

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-86879; File No. SR-CBOE-2019-034)

September 5, 2019

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing of Amendment Nos. 1, 2, and 3 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment Nos. 1, 2, and 3, to Amend the Exchange's Opening Process, Including on VIX Settlement Days

I. Introduction

On July 2, 2019, Cboe Exchange, Inc. (the "Exchange" or "Cboe Options") filed with the Securities and Exchange Commission ("Commission"), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act")<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> a proposed rule change to amend the Exchange's opening auction process for options as well as the modified opening auction process used to calculate the exercise or final settlement value of expiring volatility index derivatives. The proposed rule change was published for comment in the Federal Register on July 22, 2019.<sup>3</sup> On August 15, 2019, the Exchange filed Amendment No. 1 to the proposed rule change.<sup>4</sup> The Exchange filed Amendment Nos. 2 and 3 to the proposal on August 20, 2019,

---

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

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

<sup>3</sup> See Securities Exchange Act Release No. 86387 (July 22, 2019), 84 FR 35147 ("Notice").

<sup>4</sup> In Amendment No. 1, the Exchange: revised the proposal to make clear that a series is ineligible to open if the Composite Market of the series is crossed; modified the application of the Maximum Composite Width Check for constituent series on exercise settlement value determination days to provide additional price protection to the opening prices of constituent option series; provided additional detail regarding the proposed settlement strip; clarified the timing and frequency for the Exchange's dissemination of opening auction updates, including for constituent option series on exercise settlement value determination days; correct a typographical error in proposed Exchange Rule 5.31(c); indicated that the Exchange maintains and reviews records of any determinations made pursuant to proposed Exchange Rule 5.31(j)(2) with respect to the modified opening process in accordance with proposed Exchange Rule 5.31; clarified that All Sessions orders will rest on the GTH Queuing Book starting at 2:00 a.m., rather than 7:30

and August 28, 2019, respectively.<sup>5</sup> The Commission has received no comments regarding the proposal. The Commission is publishing this notice to solicit comment on Amendment Nos. 1, 2, and 3 and is approving the proposed rule change, as modified by Amendment Nos. 1, 2, and 3, on an accelerated basis.

## II. Description of the Proposed Rule Change

As described more fully in the Notice,<sup>6</sup> the Exchange proposes to amend (1) the opening auction process used to open options on the Exchange; and (2) the modified opening auction process used to calculate the exercise or final settlement value of expiring Cboe Volatility Index (“VIX”) derivatives.<sup>7</sup> The Exchange states that the proposed opening auction process, other than

---

a.m., to participate in the GTH opening auction process; indicated that the term “primary market” means the primary exchange on which an underlying security is listed, and that the term “equity option” includes options on exchange-traded products; and indicated that the VIX methodology is available on the Exchange’s website. Amendment No. 1 replaced and superseded the original filing in its entirety. When it filed Amendment No. 1 with the Commission, the Exchange simultaneously submitted it as a comment letter on the proposal and the Commission publicly posted it here:

<https://www.sec.gov/comments/sr-cboe-2019-034/srcboe2019034-5977238-190214.pdf>.

<sup>5</sup> In Amendment No. 2, the Exchange revised the definition of Maximum Composite Width in proposed Exchange Rules 5.31(a) and 5.31(j)(1) to replace references to “Market Composite Widths” with references to “Maximum Composite Widths.” When it filed Amendment No. 2 with the Commission, the Exchange simultaneously submitted it as a comment letter on the proposal and the Commission publicly posted it here:

<https://www.sec.gov/comments/sr-cboe-2019-034/srcboe2019034-5994750-190368.pdf>.

In Amendment No. 3, the Exchange deleted two sentences that were erroneously retained in proposed Exchange Rule 5.31(j)(5) following modifications to that paragraph by Amendment No. 1. The deletion of the sentences makes clear that on exercise settlement value determination days, the System performs the Maximum Composite Width check and determines the opening trade price pursuant to proposed Exchange Rule 5.31(j)(5) in lieu of propose Exchange Rules 5.31(e)(1) and (2). When it filed Amendment No. 3 with the Commission, the Exchange simultaneously submitted it as a comment letter on the proposal and the Commission publicly posted it here: <https://www.sec.gov/comments/sr-cboe-2019-034/srcboe2019034-6034336-191248.pdf>.

<sup>6</sup> See note 3, *supra*.

<sup>7</sup> See proposed Exchange Rule 5.31(j) (defining “VIX derivatives”). The Exchange notes that options expire on an expiration date and settle to an exercise settlement value, and

the modified opening auction process for expiring VIX derivatives, is “virtually identical” to the opening auction process used on two of the Exchange’s affiliated exchanges.<sup>8</sup> The Exchange states that the proposed modified opening auction process for expiring VIX derivatives “will function in substantially similar manner as the current modified opening auction process” for expiring VIX derivatives.<sup>9</sup>

A. Standard Opening Auction Process

Under the proposed opening auction process, the Queuing Period<sup>10</sup> will begin at 2:00 a.m. for All Sessions Classes<sup>11</sup> and at 7:30 a.m. for Regular Trading Hours (“Regular Trading Hours” or “RTH”) classes.<sup>12</sup> During the Queuing Period, the System will accept orders and quotes

---

futures settle on a final settlement date to a final settlement value. See Notice, supra note 3, 84 FR at 35152, n. 51.

