange data found that the current Program provided approximately \$33 million in price improvement to retail investors during calendar year 2022, which is a substantial increase from the 4.5 million provided to retail investors between January 2016 and June 2018.<sup>169</sup> It is reasonable to believe that the proposed Enhanced RPI Order, by virtue of providing at least \$0.005 of price improvement in exchange for execution priority, would only add to the Exchange's ability to provide price improvement to retail investors. The Exchange does not believe that offering additional price improvement to retail investors through Enhanced RPI Orders would cause harm to the broader market. On the contrary, the Exchange believes that rewarding Enhanced RPI Orders with order book priority in exchange for price improvement would further the Commission's goal of providing additional opportunities for retail investors to interact directly with a large volume of individual investor orders. The Exchange created the Enhanced RPI Order with the goal of encouraging liquidity providers to submit orders eligible to interact with marketable retail order flow with the competition from these liquidity providers resulting in a reasonable alternative for marketable retail order flow to receive executions at a price better than the Protected NBBO. As the Commission noted in

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Protected NBB or Protected NBO is \$0.0001.

<sup>168</sup> Retail Orders may only receive \$0.001 price improvement in certain situations, including where an Enhanced RPI Order steps up against the limit price of an RPI Order priced in sub-pennies. An Enhanced RPI Order would be given order book priority over RPI Orders in the event that the Enhanced RPI Order was priced equal to or less aggressive than the limit price of a resting RPI Order but had a step-up range that was priced more aggressive than the limit price of the resting RPI Order (supra note 108).

<sup>169</sup> See RPI Approval Order at 53184.

its Order Competition Rule proposal, over 90% of marketable NMS retail stock orders are routed to wholesalers where the orders are not exposed to order-by-order competition.<sup>170</sup> While wholesalers generally achieve price improvement relative to the NBBO, the Commission has indicated that exchanges often have liquidity available at the NBBO midpoint, which would be a more favorable price than a retail order receives when executed by a wholesaler.<sup>171</sup> Here, the Exchange is proposing price improvement of at least \$0.005, and in some cases \$0.01, which the Exchange believes would further the Commission's goal of "increasing competition and enhancing the direct exposure of individual investor orders to a broader spectrum of market participants" as set forth in section 11A of the Exchange Act.<sup>172</sup>

In addition to the proposed introduction of the Enhanced RPI Order, the Exchange also believes that expanding the Program to include securities priced below \$1.00 is consistent with Section 6(b)(5) of the Act because it promotes just and equitable principles of trade by allowing liquidity providers to submit orders designed to interact with retail order flow in all securities, rather than only in securities priced at or above \$1.00. As stated above, a significant majority of the increased volume in sub-dollar securities comes from executions occurring off-exchange.<sup>173</sup> By permitting the Exchange to expand its Program to include securities priced below \$1.00, the Exchange would be a more attractive venue for liquidity providers seeking to interact with retail order flow, which furthers the Commission's goal of bringing retail order executions back on-exchange. Further, the

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<sup>170</sup> Supra note 105 at 178.

<sup>171</sup> Id.

<sup>172</sup> Id.

<sup>173</sup> Supra note 146.

