

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-83505; File No. SR-CBOE-2018-046)

June 25, 2018

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Relating to Exchange Rule 6.2., Hybrid Opening (and Sometimes Closing) System (“HOSS”)

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on June 15, 2018, Cboe Exchange, Inc. (the “Exchange” or “Cboe Options”) filed with the Securities and Exchange Commission (the “Commission”) the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Exchange filed the proposal pursuant to Section 19(b)(3)(A)(iii) of the Act<sup>3</sup> and Rule 19b-4(f)(6) thereunder.<sup>4</sup> 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**

The Exchange proposes to amend Rule 6.2., Hybrid Opening (and Sometimes Closing) System (“HOSS”).

(additions are underlined; deletions are [bracketed])

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**Cboe Exchange, Inc.  
Rules**

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**Rule 6.2. Hybrid Opening (and Sometimes Closing) System (“HOSS”)**

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

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

<sup>3</sup> 15 U.S.C. 78s(b)(3)(A)(iii).

<sup>4</sup> 17 CFR 240.19b-4(f)(6).

(a) – (b) (No change).

(c) Opening Rotation Period. After the System initiates the opening rotation procedure and sends the Rotation Notice, the System begins the opening rotation period. During the opening rotation period for a series:

(i) – (ii) (No change).

(iii) After a period of time determined by the Exchange for all classes (which period of time may be no longer than five seconds), the System opens series of a class in [a random]the following order[, staggered over regular intervals of time (the Exchange determines the length and number of these intervals for all classes).];

(A) ATM and OTM Series with Expirations of 29 to 31 Days. During the initial interval (the Exchange determines the length of this interval for all classes, the length of which may be no longer than three seconds), the System opens:

(I) at-the-money (“ATM”) puts and a group of out-of-the-money (“OTM”) puts with strike prices closest to the ATM strike price, in a random order;

(II) ATM calls and a group of OTM calls with strike prices closest to the ATM strike price, in a random order; and

(III) alternating groups of further OTM puts and further OTM calls, each in a random order.

During this interval, the System attempts to open any ATM or OTM series that could not open on its first attempt.

(B) All Other Series. After the initial interval, the System opens all other series, and any series that did not open pursuant to subparagraph (A), in a random order, staggered over regular intervals of time (the Exchange determines the length and number of these intervals for all classes, the length of which intervals may be no longer than two seconds).

(C) Definition of ATM. For purposes of subparagraph (A), a put (call) is ATM if its strike price equals or is the first strike above (below) the last disseminated transaction price in the underlying security or index value on the same trading day. If the System begins an opening rotation for a class prior to receiving a disseminated transaction price in the underlying security or index value, the System will open all series in the class pursuant to subparagraph (B).

Subject to paragraph (d) below, the opening rotation period (including these intervals) may not exceed [60]30 seconds.

(d) – (h) (No change).

. . . *Interpretations and Policies:*

.01 – .07 (No change).

\* \* \* \* \*

The text of the proposed rule change is also available on the Exchange’s website (<http://www.cboe.com/AboutCBOE/CBOELegalRegulatoryHome.aspx>), at the Exchange’s Office of the Secretary, and at the Commission’s Public Reference Room.

**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

The proposed rule change amends the order in which the System opens series for trading. Current Rule 6.2(c)(iii) states, after a period of time after the initiation of the opening rotation (which time is determined by the Exchange for all classes, and may be no longer than five seconds),<sup>5</sup> the System opens series of a class in a random order, staggered over regular intervals of

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<sup>5</sup> Currently, this time is set to two seconds. The Exchange intends to reduce this time period to one second in June 2018.

time (the Exchange determines the length and number of these intervals for all classes).<sup>6</sup> The opening rotation period (including these intervals) may not exceed 60 seconds, except as otherwise set forth in the Rule.