<sup>8</sup> Id. at 35164 (citing C2 Rule 6.11 and EDGX Options Rule 21.7).

<sup>9</sup> Id. at 35163. See also Exchange Rule 6.2, Interpretation and Policy .01.

<sup>10</sup> The Queuing Period is the time period prior to the initiation of an opening rotation during which the System accepts orders and quotes in the Queuing Book for participation in the opening rotation for the applicable trading session. The Queuing Book is the book into which Users may submit orders and quotes (and onto which Good-til-Cancelled and Good-til-Date orders remaining on the Book from the previous trading session or trading day, as applicable, are entered) during the Queuing Period for participation in the applicable opening rotation. Orders and quotes on the Queuing Book may not execute until the applicable opening rotation commences. The Queuing Book for the Global Trading Hours (“Global Trading Hours” or “GTH”) opening auction process is distinguished from the Queuing Book for the RTH opening auction process. See proposed Exchange Rule 5.31(a).

<sup>11</sup> An All Sessions Class is an options class that the Exchange lists for trading during both Global Trading Hours and Regular Trading Hours. See Exchange Rule 1.1. At the time of this order, Cboe only trades certain SPX and VIX options during GTH. See <http://www.cboe.com/micro/eth/pdf/global-trading-hours.pdf>. Regular Trading Hours and Global Trading Hours are set forth in Exchange Rule 5.1.

<sup>12</sup> See proposed Exchange Rule 5.31(b)(1). At 2:00 a.m., All Sessions Orders will rest on the GTH Queuing Book and will be eligible to participate in the GTH opening auction process. In addition, Users may enter orders into the RTH Queuing Book beginning at 2:00 a.m., and these orders will rest on the RTH Queuing Book and be eligible to participate in the RTH opening auction process once it begins. See Amendment No. 1.

pursuant to Exchange Rule 5.30, and they will be eligible for execution during the opening rotation, with certain limitations.<sup>13</sup> Orders and quotes on the Queuing Book will not be eligible for execution until the opening rotation, as provided in proposed Exchange Rule 5.31(e).<sup>14</sup> Beginning at 2:00 a.m. for the GTH trading session and at 8:30 a.m. for the RTH trading session, and until the conclusion of the opening rotation for a series, the Exchange will disseminate opening auction updates for the series.<sup>15</sup> The Exchange will disseminate opening auction updates every five seconds, unless there are no updates to the opening information since the previously disseminated update, in which case the Exchange will disseminate updates every minute.<sup>16</sup> The Exchange believes that these messages will provide market participants with information that may contribute to enhanced liquidity and price discovery during the opening auction process.<sup>17</sup>

---

<sup>13</sup> See proposed Exchange Rule 5.31(b)(2). The following limitations apply to orders and quotes entered during the Queuing Period: (1) the System rejects Immediate-or-Cancel and Fill-or-Kill orders during the Queuing Period; (2) the System accepts orders and quotes with Match Trade Prevention (“MTP”) Modifiers during the Queuing Period, but does not enforce them during the opening rotation; (3) the System accepts all-or-none, stop, and stop-limit orders during the Queuing Period, but they do not participate in the opening rotation. The System enters any of these orders it receives during the Queuing Period into the Book following completion of the opening rotation (in time priority); (4) the System converts all intermarket sweep orders (“ISOs”) received prior to the completion of the opening rotation into non-ISOs; and (5) complex orders do not participate in the opening auction process described in proposed Exchange Rule 5.31 and instead may participate in the Complex Order Book Opening Process pursuant to Exchange Rule 5.33(c). See *id.* The “System” refers to the Exchange’s hybrid trading platform that integrates electronic and open outcry trading of option contracts on the Exchange, and includes any connectivity to the foregoing trading platform that is administered by or on behalf of the Exchange, such as a communications hub. See Exchange Rule 1.1.

<sup>14</sup> See proposed Exchange Rule 5.31(b)(2).

<sup>15</sup> See proposed Exchange Rule 5.31(c) and Amendment No. 1.

<sup>16</sup> See *id.*

<sup>17</sup> See Notice, *supra* note 3, 84 FR at 35149.

