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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 19b-4

File No.* SR - 2017 - * 062
Amendment No. (req. for Amendments *)

Filing by Chicago Board Options Exchange

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

| Initial * | Amendment * | Withdrawal | Section 19(b)(2) * | Section 19(b)(3)(A) * | Section 19(b)(3)(B) * |
|---|---|---|---|---|---|
| ☑ | ☐ | ☐ | ☐ | ☑ | ☐ |

Pilot ☐

Extension of Time Period for Commission Action * ☐

Date Expires *

Rule

☐ 19b-4(f)(1) ☐ 19b-4(f)(4)
☐ 19b-4(f)(2) ☐ 19b-4(f)(5)
☐ 19b-4(f)(3) ☑ 19b-4(f)(6)

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010

Section 806(e)(1) * ☐ Section 806(e)(2) * ☐

Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934

Section 3C(b)(2) * ☐

Exhibit 2 Sent As Paper Document ☐ Exhibit 3 Sent As Paper Document ☐

**Description**

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Proposed rule change to permit the Exchange to publish end-of-day indicative values in SPX after the close of regular trading hours in SPX.

**Contact Information**

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name * Kyle Last Name * Edwards
Title * Counsel
E-mail * edwards@cboe.com
Telephone * (312) 786-7304 Fax

**Signature**

Pursuant to the requirements of the Securities Exchange Act of 1934,

has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

Date 09/18/2017
By Anders Franzon
(Name *)

(Title *)
SVP, Associate General Counsel

NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

afranzon@bats.com

*Required fields are shown with yellow backgrounds and asterisks.*

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

| | |
|---|---|
| **Form 19b-4 Information *** Add Remove View | The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act. |
| **Exhibit 1 - Notice of Proposed Rule Change *** Add Remove View | The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO] -xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3) |
| **Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *** Add Remove View | The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO] -xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3) |
| **Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications** Add Remove View Exhibit Sent As Paper Document ☐ | Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G. |
| **Exhibit 3 - Form, Report, or Questionnaire** Add Remove View Exhibit Sent As Paper Document ☐ | Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change. |
| **Exhibit 4 - Marked Copies** Add Remove View | The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working. |
| **Exhibit 5 - Proposed Rule Text** Add Remove View | The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change. |
| **Partial Amendment** Add Remove View | If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions. |

**Item 1. <u>Text of the Proposed Rule Change</u>**

(a) Chicago Board Options Exchange, Incorporated (the “Exchange” or “CBOE”) proposes to adopt a process for disseminating two-sided indicative values in non-expiring series of S&P 500 Index ("SPX") options, when necessary, in the interests of fair and orderly markets (“End-of-Day Indicative Values”). The text of the proposed rule change is provided in Exhibit 5.

(b) Not applicable.

(c) Not applicable.

**Item 2. <u>Procedures of the Self-Regulatory Organization</u>**

(a) The Exchange’s President (or designee) pursuant to delegated authority approved the proposed rule change on September 13, 2017.

(b) Please refer questions and comments on the proposed rule change to Joanne Moffic-Silver, Executive Vice President, General Counsel, and Corporate Secretary, (312) 786-7462, or Kyle Edwards, (312) 786-7304, Chicago Board Options Exchange, Incorporated, 400 South LaSalle, Chicago, Illinois 60605.

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

(a) <u>Purpose</u>

The Exchange proposes to amend Interpretation and Policy .06 to Rule 6.2B (Hybrid Opening (and Sometimes Closing) System (“HOSS”)) to establish its aftermarket procedure for generating two-sided indicative values in certain series of SPX options (including series of SPX and SPXW). Specifically, proposed paragraph (a) would contain the current text of Interpretation and Policy .06 to Rule 6.2B, which the Exchange is not proposing to change, regarding the Exchange’s end-of-month process for disseminating after the close of trading bid and offer quotations that reflect a designated Lead Market-Maker's ("LMM's") calculated theoretical fair value of non-expiring series of SPX options as of time of the close of trading in the underlying cash market on the last business day of each calendar month. Proposed paragraph (b) of Interpretation and Policy .06 to Rule 6.2B would establish the Exchange's process for generating two-sided indicative values for non-expiring series of SPX options when the Exchange determines that it is necessary to publish such values in the interests of fair and orderly markets on trading days other than the final business day of a calendar month. The specific provisions of proposed paragraph (b) to Interpretation and Policy .06 to Rule 6.2B are discussed in detail below.