proposal to expand the Program to include securities priced below \$1.00 is not unfairly discriminatory because all Users will be able to submit RPI Orders or Enhanced RPI Orders at prices below \$1.00. As noted above, the Exchange, along with its affiliates, maintained a market share of 13.3% in sub-dollar securities during the first quarter of 2023.<sup>174</sup> The Exchange believes that its expansion of the Program to include sub-dollar securities would lead to more liquidity providers submitting order flow to the Exchange in an attempt to execute against Retail Orders. In turn, RMOs would submit additional Retail Order flow to the Exchange to interact with RPI Orders and Enhanced RPI Orders as there would be additional opportunities for price improvement in sub-dollar securities. The proposal removes impediments to and perfect the mechanism of a free and open market and a national market system and protects investors and the public interest by allowing executions in Retail Orders priced below \$1.00 to receive price improvement by executing against RPI Orders or Enhanced RPI Orders, which are currently only available at prices at or above \$1.00. In addition to the changes described above, the Exchange believes that the changes to certain existing rule text within Rule 11.24 is consistent with Section 6(b)(5) of the Act because it provides additional certainty as to how Rule 11.24 is to be applied. The proposed revised definition of RPI Interest in Rule 11.24(a)(5) is necessary in order to capture the proposed Enhanced RPI Order type, in addition to the existing RPI Order. Additionally, amending Rule 11.24(e) and Rule 11.24(f)(1) – (2) to reflect the changes made in Rule 11.24(a)(5) is necessary in order to ensure that RPI Interest is properly defined throughout Rule 11.24. The deletion of Rule 11.24(h) and renumbering of Rule 11.24(i) are consistent with the Exchange’s proposal to expand the Program to securities

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Id.

priced below \$1.00. The proposed changes to Rule 11.24(a)(2) are intended to: i) clarify that a Retail Order must be submitted with a time-in-force of IOC; and ii) introduce the ability for Users to submit Retail Orders as Mid-Point Peg Orders, both of which changes serve to provide additional guidance to Users of Retail Orders about the order modifiers permitted by the Exchange. The Exchange believes these changes are ministerial in nature and serve to ensure that Rule 11.24 is properly describing order behavior after the proposed introduction of the Enhanced RPI Order and proposed expansion of the Program to securities priced below \$1.00.

**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 proposal does not impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. Rather, the proposed rule change is designed to increase intramarket competition for retail order flow by introducing a new order type that is designed to provide price improvement to Retail Orders in exchange for price priority over resting orders on the same side of the BYX Book. The proposal, which seeks to provide an innovative form of price improvement to Retail Orders through the creation of the Enhanced RPI Order, represents an effort by the Exchange to encourage on-exchange liquidity and incentivize the trading of Retail Orders on a national securities exchange.

The Exchange also believes the proposed rule change does not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the Act. As discussed above, IEX, NYSE, NYSE National, and Nasdaq BX each operate RLPs and the Exchange believes that its proposed rule change will allow it to compete for additional



retail order flow with the aforementioned exchanges.<sup>175</sup> Furthermore, the Exchange's proposal will promote competition between the Exchange and off-exchange trading venues where the majority of retail order flow trades today. The proposed Enhanced RPI Order is designed to foster innovation within the market and increase the quality of the national market system by allowing national securities exchanges to compete both with each other and with off-exchange venues for order flow. Expanding the program to include securities priced below \$1.00 similarly would not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the Act. The Exchange's proposal is designed to increase competition for trading in all securities, including but not limited to securities priced below \$1.00. Given the growth of trading in sub-dollar securities since 2020, the Exchange believes that expanding the Program to include sub-dollar securities will make the Program an attractive option for retail investors seeking to trade in lower-priced securities, and as such is a competitive measure designed to compete directly with other exchanges for order flow.

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:

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<sup>175</sup> Supra note 163.

- 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 (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include file number SR-CboeBYX-2023-020 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-2023-020. 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-CboeBYX-2023-020 and should be submitted on or before [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>176</sup>

**Sherry R. Haywood,**

*Assistant Secretary.*

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<sup>176</sup> 17 CFR 200.30-3(a)(12).

## EXHIBIT 5

(additions are underlined; deletions are [bracketed])

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## Rules of Cboe BYX Exchange, Inc.

\* \* \* \* \*

## Rule 11.24. Retail Price Improvement Program

(a) *Definitions.*

(1) No change.