For Regular Trading Hours, the System will initiate the opening rotation for the series in a class after 9:30 a.m. following the first disseminated (A) transaction on the primary market in the security underlying an equity option; or (B) index value for the index underlying an index option.<sup>18</sup> For Global Trading Hours, the System will initiate the opening rotation at 3:00 a.m.<sup>19</sup> The Exchange will disseminate a message to market participants indicating the initiation of the opening rotation.<sup>20</sup>

As part of the opening rotation, the System will conduct a Maximum Composite Width check for a series.<sup>21</sup> If the Composite Market of a series is not crossed, and the Composite Width of the series is less than or equal to the Maximum Composite Width, the series is eligible to open and the System will determine the Opening Trade Price pursuant to proposed Exchange Rule 5.31(e)(2).<sup>22</sup> If the Composite Market of a series is not crossed, and the Composite Width of the series is greater than the Maximum Composite Width, but there are (i) no non-M Capacity<sup>23</sup> (a) market orders or (b) buy (sell) limit orders with prices higher (lower) than the Composite Bid

---

<sup>18</sup> The primary market is the primary exchange on which an underlying security is listed. The Exchange notes that equity options include options on exchange-traded products. See Exchange Rule 1.1, proposed Exchange Rule 5.31(d)(1), and Amendment No. 1.

<sup>19</sup> See proposed Exchange Rule 5.31(d)(2).

<sup>20</sup> See proposed Exchange Rule 5.31(d)(1).

<sup>21</sup> See proposed Exchange Rule 5.31(e)(1). The Maximum Composite Width, as set forth in proposed Exchange Rule 5.31(a)(1), is the amount that the Composite Width of a series may generally not be greater than before the Exchange will open the series (subject to certain exceptions set forth in proposed Exchange Rule 5.31(e)(1)). The Composite Width is the width of the Composite Market (i.e., the width between the Composite Bid and the Composite Offer) of a series. The Composite Market is the market for a series comprised of (1) the higher of the then-current best appointed Market-Maker bid on the Exchange and the Away Best Bid (“ABB”) (if there is an ABB) and (2) the lower of the then-current best appointed Market-Maker offer on the Exchange and the Away Best Offer (“ABO”) (if there is an ABO). See proposed Cboe Rule 5.31(a).

<sup>22</sup> See proposed Exchange Rule 5.31(e)(1)(A).

<sup>23</sup> An M Capacity order is an order for the account of a Market Maker. See Cboe Rule 1.1.

(Offer) and (ii) no orders or quotes marketable against each other, the series is eligible to open, and the System will determine the Opening Trade Price pursuant to proposed Exchange Rule 5.31(e)(2).<sup>24</sup> If the conditions in neither proposed Exchange Rule 5.31(e)(1)(A) or (B) are satisfied for a series, or if the Composite Market of a series is crossed, the series will be ineligible to open and the Queuing Period for the series will continue (including the dissemination of opening auction updates) until one of the conditions in proposed Exchange Rule 5.31(e)(1)(A) or (B) for the series is satisfied, or the Exchange opens the series pursuant to proposed Exchange Rule 5.31(h).<sup>25</sup>

After a series satisfies the Maximum Composite Width Check, if there are orders and quotes marketable against each other at a price not outside the Opening Collar, the System will determine the Opening Trade Price for the series.<sup>26</sup> If there are no such orders or quotes, there is no Opening Trade Price.<sup>27</sup> The Opening Trade Price is the volume-maximizing, imbalance minimizing price (“VMIM price”) that is not outside the Opening Collar.<sup>28</sup> The Exchange states

---

<sup>24</sup> See proposed Exchange Rule 5.31(e)(1)(B).

<sup>25</sup> See proposed Exchange Rule 5.31(e)(1)(C) and Amendment No. 1. See Notice, *supra* note 3, 84 FR at 53510, for examples of the application of the Maximum Composite Width Check.

<sup>26</sup> See proposed Exchange Rule 5.31(e)(2). The Opening Collar is the price range that establishes limits at or inside of which the System will determine the Opening Trade Price for a series. The Exchange sets the Opening Collar by determining the midpoint of the Composite Market and adding and subtracting half of the applicable width amount above and below, respectively, that midpoint. The Opening Collar widths for all classes are set forth in proposed Exchange Rule 5.31(a)(1) and are based on the Composite Bid for a series. See proposed Exchange Rule 5.31(a)(1).

<sup>27</sup> See proposed Exchange Rule 5.31(e)(2).

<sup>28</sup> The VMIM price is: (1) the price at which the largest number of contracts can execute (*i.e.*, the volume-maximizing price); (2) if there are multiple volume-maximizing prices, the price at which the fewest number of contracts remain unexecuted (*i.e.*, the imbalance-minimizing price); or (3) if there are multiple volume-maximizing, imbalance-minimizing prices, (i) the highest (lowest) price, if there is a buy (sell) imbalance, or (ii)

that the Maximum Composite Width Check and Opening Collar are intended to facilitate the opening of a series in a fair and orderly manner and at prices consistent with the current market conditions at the Exchange and other exchanges.<sup>29</sup>

If the System establishes an Opening Trade Price, the System will execute orders and quotes in the Queuing Book at the Opening Trade Price, prioritizing orders and quotes in the following order: market orders, limit orders, and quotes with prices better than the Opening Trade Price, and orders and quotes at the Opening Trade Price.<sup>30</sup> The System will allocate orders and quotes at the same price on a pro-rata basis pursuant to Exchange Rule 5.32., and will apply a Priority Customer overlay to all classes, except for SPX (including SPXW) and VIX (excluding VIXW).<sup>31</sup> If there is no Opening Trade Price, the System will open a series without a trade.<sup>32</sup> Following the conclusion of the opening rotation, the System will enter any unexecuted orders and quotes, or remaining portions, from the Queuing Book into the Book in time sequence, subject to a User's instructions, where they will be processed in accordance with Exchange Rule 5.32.<sup>33</sup> The System will cancel any unexecuted OPG orders, or remaining portions thereof, following the conclusion of the opening rotation.<sup>34</sup>

---

the price at or nearest to the midpoint of the Opening Collar, if there is no imbalance.  
See id.