Pursuant to the proposed rule change, during an initial interval (the Exchange determines the length of this interval for all classes, which may be no longer than three seconds),<sup>7</sup> the System will first open at-the-money (“ATM”) and out-of-the-money (“OTM”) series with expirations of 29 to 31 days, and then open all remaining series. Specifically, during the first interval, the System will open:

- ATM puts and a group of OTM puts with strike prices closest to the ATM strike price, in a random order;
- ATM calls and a group of OTM calls with strike prices closest to the ATM strike price, in a random order; and
- alternating groups of further OTM puts and further OTM calls, each in a random order.

During this interval, the System attempts to open any ATM or OTM series that could not open on its first attempt.

After the first interval, the System opens all other series, and any OTM and ATM series with expirations of 29 to 31 days that did not open during the first interval, in a random order, staggered over regular intervals of time (the Exchange determines the length and number of these intervals for all classes, the length of which may be no longer than two seconds).<sup>8</sup>

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<sup>6</sup> Currently, there are two one-second intervals.

<sup>7</sup> The Exchange intends to initially set the length of this interval to 500 milliseconds.

<sup>8</sup> The Exchange intends to initially have 10 intervals of 100 milliseconds each.

For purposes of this proposed rule change, a put (call) is ATM if its strike price equals or is the first strike above (below) the last disseminated transaction price in the underlying security or index value on the same trading day. If the System begins an opening rotation for a class prior to receiving a disseminated transaction price in the underlying security or index value, the System will open all series in the class pursuant to proposed subparagraph (B) (i.e. all in a random order, staggered over regular intervals of time). Pursuant to Rule 6.2, the opening rotation for most equity and exchange-traded product options will begin after the System receives a disseminated opening trade or quote in the market for the underlying security. Additionally, the opening rotation for certain index options will begin at the later of 8:30 a.m. and the time the System receives a disseminated index value for classes determined by the Exchange. However, for certain classes, the opening rotation will begin at 8:30 a.m. As a result, it is possible the System may not have a value to determine which series are ATM. To avoid delaying the opening of series in these classes, the Exchange believes it is appropriate to open all series in a random order rather than wait for such a value.

Below are examples demonstrating the new opening sequence. For purposes of these examples, assume the ATM strike price is 50. Additionally, assume June expiration series are 30 days away and all other series are more than 31 days away. There will be a one second opening timer delay, an initial interval of 500 milliseconds, and then 10 intervals of 100 milliseconds. Puts will be opened in groups of 4, and calls will be opened in groups of 3 (the first put and call group will also include the ATM strike). Class ABC consists of the following series:

Jun ABC 62 put

July ABC 60 put

Jun ABC 61 put

July ABC 60 call

Jun ABC 60 put

July ABC 59 put

Jun ABC 59 put	Jun ABC 59 call	July ABC 59 call
Jun ABC 58 put	Jun ABC 58 call	July ABC 58 put
Jun ABC 57 put	Jun ABC 57 call	July ABC 58 call
Jun ABC 56 put	Jun ABC 56 call	July ABC 57 put
Jun ABC 55 put	Jun ABC 55 call	July ABC 57 call
Jun ABC 54 put	Jun ABC 54 call	July ABC 56 put
Jun ABC 53 put	Jun ABC 53 call	July ABC 56 call
Jun ABC 52 put	Jun ABC 52 call	July ABC 55 put
Jun ABC 51 put	Jun ABC 51 call	July ABC 55 call
Jun ABC 50 put	Jun ABC 50 call	Aug ABC 60 put
Jun ABC 49 put	Jun ABC 49 call	Aug ABC 60 call
Jun ABC 48 put	Jun ABC 48 call	Aug ABC 59 put
Jun ABC 47 put	Jun ABC 47 call	Aug ABC 59 call
Jun ABC 46 put	Jun ABC 46 call	Aug ABC 58 put
Jun ABC 45 put	Jun ABC 45 call	Aug ABC 58 call
Jun ABC 44 put	Jun ABC 44 call	Aug ABC 57 put
Jun ABC 43 put	Jun ABC 43 call	Aug ABC 57 call
Jun ABC 42 put	Jun ABC 42 call	Aug ABC 56 put
Jun ABC 41 put	Jun ABC 41 call	Aug ABC 56 call
Jun ABC 40 put		Aug ABC 55 put
Jun ABC 39 put		Aug ABC 55 call
Jun ABC 38 put		