(2) Retail Order. A “Retail Order” is an agency or riskless principal order that meets the criteria of FINRA Rule 5320.03 that originates from a natural person and is submitted to the Exchange by a Retail Member organization, provided that no change is made to the terms of the order with respect to price or side of market and the order does not originate from a trading algorithm or any other computerized methodology. A Retail Order [is] must have a time-in-force of [an] Immediate or Cancel (“IOC”) [Order ] and shall operate in accordance with paragraph (f) below. A Retail Order may be entered as a Mid-Point Peg Order. A Retail Order may be an odd lot, round lot, or mixed lot.

(3) Retail Price Improvement Order. A “Retail Price Improvement Order” or “RPI Order” consists of non-displayed interest on the Exchange that is [priced] eligible to execute at prices better than the Protected NBB or Protected NBO by at least \$0.001 in securities priced at or above \$1.00 and by at least \$0.0001 in securities priced below \$1.00 and that is identified as such. The System will monitor whether RPI buy or sell interest, adjusted by any offset and subject to the ceiling or floor price, is eligible to interact with incoming Retail Orders. An RPI Order remains non-displayed in its entirety (the buy or sell interest, the offset, and the ceiling or floor). An RPI Order may also be entered in a sub-penny increment with an explicit limit price. Any User is permitted, but not required, to submit RPI Orders. An RPI Order may be an odd lot, round lot or mixed lot. An RPI Order is ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO.

(4) Enhanced Retail Price Improvement Order. An “Enhanced Retail Price Improvement Order” or “Enhanced RPI Order” consists of non-displayed interest on the Exchange that is eligible to execute against contra-side Retail Orders. An Enhanced RPI Order will be ranked at its limit price and must also include a step-up range, which is the maximum price (for buy orders) or minimum price (for sell orders) at which the Enhanced RPI Order is willing to execute. An Enhanced RPI Order may execute at: i) its limit price, so long as the limit price is priced better than the Protected NBB or Protected NBO; ii) for securities priced at or above \$1.00, at a price within the step-up range that is able to improve upon the price of a same-side resting order on the BYX Book by stepping up to the

next half cent or full cent, and for securities priced below \$1.00 by stepping up to the next minimum price increment; or iii) at a price within the step-up range when the limit price of a contra-side Retail Order is within the step-up range. An Enhanced RPI Order may be a Primary Pegged order or a limit order. An Enhanced RPI Order that is also a Primary Pegged order will have ranked price determined in accordance with Rule 11.9(c)(8) and the step-up range will be applied to the resulting ranked price. The System will monitor whether Enhanced RPI interest, including the step-up range, and adjusted by any offset and subject to the ceiling or floor price, is eligible to interact with incoming Retail Orders. An Enhanced RPI Order (the buy or sell interest, the step-up range, the offset, and the ceiling or floor) remains non-displayed in its entirety. Any User is permitted, but not required, to submit Enhanced RPI Orders. An Enhanced RPI Order may be an odd lot, round lot or mixed lot. An Enhanced RPI Order shall have priority as described in Rule 11.24(g)(2). An Enhanced RPI Order is ineligible to execute at prices equal to or inferior to the Protected NBB or Protected NBO.

(5) RPI Interest. RPI Interest means an order submitted to the Exchange that is designated as either an RPI Order or an Enhanced RPI Order.

(b) – (d) No change.

(e) *Retail Liquidity Identifier.* An identifier shall be disseminated through proprietary data feeds or as appropriate through the Consolidated Quotation System when RPI [i]Interest priced at least \$0.001 better than the Protected NBB or Protected NBO for a particular security is available in the System (“Retail Liquidity Identifier”) and is priced at or above \$1.00. The Retail Liquidity Identifier shall reflect the symbol for the particular security and the side (buy or sell) of the RPI [i]Interest, but shall not include the price or size of the RPI [i]Interest. For securities priced below \$1.00, the Retail Liquidity Identifier shall be disseminated in the same manner as above when RPI Interest priced at least \$0.0001 better than the Protected NBB or Protected NBO for a particular security is available in the System.