<sup>29</sup> See Notice, supra note 3, 84 FR at 35150.

<sup>30</sup> See proposed Exchange Rule 5.31(e)(3)(A).

<sup>31</sup> See proposed Exchange Rule 5.31(e)(3)(A)(ii).

<sup>32</sup> See proposed Exchange Rule 5.31(e)(3)(B).

<sup>33</sup> See proposed Exchange Rule 5.31(f). The Book is the electronic book of simple orders and quotes maintained by the System, which single book is used during both the RTH and GTH trading sessions. See Exchange Rule 1.1.

<sup>34</sup> See proposed Exchange Rule 5.31(f). An OPG order is an order that may only participate in the Opening Process on the Exchange.

Following a trading halt in a class, the Exchange will open series using the same auction process described in proposed Exchange Rule 5.31, except that: (1) the Queuing Period will begin immediately when the Exchange halts trading in the class; (2) the system will queue orders or quotes resting on the Book at the time of a trading halt for participation in the opening rotation following the trading halt, unless the User has entered instructions to cancel its resting orders and quotes; and (3) the System will initiate the opening rotation for a class upon the Exchange's determination to resume trading.<sup>35</sup>

The proposal deletes current Exchange Rule 6.2(g) regarding the use of the opening auction process to conduct a closing rotation upon determination by the Exchange. The Exchange states that it does not currently conduct closing rotations, and does not intend to do so in the future.<sup>36</sup>

## B. Modified Opening Process for Expiring VIX Derivatives

### 1. Background

Currently, the exercise settlement value for expiring VIX derivatives is determined on the morning of their expiration date using the opening prices of a portfolio of SPX options—the settlement strip—that expire approximately 30 days later.<sup>37</sup> These opening prices are determined through a modified version of the Exchange's standard opening auction process.<sup>38</sup> The Exchange proposes several changes to its modified opening auction process, including changes

---

<sup>35</sup> See proposed Exchange Rule 5.31(g).

<sup>36</sup> See Notice, supra note 3, 84 FR at 35152.

<sup>37</sup> See id. at 35152. The proposal defines the “settlement strip” as the constituent option series used to calculate the exercise or final settlement value, as applicable, of expiring VIX derivatives. The “constituent option series” are all SPX (including SPXW) option series listed on the Exchange with the expirations the Exchange uses to calculate the exercise or final settlement value of the expiring VIX derivative on exercise settlement value determination days. See proposed Exchange Rule 5.31(j)(1).

<sup>38</sup> See Notice, supra note 3, 84 FR at 35152.

to its methodology for determining the settlement strip and the elimination of the concepts of “strategy orders”<sup>39</sup> and “non-strategy orders.”<sup>40</sup>

## 2. Determination of the Settlement Strip

Currently, the Exchange uses the opening trade prices of SPX series that comprise the settlement strip (or the average of a series’ opening bid and ask if there is no opening trade in that series) established by the modified opening auction process to calculate the exercise or final settlement value of expiring VIX derivatives.<sup>41</sup> In doing so, the Exchange excludes from consideration out-of-the-money SPX put and call options in any SPX series that have a zero bid

---

<sup>39</sup> See Exchange Rule 6.2, Interpretation and Policy .01(c). Currently, the Exchange deems individual orders (considered collectively) that a market participant submits for participation in the modified opening auction process to be a “strategy order,” based on related facts and circumstances considered by the Exchange, if the orders: (1) relate to the market participant’s positions in expiring VIX derivatives; (2) are for option series with the expiration that the Exchange will use to calculate the exercise or final settlement value, as applicable, of the applicable VIX derivative; (3) are for option series with strike prices approximating the range of series that are later determined to constitute the constituent option series for the applicable expiration; (4) are for put (call) options with strike prices equal to or less (greater) than the “at-the-money” strike price; and (5) have quantities approximating the weighting formula used to determine the exercise or final settlement value, as applicable, in accordance with the VIX methodology. See Notice, supra note 3, 84 FR at 35153, n. 54, and current Exchange Rule 6.2, Interpretation and Policy .01(a) (definition of “strategy order”).