Background

The Exchange's opening and closing procedures are codified in Rules 6.2 (Trading Rotations), 6.2B (Hybrid Opening System ("HOSS")), and 24.13 (Trading Rotations).[1] In addition to describing the Exchange's normal opening and closing procedures, the Rules also provide for deviations from the Exchange's regular opening

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[1] Additional opening procedures for classes that are not traded on the Hybrid Trading System are also contained in Rule 6.2A (Rapid Opening System). The "Hybrid Trading System" refers to the Exchange's trading platform that allows Market-Makers to submit electronic quotes in their appointed classes and any connectivity to the foregoing trading platform that is administered by or on behalf of the Exchange, such as a communications hub. "Hybrid 3.0 Platform" is an electronic trading platform on the Hybrid Trading System that allows one or more quoters to submit electronic quotes which represent the aggregate Market-Maker quoting interest in a series for the trading crowd. References to "Hybrid," "Hybrid System," or "Hybrid Trading System" in the Exchange's Rules include all platforms unless otherwise provided by rule, including both the Hybrid and Hybrid 3.0 platforms. See Rule 1.1(aaa) (Definitions - Hybrid Trading System). Currently, all classes traded on the Exchange are traded on the Hybrid System as defined under Rule 1.1(aaa), with standard SPX options contracts being the only group of series of any class that is traded on the Hybrid 3.0 Platform.

and closing procedures, which, from time-to-time, the Exchange employs in the interests of fair and orderly markets under certain circumstances.[2] Pursuant to Rules 6.2, 6.2A, 6.2B and 24.13, the Exchange may, in the interests of a fair and orderly market, decide to employ special closing procedures after the normal close of a trading session.[3] For example, Interpretation and Policy .02 to Rule 6.2 provides that a closing trading rotation may be conducted in non-expiring options whenever two Floor Officials conclude, in their judgment, that such action is appropriate. Among the factors that may be considered in determining whether to conduct a closing rotation are whether there has been a recent opening or reopening of trading in the underlying security, a declaration of a "fast market" pursuant to Rule 6.6,[4] a need for a rotation in connection with expiring individual security options, an end of the year rotation, or the restart of a rotation which is already in progress.[5] Notably, Interpretation and Policy .02 to Rule 6.2 explicitly provides that the list of examples identified as factors that may be considered in determining whether to employ a closing rotation are exemplary, not exhaustive. In addition, Rule 6.2 expressly provides that the DPM or LMM appointed in the class may,

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2 Although Rule 6.2 pertains to trading rotations, Interpretation and Policy .02 to Rule 6.2 provides that the Designated Primary Market-Maker ("DPM") or LMM appointed in the class may deviate from any rotation policy or procedure issued by the Exchange with the approval of two Floor Officials. Rule 6.2B(h) is silent as to the type of closing procedure that may be employed in the interests of a fair and orderly market. Rule 24.13 references Rules 6.2 and 6.2B, indicating that the procedures set forth in those rules may be employed with respect to index options.

3 See Rules 6.2.02, 6.2.03, 6.2.05, 6.2B(h), 6.2B(f), and 24.13.01.

4 See Rule 6.6(a) (Unusual Market Conditions) (Whenever in the judgment of any two Floor Officials, because of an influx of orders or other unusual conditions or circumstances, the interest of maintaining a fair and orderly market so require, those Floor Officials may declare the market in one or more classes of option contracts to be "fast.").

5 See Rule 6.2.02.

with the approval of senior Help Desk personnel, deviate from any rotation policy or procedure issued by the Exchange. Such deviations from normal policies and procedures may include, for example, determinations to employ abbreviated closing rotation procedures pursuant to Interpretation and Policy .04 to Rule 6.2.

Similarly, Rule 6.2B(g) permits the Exchange to employ a closing rotation in series traded on the Hybrid Trading System. Under Rule 6.2B(h), the Exchange may decide to employ a closing rotation in a series after the end of the normal close of any trading session whenever the Exchange concludes that such action is appropriate in the interests of a fair and orderly market. Similar to Interpretation and Policy .02 to Rule 6.2, the list of factors that may be considered in determining whether to hold a closing rotation procedure include, but are not limited to, whether there has been a recent opening or reopening of trading in the underlying security, a declaration of a fast market, or a need for a closing procedure in connection with expiring individual security options, an end of the year procedure, or the restart of a procedure which is already in progress. Rule 6.2B(g) provides that senior Help Desk personnel and senior management may deviate from the standard manner of conducting a closing rotation in any option class if necessary in the interests of maintaining a fair and orderly market. Similarly, Rule 24.13 extends the closing rotation procedures in Rules 6.2 and 6.2B to index options products.[6]

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[6] Under Rule 24.13 (Trading Rotations), the Exchange may provide for the opening rotation to be conducted using the procedures as described in this Rule 24.13 or in Rule 6.2, or by use of the Exchange's Rapid Opening System as set forth in Rule 6.2A or the Exchange's Hybrid Opening System as set forth in Rule 6.2B. The DPM, LMM or Order Book Official (“OBO”), with the approval of two Floor Officials, may deviate from any rotation policy or procedure issued by the Exchange when they conclude in their judgment that such action is appropriate in the interests of a fair and orderly market.