(f) *Retail Order Designation.* A Retail Member Organization can designate how a Retail Order will interact with available contra-side interest as follows:

(1) Type 1. A Type 1-designated Retail Order will interact with available contra-side RPI [Orders]Interest and other price improving contra-side interest but will not interact with other available contra-side interest in the System that is not offering price improvement or route to other markets. The portion of a Type 1-designated Retail Order that does not execute against contra-side RPI [Orders]Interest or other price improving liquidity will be immediately and automatically cancelled.

(2) Type 2. A Type 2-designated Retail Order will interact first with available contra-side RPI [Orders]Interest and other price improving liquidity and then any remaining portion of the Retail Order will be executed as an IOC Order pursuant to Rule 11.9(b)(1). Any remaining portion of a Type 2-designated Retail Order will be ineligible to execute with resting RPI Interest that is not priced better than the Protected NBB or Protected NBO.

A Type 2-designated Retail Order can either be submitted as a BYX Only Order or as an order eligible for routing pursuant to Rule 11.13(a)(2)

(g) *Priority and Order Allocation.*

(1) RPI Order Priority. RPI Orders in the same security shall be ranked and allocated according to price then time of entry into the System[s]. Executions shall occur in price/time priority in accordance with Rule 11.12. Any remaining unexecuted RPI Order interest will remain available to interact with other incoming Retail Orders. RPI Orders are ineligible to execute at prices that are equal to or inferior to the Protected NBB or Protected NBO. RPI Order interest that is priced equal to or inferior to the Protected NBB or Protected NBO will not be cancelled and will become eligible to execute against Retail Orders should the RPI Order interest become priced better than the Protected NBB or Protected NBO at a later time. Any remaining unexecuted portion of the Retail Order will cancel or execute in accordance with paragraph (f) above.

Examples of priority and order allocation for RPI Orders are as follows:

Protected NBBO for security ABC is \$10.00 – \$10.05

User 1 enters an RPI Order to buy ABC at \$10.015 for 500

User 2 then enters an RPI Order to buy ABC at \$10.02 for 500

User 3 then enters an RPI Order to buy ABC at \$10.035 for 500

An incoming Retail Order to sell ABC for 1,000 executes first against User 3's bid for 500 at \$10.035, because it is the best priced bid, then against User 2's bid for 500 at \$10.02, because it is the next best priced bid. User 1 is not filled because the entire size of the Retail Order to sell 1,000 is depleted. The Retail Order executes against RPI Orders in price/time priority.

However, assume the same facts above, except that User 2's RPI Order to buy ABC at \$10.020 is for 100. The incoming Retail Order to sell 1,000 executes first against User 3's bid for 500 at \$10.035, because it is the best priced bid, then against User 2's bid for 100 at \$10.02, because it is the next best priced bid. User 1 then receives an execution for 400 of its bid for 500 at \$10.015, at which point the entire size of the Retail Order to sell 1,000 is depleted.

As a final example, assume the same facts as above, except that User 3's order was not an RPI Order to buy ABC at \$10.035, but rather, a Non-Displayed Order to buy ABC at \$10.03. The result would be similar to the result immediately above, in that the incoming Retail Order to sell 1,000 executes first against User 3's bid for 500 at \$10.03, because it is the best priced bid, then against User 2's bid for 100 at \$10.02, because it is the next priced bid. User 1 then receives an execution for 400 of its bid for 500 at \$10.015, at which point the entire size of the Retail Order to sell 1,000 is depleted.