<sup>40</sup> A “non-strategy order” is any order (including an order in a constituent option series) a market participant submits for participation in the modified opening procedure that is not a strategy order (or a change to or cancellation of a strategy order). Examples of non-strategy orders include, but are not limited to: (1) a buy (sell) order in a constituent options series if an expected opening information message (“EOI”) disseminated no more than two minutes prior to the time a market participant submitted the order included a sell (buy) imbalance and the size of the order is no larger than the size of the imbalance in the EOI, regardless of whether the market participant previously submitted a strategy order or has positions in expiring volatility index derivatives; or (2) a Market-Maker bid or offer in a constituent option series, as set forth in Exchange Rule 6.2, Interpretation and Policy .01(e).

<sup>41</sup> See Notice, supra note 3, 84 FR at 35157.

price.<sup>42</sup> The methodology then truncates the SPX series used to calculate the VIX settlement value after encountering two consecutive series having “zero-bid” prices, even if further out-of-the-money series have an opening trade price and are “non-zero” bid.<sup>43</sup>

As proposed, the Exchange will no longer use the non-zero bid provision and the two consecutive zero-bid provisions.<sup>44</sup> Instead, the Exchange proposes to determine the settlement strip as follows:

(A) The Exchange determines the highest call strike and lowest put strike that establish the “strike range” for the settlement strip pursuant to an algorithm.

(B) The at-the-money strike price is determined in accordance with the VIX methodology, using opening bid and offer information of each constituent option series.

(C) The Exchange disseminates the highest call strike and lowest put strike of the strike range to all subscribers through the Exchange’s data feeds that deliver opening auction update messages, no later than 8:45 a.m. on exercise settlement value determination days.

(D) Each call (put) constituent option series with a strike price not outside the strike range (i.e., a strike price equal to or greater (less) than the at-the-money strike price up (down) to the highest call (lowest put) strike of the strike range) is included in the settlement strip.

(E) The Exchange may update the strike range until 9:15 a.m. pursuant to an algorithm due to changes to the value of VIX, prices of related futures, or other algorithmic inputs. The Exchange will disseminate any such updates.<sup>45</sup>

---

<sup>42</sup> See id.

<sup>43</sup> See id.

<sup>44</sup> See id. at 35159.

The Exchange believes that the proposed settlement methodology may provide additional protection against manipulation because the Exchange will be solely responsible for determining the strike range of the settlement strip, making it impossible for anyone to attempt to manipulate the VIX settlement process by attempting to artificially affect which SPX series will have zero bids at the opening and thus potentially be included in the settlement strip.<sup>46</sup> The Exchange notes that the algorithm that will determine the strike range of the settlement strip will employ numerous market inputs, including prices (both on the exercise settlement value determination day (including during the GTH trading day) and the previous trading day) of SPX options, SPY options, and e-mini S&P 500 options.<sup>47</sup> The Exchange believes that it is therefore unlikely that one of these inputs of the Exchange's algorithm will have a material impact on the determination of the strike range.<sup>48</sup> The Exchange designed the proposed methodology for determining the settlement strip to approximate the same settlement strip that would be used pursuant to the Exchange's current methodology.<sup>49</sup>

### 3. Entry of Orders and Quotes During the Queuing Period

The Exchange's current rules generally require strategy orders to be entered prior to the strategy order cut-off time.<sup>50</sup> The proposal eliminates the concept of both strategy orders and non-strategy orders. Instead, during the Queuing Period prior to 9:20 a.m., the System will continue to accept all orders and quotes (except Settlement Liquidity Opening Orders, or SLOOs, which the System rejects), and any changes to or cancellations of those orders and

---

<sup>45</sup> See proposed Exchange Rule 5.31(j)(1) and Amendment No. 1.

<sup>46</sup> See Notice, supra note 3, 84 FR at 35164.

<sup>47</sup> See id. at 35159.

<sup>48</sup> See id.

<sup>49</sup> See id. at 35157.

<sup>50</sup> See Exchange Rule 6.2, Interpretation and Policy .01(c) and (d).

quotes. After the 9:20 a.m. cut-off time (until the opening of trading in a series), the System will only accept SLOOs (including changes to and cancellations of SLOOs) and bulk message bids and offers (including changes to and cancellations of bulk message bids and offers submitted before and after the cut-off time) from Market-Makers with an SPX appointment. After that cut-off, the System will reject all other orders and quotes (and all other changes to and cancellations of orders and quotes submitted prior to the cut-off time).<sup>51</sup> The Exchange states that SLOOs will provide market participants with a definitive order type that they may use to participate in a competitive auction without creating an imbalance condition that would prevent a series from opening.<sup>52</sup>

Under the proposal, Market-Makers with an SPX appointment will continue to be able to submit bulk message bids and offers (including changes to and cancellations of bulk message bids and offers submitted before and after the cut-off time) following the cut-off time, as they do today.<sup>53</sup> The Exchange notes that a Market-Maker has obligations to, among other things,