Example #1 – All series satisfy opening conditions on first attempt

After the one-second delay, the 500-millisecond interval starts. During that interval, the System opens in a random order the Jun ABC 50, 49, 48, 47, and 46 puts. The System then opens in a random order the Jun ABC 50, 51, 52, and 53 calls. Then, the System opens in a random order the Jun ABC 45, 44, 43, and 42 puts. Then, the System opens in a random order the Jun ABC 54, 55, and 56 calls. Next, the System opens in a random order the Jun ABC 41, 40, 39, and 38 puts. The System then opens in a random order the Jun ABC 57, 58, and 59 calls. After 500 milliseconds, the System opens in a random order over 10 100-millisecond intervals the remaining Jun puts and calls and all Jul and Aug puts and calls.

Example #2 – Assume one series does not open on first attempt but does open on second attempt during the initial interval

After the one-second delay, the 500-millisecond interval starts. During that interval, the System opens in a random order the Jun ABC 50, 49, 48, 47, and 46 puts. The System then opens in a random order the Jun ABC 50, 51, 52, and 53 calls. Then, the System opens in a random order the Jun ABC 45, 44, and 43, and attempts to but cannot open the Jun ABC 42 put. Then, the System opens in a random order the Jun ABC 54, 55, and 56 calls. Next, the System opens in a random order the Jun ABC 41, 40, 39, and 38 puts. The System then opens in a random order the Jun ABC 57, 58, and 59 calls. The System then opens the Jun ABC 42 put, which did not open on its first attempt. After 500 milliseconds, the System opens in a random order over 10 100-millisecond intervals the remaining Jun puts and calls and all Jul and Aug puts and calls.

Example #3 – Assume one series does not satisfy opening conditions during the first interval

After the one-second delay, the 500-millisecond interval starts. During that interval, the System opens in a random order the Jun ABC 50, 49, 48, 47, and 46 puts. The System then opens in a random order the Jun ABC 50, 51, 52, and 53 calls. Then, the System opens in a random order

the Jun ABC 45, 44, and 43, and attempts to but cannot open the Jun ABC 42 put. Then, the System opens in a random order the Jun ABC 54, 55, and 56 calls. Next, the System opens in a random order the Jun ABC 41, 40, 39, and 38 puts. The System then opens in a random order the Jun ABC 57 and 58 calls, and attempts to but cannot open the Jun ABC 59 call. During the initial 500 milliseconds, the System continues to attempt to but cannot open the Jun ABC 59 call. After 500 milliseconds, the System opens in a random order over 10 100-millisecond intervals the Jun ABC 59 call, the remaining Jun puts and calls, and all Jul and Aug puts and calls.

While the System will continue to open series in a random order, during an initial longer interval, the System will open specific groups of series within a random order. The order in which the System opens series for trading is generally immaterial; however, on expiration days for volatility index derivatives, ATM and OTM series with expirations of approximately one month are used to calculate the exercise settlement value of expiring volatility index derivatives as part of the modified opening procedure. The Exchange believes opening these series first will enhance liquidity in those series on expiration days for volatility index derivatives.

Specifically, Market-Makers are the primary liquidity providers in the Exchange's market. The Exchange provides Market-Makers with a tool, the Quote Risk Monitor ("QRM") they use to control risk of multiple, automatic executions. A QRM event in a class will cause a Market-Maker's quotes in all series in the class to be cancelled (certain events may cause a Market-Maker's quotes in all classes to be cancelled).<sup>9</sup> As a result, a Market-Maker's opening transactions in series not used to calculate an exercise settlement value may cause a QRM event, cancelling the Market-Maker's quotes in all other series in the class, including series used to calculate an exercise settlement value. This reduces liquidity in these series. Similarly, the Exchange has observed larger

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<sup>9</sup> See Rule 8.18.