(2) Enhanced RPI Order Priority. Enhanced RPI Orders in the same security shall be ranked and allocated according to their limit price then time of entry into the

System. Enhanced RPI Orders priced at or above \$1.00 shall be granted price priority over resting orders in the same security on the BYX Book in the event that the step-up range of the Enhanced RPI Order is able to provide a greater amount of price improvement to an incoming contra-side Retail Order by stepping up to the next half cent or full cent. An Enhanced RPI Order may only need to step-up one-half cent in situations where: i) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at the NBBO midpoint, and the Enhanced RPI Order is stepping up to the next full cent; or ii) the NBBO midpoint is priced in a half-cent increment, the best-priced resting order on the BYX Book is ranked at a full cent directly above (below) the NBBO midpoint, and the Enhanced RPI Order is stepping up to the NBBO midpoint. Enhanced RPI Orders priced below \$1.00 shall be granted price priority over resting orders in the same security on the BYX Book in the event that the step-up range of the Enhanced RPI Order is able to provide a greater amount of price improvement to an incoming contra-side Retail Order by stepping up to the next minimum price increment. The step-up range of an Enhanced RPI Order will be utilized to determine price priority when:

(A) the range is needed to gain priority over a resting order with higher order book priority that is not an Enhanced RPI Order;

(B) in situations where i) a contra-side Retail Order is entered at a less aggressive price than the ranked price of the Enhanced RPI Order and all other resting liquidity and ii) the Enhanced RPI Order's step-up range is equal to or more aggressively priced than the Retail Order's limit price; and

(C) to determine order book priority when multiple Enhanced RPI Orders are resting on the BYX Book and are eligible to trade ahead of higher priority orders resting on the BYX Book that are not Enhanced RPI Orders.

(i) In the event that multiple Enhanced RPI Orders are eligible to trade ahead of higher priority orders resting on the BYX Book, priority will be given to the Enhanced RPI Order containing the step-up range that could result in the highest (in the event of a buy order) or lowest (in the event of a sell order) maximum possible price, even if the resulting execution does not occur at the highest (lowest) maximum execution price. If multiple Enhanced RPI Orders could have the same highest (lowest) maximum execution price, then priority will be determined by the time the order was received by the System. In the event that there are multiple Enhanced RPI Orders resting on the BYX Book, no other same side liquidity with higher priority, and an incoming contra-side Retail Order is priced equal to or more aggressively than the resting Enhanced RPI Orders, execution priority will be determined by the higher ranked price and not the step-up ranges of the Enhanced RPI Orders.

Any remaining unexecuted Enhanced RPI Order interest will remain available to interact with other incoming Retail Orders. Enhanced RPI Orders are ineligible to execute at prices that are equal to or inferior to the Protected NBB or Protected NBO. Enhanced RPI Order interest that is priced equal to or inferior to the Protected NBB or Protected NBO will

not be cancelled and will become eligible to execute against Retail Orders should the Enhanced RPI Order interest become priced better than the Protected NBB or Protected NBO at a later time. Any remaining unexecuted portion of the Retail Order will cancel or execute in accordance with paragraph (f) above.

Examples of priority and order allocation for Enhanced RPI Orders are as follows:

***Example 1***

Protected NBBO for security ABC is \$10.00 x \$10.05.

User 1 enters a non-displayed order to buy ABC at \$10.02 for 100. User 1's order is ranked at \$10.02.

User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User's step-up range is \$0.02. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.03.

User 3 enters a Retail Order to sell ABC at \$10.00 for 100.

User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.025. While User 1's order is ranked at a higher price (\$10.02) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.02 on its order and is willing to step up to a maximum price of \$10.03 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though User 2's order may execute up to a price of \$10.03, it only needs to provide one-half cent price improvement over User 1's ranked price of \$10.02 in order to provide meaningful price improvement at the midpoint.

***Example 2***

Protected NBBO for security ABC is \$10.00 – \$10.10.

User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.

User 2 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 2's step-up range is \$0.04. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.

User 3 enters a Retail Order to sell ABC at \$10.00 for 100.

User 3's Retail Order for 100 will execute against User 2's Enhanced RPI Order at \$10.04. While User 1's order is ranked at a higher price (\$10.03) than User 2's order (\$10.01), User 2 has included a step-up range of \$0.04 on its order and is willing to a maximum price of \$10.05 in order to provide additional price improvement as compared to other orders resting on the BYX Book. Even though User 2's order may execute up to a price of \$10.05, it only needs to provide one penny of price



improvement to User 1's ranked price of \$10.03 in order to provide meaningful price improvement.