---

<sup>51</sup> See proposed Exchange Rule 5.31(j)(3). A SLOO is a limit order in a constituent option series designated with an OPG Time-in-Force that Users may only submit to the Exchange on exercise settlement value determination days following the cut-off time described in proposed Exchange Rule 5.31(j)(3). The System cancels a SLOO (or remaining portion thereof) that does not execute during the modified opening auction process, and Users may not designate bulk messages as SLOOs. If the limit price of a buy (sell) SLOO crosses the midpoint of the then-current Opening Collar upon entry, the System adjusts its price to equal the midpoint of the Opening Collar (rounded up (down) to the nearest minimum increment), except for a sell SLOO when the midpoint is less than or equal to 0.175. If the midpoint of the Opening Collar changes during the Queuing Period, the System re-adjusts the SLOO's price to equal to the new Opening Collar midpoint (rounded as provided above), up to its limit price. The Exchange does not disseminate the prices of SLOOs in the Queuing Book. See proposed Exchange Rule 5.31(j)(1).

<sup>52</sup> The Exchange notes that the proposed SLOO repricing functionality, as described in note 51, supra, will prevent the entry of a SLOO from creating or adding to an imbalance that would prevent a constituent option series from opening. See id. at 35156.

<sup>53</sup> See id.

engage in dealings for the Market-Maker's own account when there exists a lack of price continuity or a temporary disparity between the supply of and demand for an option (i.e., an imbalance), to compete with other Market-Makers to improve markets in its appointed classes, and to update market quotations in response to changed market conditions in its appointed classes.<sup>54</sup> The Exchange believes that Market-Maker participation throughout the entire modified opening auction process may add liquidity to the process and promote a fair and orderly opening and settlement process.<sup>55</sup> In addition, the Exchange states that it will continue to review all Trading Permit Holder activity in constituent series on exercise settlement value determination days for compliance with all applicable Rules.<sup>56</sup>

#### 4. Auction Updates, Opening Rotation, and Opening Trade Price Determination

---

<sup>54</sup> See id.

<sup>55</sup> See id. The Exchange notes that Market-Maker quoting activity on exercise settlement value determination days will continue to be subject to all applicable Exchange rules. These rules include, among others: current Exchange Rule 4.1, which prohibits a Trading Permit Holder from engaging in acts or practices inconsistent with just and equitable principles of trade; current Exchange Rule 4.7, which prohibits (among other things) a Trading Permit Holder from effecting or inducing the purchase, sale, or exercise of any security for the purpose of creating or inducing a false, misleading, or artificial appearance of activity in such security or in the underlying security, or for the purpose of unduly or improperly influencing the market price of such security or of the underlying security or for the purpose of making a price that does not reflect the true state of the market in such security or in the underlying security; current Exchange Rule 4.18, which requires a Trading Permit Holder to establish, maintain, and enforce written policies and procedures reasonably designed, taking into consideration the nature of such Trading Permit Holder's business, to prevent the misuse, in violation of the Exchange Act and the Rules, of material, nonpublic information by the Trading Permit Holder or persons associated with the Trading Permit Holder; and current Exchange Rule 8.7, which requires Market-Makers to, among other things, enter into transactions in their market making capacity that constitute a course of dealings reasonably calculated to contribute to the maintenance of a fair and orderly market, and not to make bids or offers or enter into transactions that are inconsistent with such course of dealings. See id. at 335156-7.

<sup>56</sup> See id. at 335157.

On exercise settlement value determination days, the Exchange will disseminate opening auction updates for constituent series every five seconds, regardless of whether there are updates to the opening information since the previously disseminated update.<sup>57</sup> The opening rotation process will occur as set forth in proposed Exchange Rule 5.31(e), except that the System will perform the Maximum Composite Width Check and determine the Opening Trade Price pursuant to proposed Exchange Rule 5.31(j)(5).<sup>58</sup> The Maximum Composite Width Check for constituent series on exercise settlement value determination days differs from the Maximum Composite Width Check used on other days in that a constituent series will not open, without exception, if the Composite Width is greater than the Maximum Composite Width.<sup>59</sup> In that case, the Queuing Period for the series will continue, including the dissemination of opening auction updates, until the Composite Width is less than or equal to the Maximum Composite Width or until the Composite Market is not crossed (as applicable), or the Exchange opens the series pursuant to proposed Exchange Rule 5.31(h).<sup>60</sup> The Exchange states that this proposed process is similar to the current opening auction process in classes in which the Hybrid Agency Liaison (“HAL”) is not activated at the open.<sup>61</sup>

---

<sup>57</sup> See proposed Exchange Rule 5.31(j)(4) and Amendment No. 1. The Exchange believes providing frequent, regular updates in constituent series will further enhance transparency in the modified opening auction process. In addition, because the opening trading prices that will be used to determine the settlement values of expiring VIX derivatives will be determined by prices of the constituent option series, the Exchange believes that regular auction updates, and thus additional transparency, will contribute to a fair and orderly auction and settlement process. See Amendment No. 1.

<sup>58</sup> See proposed Exchange Rule 5.31(j)(5) and Amendment No. 3.

<sup>59</sup> See proposed Exchange Rule 5.31(j)(5)(B) and Amendment No. 1.

<sup>60</sup> See id.