Market-Maker quote sizes in further OTM puts and calls compared to sizes in less OTM puts and calls and ATM puts and calls, which have higher weightings in the formula used to determine the exercise settlement value of expiring volatility index derivatives in accordance with the applicable volatility index methodology.<sup>10</sup> If the further OTM puts and calls open prior to the less OTM puts and calls and ATM puts and calls, similar reduced liquidity in those ATM and less OTM puts and calls from QRM events may occur. The Exchange believes the proposed rule change will increase liquidity in all series used to calculate exercise settlement values, which is desirable to ensure these series open at competitive prices on expiration days for volatility index derivatives. While liquidity is important to open all series on the Exchange, given the potential impact on the exercise settlement value determined for expiring volatility index derivatives, the Exchange believes it is appropriate to ensure a fair and orderly opening of the series used to calculate the exercise settlement value.

## 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>11</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>12</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

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<sup>10</sup> See, e.g., the VIX methodology at <http://www.cboe.com/micro/vix/vix-index-rules-and-methodology.pdf>.

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

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

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>13</sup> requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In particular, the proposed rule change merely modifies the order in which the System opens series for trading on the Exchange. The System will continue to open series in a random order; however, initially, it will open series within specific groups in a random order. The Exchange believes the System can open series pursuant to the proposed maximum interval times, as current interval times are under these maximums, and because they are consistent with the proposed maximum of 30 seconds for the entire opening process. These interval times ensure a fast opening of all series, which will benefit investors.

While the order in which the System opens series is generally immaterial (and thus why the Exchange has opened them in a random order), the Exchange believes opening ATM and OTM series with expirations of approximately one month will permit series used to calculate exercise settlement values for expiring volatility index derivatives to open as soon as possible. As discussed above, the Exchange believes this may enhance liquidity in these series on expiration days for volatility index derivatives, which benefits market participants. Additionally, reducing the potential time during which all series in all classes will open benefits all market participants, because market participants will be able to begin trading in all series sooner.

B. Self-Regulatory Organization's Statement on Burden on Competition

Cboe Options 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

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Id.

proposed rule change only modifies the order in which the System will open series for trading. The System will open groups of ATM and OTM series with expirations of approximately one month first, but will continue to open series within those groups in a random order, and then open all in-the-money series in a random order (as is case today with respect to those series). Additionally, pursuant to the proposed rule change, the opening process must be within a shorter time period. The proposed maximum interval times are consistent with current and proposed interval times, and are consistent with the proposed maximum of 30 seconds for the entire opening process (which is shorter than the current maximum). The proposed rule change applies to all classes in the same manner, and only applies to the order in which the System will open series for trading on the Exchange. As discussed above, the Exchange believes this may enhance liquidity in these series on expiration days for volatility index derivatives, which benefits market participants. Additionally, reducing the potential time during which all series in all classes will open benefits all market participants, because market participants will be able to begin trading in all series sooner.

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**

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time

as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act<sup>14</sup> and subparagraph (f)(6) of Rule 19b-4 thereunder.<sup>15</sup>

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is: (i) necessary or appropriate in the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or 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 (<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-2018-046 on the subject line.

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<sup>14</sup> 15 U.S.C. 78s(b)(3)(A)(iii).

<sup>15</sup> 17 CFR 240.19b-4(f)(6). In addition, Rule 19b-4(f)(6)(iii) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

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-2018-046. 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-2018-046 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>16</sup>

Eduardo A. Aleman  
Assistant Secretary

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<sup>16</sup> 17 CFR 200.30-3(a)(12).