### **Example 3**

Protected NBBO for security ABC is \$10.00 – \$10.05.

User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.

User 2 enters a non-displayed order to buy ABC at \$10.02 for 100. User 2's order is ranked at \$10.02.

User 3 enters a Retail Order to sell ABC at \$10.03 for 100.

User 3's order will execute with User 1's Enhanced RPI Order at \$10.03 because i) User 3's Retail Order was entered at a less aggressive price than the ranked price of both User 1 and User 2's orders; and ii) the maximum price provided by the step-up range of User 1's Enhanced RPI Order is more aggressively priced (\$10.05) than the limit price of User 3's Retail Order (\$10.03). Even though User 2's ranked price is higher than User 1's ranked price, User 2's order is not marketable against User 3's Retail Order. User 3's Retail Order would otherwise be unable to execute if the Exchange did not look to the step-up range to permit an execution between User 1 and User 3.

### **Example 4**

Protected NBBO for security ABC is \$10.00 – \$10.05.

User 1 enters an Enhanced RPI Order to buy ABC at \$10.01 for 100. User 1's step-up range is \$0.04. User 1's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.05.

User 2 enters an Enhanced RPI Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.02. User 2's order is ranked at \$10.02 and is willing to step up to a maximum price of \$10.04.

User 3 enters a non-displayed order to buy ABC at \$10.03 for 100. User 3's order is ranked at \$10.03.

User 4 enters a Retail Order to sell ABC at \$10.03 for 100.

User 4's Retail Order will execute with User 1's Enhanced RPI Order at \$10.04 because the Exchange looks to the step-up range to determine order book priority when there are multiple Enhanced RPI Orders resting on the BYX Book that can improve upon the price of higher priority orders in the same security also resting on the BYX Book. While both User 1 and User 2 can execute at a price of \$10.04, User

1's Enhanced RPI Order can result in a higher maximum possible execution price (step up range of \$0.04; maximum price of \$10.05) as compared to User 2's Enhanced RPI Order (step up range of \$0.02; maximum price of \$10.04). As such, User 1's Enhanced RPI Order is given priority ahead of User 2's Enhanced RPI Order to execute against User 4's Retail Order.

*Example 5*

Protected NBBO for security ABC is \$10.00 x \$10.05.

User 1 enters a non-displayed order to buy ABC at \$10.03 for 100.

User 2 enters an Enhanced RPI Order that is also a Primary Pegged Order to buy ABC at \$10.02 for 100. User 2's step-up range is \$0.03. User 2's order includes an offset of \$0.01. User 2's order is ranked at \$10.01 and is willing to step up to a maximum price of \$10.04.

The Protected NBBO for security ABC changes to \$10.01 x \$10.05.

User 2's Enhanced RPI Order that is also a Primary Pegged Order is now ranked at \$10.02 and is willing to step up to a maximum price of \$10.05.

User 3 enters a Retail Order to sell ABC at \$10.01 for 100.

User 3's Retail Order will execute with User 2's Enhanced RPI Order at a price of \$10.04 because User 2's Enhanced RPI Order includes a step-up range of \$0.03 and is willing to execute up to a maximum price of \$10.05 (based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered) in order to provide additional price improvement as compared to other orders resting on the BYX Book. While User 1's order has a higher limit price (\$10.03) than User 2's Enhanced RPI Order (\$10.02, based on the Protected NBBO and the offset of \$0.01 at the time User 3's order is entered), User 2's Enhanced RPI Order is given queue priority due to its ability to provide \$0.01 of price improvement over User 1's order.

[(h) The Program will be limited to trades occurring at prices equal to or greater than \$1.00 per share. The Exchange will periodically notify the membership regarding the securities included in the Program through an information circular.]

[(i)h] No change.

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