<sup>61</sup> See Amendment No. 1.

After a series satisfies the Maximum Composite Width Check, the System determines the Opening Trade Price for the series if there are orders and quotes marketable against each other at a price not outside the Opening Collar.<sup>62</sup> If there are no such orders or quotes, there is no Opening Trade Price.<sup>63</sup> The Exchange notes that during the opening rotation on non-exercise settlement value determination days, the Opening Trade Price is the VMIM price that is not outside the Opening Collar.<sup>64</sup> Thus, if the System determines that the VMIM price is outside of the Opening Collar, rather than not open, the System will use the collar limit as the opening price.<sup>65</sup> On exercise settlement value determination days for constituent series, however, if (1) the VMIM price is outside the Opening Collar, or (2) there would be unexecuted market orders (or remaining portions), the series will not open.<sup>66</sup> In either case, the Queuing Period for the series will continue (including the dissemination of opening auction updates) until the VMIM price is not outside the Opening Collar, or the Exchange opens the series pursuant to proposed paragraph (h).<sup>67</sup> The Exchange notes that this is consistent with the current opening auction process in classes in which HAL is not activated at the open.<sup>68</sup>

## 5. Opening Rotation Self-Trades

---

<sup>62</sup> See proposed Exchange Rule 5.31(j)(5).

<sup>63</sup> See Amendment No. 1.

<sup>64</sup> See Notice, supra note 3, 84 FR at 35160. The System will determine the VMIM price pursuant to proposed Rules 5.31(e)(2)(A) through (C) in the same manner it determines the VMIM price on all other days. See proposed Exchange Rule 5.31(j)(5)(B)(i) and Notice, supra note 3, 84 FR at 35159-60.

<sup>65</sup> See id.

<sup>66</sup> See proposed Exchange Rule 5.31(j)(5)(B)(iii) and Amendment No. 1.

<sup>67</sup> See id.

<sup>68</sup> See Notice, supra note 3, 84 FR at 35160.

Under the proposed modified opening process, a market participant could submit orders that replicate the vega, or volatility, exposure of its expiring VIX derivatives prior to the cut-off time, and then submit a SLOO after the cut-off time to contribute liquidity to the opening process, including to offset any imbalances.<sup>69</sup> Assuming there were no other factors demonstrating a different purpose, the SLOO might not have been intended to execute against the vega replicating order (and thus effect a transaction that involves no change in beneficial ownership to create a false or misleading appearance of active trading in SPX options). Rather, the SLOO could have been intended to contribute liquidity to the modified opening auction process to offset an existing imbalance and to contribute to a fair and orderly opening process for that series.<sup>70</sup>

To accommodate fair and orderly trading in the modified opening auction process, the Exchange proposes to state in the Rules that, subject to other facts and circumstances (such as that may demonstrate a different purpose for the submission of the orders), the Exchange will not consider self-trades resulting from the execution of a User's orders against each other during the opening rotation of the modified opening auction process to be violations of Section 9(a)(1) of the Exchange Act.<sup>71</sup> The Exchange will review all activity, including these executions, during the modified opening auction process for compliance with the Exchange Act and with the Exchange's rules, including rules prohibiting manipulation.<sup>72</sup>

The Exchange represents that it has an adequate surveillance program in place to review options activity during the modified opening auction process that occurs on each exercise

---

<sup>69</sup> See id.

<sup>70</sup> See id.

<sup>71</sup> 15 U.S.C. 78(i)(a)(1). See proposed Exchange Act Rule 5.31(j)(6).

<sup>72</sup> See proposed Exchange Act Rule 5.31(j)(6). See also Notice, supra note 3, 84 FR at 35161-2.

settlement value determination day.<sup>73</sup> In addition, the Exchange states that it is updating its surveillance program to reflect the proposed amendments to the process, and that it will continue to review its surveillance program to determine whether additional enhancements are necessary or appropriate.<sup>74</sup> The Exchange notes that all market participants will be continue to be required to abide by current Exchange Rules 4.1, 4.7, and 4.18.<sup>75</sup>

### III. Discussion and Commission Findings

After careful review, the Commission finds that the proposed rule change, as modified by Amendment Nos. 1, 2, and 3, is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange and, in particular, with Section 6(b) of the Act.<sup>76</sup> In particular, the Commission finds that the proposed rule change is consistent with Section 6(b)(5) of the Act,<sup>77</sup> which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to 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.

---

<sup>73</sup> See id. at 35162.

<sup>74</sup> See id.

<sup>75</sup> See id. at 35164.

<sup>76</sup> 15 U.S.C. 78f(b). In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

<sup>77</sup> 15 U.S.C. 78f(b)(5).