In general, the Exchange's end-of-day bid and offer quotations are determined based on actual bids and offers displayed in market as of the close of trading on the Exchange. These final end-of-day bids and offer are used by various market participants, which may include broker-dealers, mutual funds, hedge funds, advisory firms, and clearing houses, for different business and risk-related functions such as portfolio performance analyses, daily profit and loss reports. On certain trading days, however, market conditions may cause Market-Makers to widen or remove their quotes from the market during the final moments of trading in order to mitigate the risk and uncertainty associated with carrying overnight positions and the possibility of hedges being unavailable to offset such risk after the close of trading. Additionally, synchronization issues may cause Market-Makers to widen or remove their quotes from the market during the final moments of trading if their feed from the underlying futures markets are not synchronized with the Exchange's close of trading. In these instances, resulting quotations may not reflect true market pricing, which may artificially affect the Net Asset Value ("NAV") of mutual funds, portfolio managers' performance indicators, and institutional and retail capital requirements. Consistent with the discretion afforded to the Exchange under Rules 6.2A, 6.2B, and 24.13, as discussed above, the Exchange may conduct special closing procedures to ensure that the end-of-day pricing is consistent with actual market conditions as of the close of trading if it concludes that deviation from the Exchange's standard closing procedures is appropriate in the interests of fair and orderly markets. In such cases, in addition to publishing the actual end-of-day bid and offer quotations displayed in market as of the close of trading, the Exchange provides notice to Trading Permit Holders ("TPHs") that a second set of quotations, determined based on an objectively selected Market-Maker's algorithmically generated bid and offer quotations in affected series, will be disseminated after the close of trading pursuant to special closing procedures. In an effort to enhance and increase transparency around the end-of-day process, the Exchange proposes to change the way that it deals with wide and absent quotations in non-expiring series of SPX on days other than the final business day of each calendar month by adding to the Rules a procedure for disseminating clearly marked two-sided indicative values, derived from previously displayed firm quotations and orders or generally accepted volatility and options pricing models after the close of trading.

Proposal

The Exchange proposes to adopt paragraph (b) to Interpretation and Policy .06 to Rule 6.2B to describe its end-of-day process for formulating two-sided indicative values for certain series of SPX options when necessary in the interests of fair and orderly markets. Specifically, proposed paragraph (b) of Interpretation and Policy .06 to Rule 6.2B would provide that following the close of trading on any trading day that is not the last business day of a calendar month, in addition to the Exchange's regular end-of-day quotations, the Exchange may determine, on a series-by-series basis, to disseminate two-sided indicative values in non-expiring series of SPX options in the interests of fair and orderly markets. Under the proposed rule, the determination to disseminate two-sided end-of-day indicative values would be made by the Exchange based on various sets of objective criteria such as the absence of any bid or offer in the series, whether the bid-ask differential in a series is unreasonably or extraordinarily wide in relation to the quote widths that existed in series during trading, or whether the midpoint between the quotes in the series moved by a certain amount within the final moments of trading.[7]

The Exchange would algorithmically derive such two-sided indicative values, on a series-by-series basis, based on the last displayed quotations and orders that meet an objective measure of reasonability (e.g., quotes and orders that create a bid-ask differential that is not wider than a particular amount) prior to the close of trading. The Exchange notes that quotes and orders that meet the reasonability criteria typically exist within 15 minutes of the close of trading. In the absence of quotes and orders in the series that meet the objective reasonability criteria, two-sided indicative values would be generated using generally accepted volatility and options pricing models (e.g., Black Scholes) as determined by the Exchange. The Exchange would apply the model to a set of data points (i.e. displayed quotations and orders) over a period of time prior to the close of trading to calculate implied volatility for all series within the data set and generate a volatility surface. Outlier data points (wide quotes or no bid series) would be removed from the calculation pursuant to a set of objective criteria. Using the derived volatility surface and ensuring that prices do not cross through closing bid/ask quotes (i.e., model-generated price cannot be lower than the market's highest bid price or greater than the lowest offer price), the Exchange would back out midpoint prices for all series

7 This process would not change the end-of-month fair value process, which is described in current Interpretation and Policy .06 to Rule 6.2B and which would become paragraph (a) to Interpretation and Policy .06 to Rule 6.2B under the Exchange's proposal. In addition, the rule text would provide that the Exchange may determine, on a series-by-series basis, to disseminate two-sided indicative values in non-expiring series of SPX options only. This process would not be applicable to expiring series of SPX options as those series would be settled at the final cash market closing value (i.e. intrinsic value at expiration).

and then generate two-sided indicative values around those midpoints, and the created spread would vary depending on series.