The Commission believes that the proposed opening auction process is consistent with the protection of investors and the public interest because it is designed to provide a fair and orderly opening for options traded on the Exchange. The Commission notes that the proposed standard opening process is substantially identical to the opening processes used on two other exchanges.<sup>78</sup>

The proposed modified opening auction process for expiring VIX derivatives will operate in a manner that is substantially similar to the Exchange's current modified opening auction process, but with certain changes, as described above.<sup>79</sup> While the Exchange has designed its new methodology of determining the settlement strip to largely replicate how settlement strips are determined today, the new methodology reduces the potential that a market participant would be able to manipulate the VIX settlement process by attempting to affect which SPX series will (and will not) have zero bids at the opening, which impacts which strikes are included in the strip.<sup>80</sup> The Commission believes that the proposed changes to the methodology for determining the settlement strip are designed to protect investors and the public interest by reducing the potential for manipulative or disruptive trading in connection with the modified opening auction process used on exercise settlement value determination days.

The Commission believes that the proposal to eliminate the concept of strategy orders, and instead permit two types of market activity following the cut-off time—the submission of SLOOs and quotes from Market-Makers with an SPX appointment—could help to attract liquidity to trade against imbalances and reduce the likelihood that a constituent option series will fail to open, thereby helping to facilitate an orderly opening for VIX derivatives. The

---

<sup>78</sup> See C2 Rule 6.11 and EDGX Options Rule 21.7.

<sup>79</sup> See Notice, supra note 3, 84 FR at 35163.

<sup>80</sup> See id. at 35164.

proposed SLOOs are designed to provide market participants with an order type they may submit following the cut-off time, which could encourage them to provide liquidity to offset order imbalances. In addition, the SLOO repricing functionality will prevent the entry of a SLOO from creating or adding to an imbalance that would prevent a constituent option series from opening.<sup>81</sup>

The Commission notes that all market participants will continue to be required to comply with current Exchange Rules 4.1 (Just and Equitable Principles of Trade), 4.7 (Manipulation), and 4.18 (Prevention of the Misuse of Material, Nonpublic Information).<sup>82</sup> In addition, the Exchange will continue to conduct surveillance to monitor all trading activity in constituent option series on exercise settlement value determination days, including but not limited to monitoring the entry of orders and quotes following the cut-off time, as well as compliance with other Exchange rules,<sup>83</sup> which the Commission believes is essential to protect investors and the public interest.

For the foregoing reasons, the Commission finds that the proposed rule change, as modified by Amendment Nos. 1, 2, and 3, is consistent with Sections 6(b)(5) of the Act.<sup>84</sup>

#### IV. Solicitation of Comments on Amendment Nos. 1, 2, and 3 to the Proposed Rule Change

Interested persons are invited to submit written data, views, and arguments concerning whether Amendment Nos. 1, 2, and 3 are consistent with the Act. Comments may be submitted by any of the following methods:

##### Electronic Comments:

---

<sup>81</sup> See id. at 35156.

<sup>82</sup> See id.

<sup>83</sup> See id.

<sup>84</sup> 15 U.S.C. 78f(b)(5).

- Use the Commission’s Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-CBOE-2019-034 on the subject line.

Paper Comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-CBOE-2019-034. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission’s Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission’s Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change.

Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-CBOE-2019-034, and should be submitted on or before [insert date 21 days from publication in the Federal Register].

V. Accelerated Approval of Proposed Rule Change, as Modified by Amendment Nos. 1, 2, and 3

The Commission finds good cause to approve the proposed rule change, as modified by Amendment Nos. 1, 2, and 3 prior to the thirtieth day after the date of publication of notice of the filing of Amendment No. 1 in the Federal Register. Amendment No. 1 clarifies several aspects of the proposal, including by providing additional details regarding the settlement strip and the timing and frequency of opening auction updates, without introducing new material concepts. In addition, Amendment No. 1 modifies the application of the Maximum Composite Width Check to provide that a constituent option series will not open if the Composite Width is greater than the Maximum Composite Width, without exception. The Exchange notes that this is similar to the current opening auction process in classes in which HAL is not activated at the open. The Commission believes that the proposed change to the Maximum Composite Width Check should protect investors by helping to assure that the constituent option series, which are used to determine the settlement value of expiring VIX derivatives, open at prices that are consistent with current market conditions. Accordingly, the Commission believes that Amendment No. 1 does not raise novel regulatory issues. Amendment Nos. 2 and 3 correct a few errors in the rule text, thereby helping to assure the accuracy and clarity of the proposed rules in a manner that is consistent with the original proposal and that do not introduce new concepts or raise novel regulatory issues. Accordingly, the Commission finds good cause, pursuant to Section 19(b)(2) of the Act,<sup>85</sup> to approve the proposed rule change, as modified by Amendment Nos. 1, 2, and 3, on an accelerated basis.

---

<sup>85</sup> 15 U.S.C. 78s(b)(2).

VI. Conclusion

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Act,<sup>86</sup> that the proposed rule change (SR-CBOE-2019-034), as modified by Amendment Nos. 1, 2, and 3, is approved on an accelerated basis.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>87</sup>

Jill M. Peterson  
Assistant Secretary

---

<sup>86</sup> 15 U.S.C. 78s(b)(2).

<sup>87</sup> 17 CFR 200.30-3(a)(12).