Two-sided indicative values would be disseminated via the Options Price Reporting Authority ("OPRA") and CBOE Streaming Markets ("CSM"). Consistent with the last sentence of proposed Interpretation and Policy .06(b) to Rule 6.2B, which provides that two-sided indicative values would be clearly identified in an appropriate manner as determined by the Exchange, two-sided indicative values would be sent to OPRA with a specific message indicator (i.e. message type "I") that has been adopted by OPRA solely for the purpose of disseminating after-market indicative value information. Pursuant to OPRA message specifications, the new "I" message type would only be applicable to and active for messages sent after the close of trading of regular trading hours, which would be enforced to only allow "I" messages to be disseminated after 4:15 p.m. ET. The "I" indicator will not be disseminated for quotes generated during an extended trading hours session. The Exchange has communicated and worked with other OPRA reporting entities to ensure that within the industry, the transmission of aftermarket messages types marked "I" is defined within the OPRA message specifications and understood to be used to delineate informational two-sided indicative values. Pursuant to the proposed rule text, these OPRA message specifications and the "I" indicator would be further described and communicated to market participants via Regulatory Circular.

(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.[8] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[9] 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)[10] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In particular, the Exchange believes that generating end-of-day indicative values will serve to protect investors and the public interest by giving market participants another value to reference, if, for example, market participants believe the end-of-day indicative values are more accurate than the actual end-of-day values. The Exchange believes that the proposed procedure is a reasonable procedure permitting the Exchange to disseminate informational indicative values more reflective of actual options values in addition to final end-of-day displayed quotations when members' systems issues or market conditions result in an absence of final quotes or extraordinarily wide final quotes without interfering in the markets or impeding any market functionalities that rely on accurate pricing or end-of-day quotes. The Exchange believes that such procedures may

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8 15 U.S.C. 78f(b).

9 15 U.S.C. 78f(b)(5).

10 Id.

be especially appropriate given the fact that wide or no-bid closing prices may be a reflection of prudent risk control measures, which may cause market participants to widen or pull quotations from the market prior to the close of trading in order to avoid carrying overnight positions or taking on positions while appropriate hedging instruments are unavailable. The Exchange also believes that its proposal is consistent with the Commission's recent emphasis on the need for exchanges to adopt measures to protect investors by dampening the effects of unrepresentative market volatility on market participants.[11]

Additionally, the Exchange believes that the proposed rule change, which simply proposes to make additional information regarding the indicative market value(s) of select SPX options available to market participants after the close of the markets is consistent with its trading rules and the Act. The proposed rule does not seek to modify any rules relating to or impacting the way in which options transactions are handled, represented, executed, or reported on the Exchange. Rather, the Exchange is simply proposing to make additional information available to market participants under certain circumstances in which such information may be informative or useful. This information would not be disseminated during trading hours and would be clearly marked to denote

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11 The Exchange also notes the Commission's emphasis on the need for exchanges to adopt measures to dampen and protect against excessive risk and market volatility. See, e.g., 15 U.S.C. 240.15c3-5 (Risk Management Controls for Brokers or Dealers with Market Access); Securities Exchange Act Release No. 34-67091 (May 31, 2011), (Order Approving, on a Pilot Basis, the National Market System Plan to Address Extraordinary Market Volatility), File No. 4-631. Various exchanges have also instituted precautionary systematic controls to assist market participants in limiting exposure and ensuring against excessive risk-taking. See, e.g., Nasdaq ISE, LLC Rule 804(g) (Automated Quotation Adjustments); Nasdaq Stock Market LLC Rule 6130 (NASDAQ Kill Switch); see also Rule 8.18 (Quote Risk Monitor Mechanism).

that it is informational only. The Exchange also believes that its proposal is consistent with current Rules 6.2, 6.2A, 6.2B and 24.13, which provide that the Exchange may, in the interests of a fair and orderly market, decide to employ the end-of-day indicative value process after the normal close of a trading session.

**Item 4. <u>Self-Regulatory Organization's Statement on Burden on Competition</u>**

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 proposed rule change merely seeks to describe procedures that may be employed at the Exchange. The proposed procedures will be equally applied to affect all market participants equally in the options market. Furthermore, when the Exchange employs the end-of-day indicative value process, market participants determine whether to utilize the indicative value.

**Item 5. <u>Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others</u>**

The Exchange neither solicited nor received written comments on the proposed rule change.

**Item 6. <u>Extension of Time Period for Commission Action</u>**

Not applicable.

**Item 7. <u>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)</u>**

(a) The proposed rule change is filed for immediate effectiveness pursuant to Section 19(b)(3)(A) of Act[12] and Rule 19b-4(f)(6)[13] thereunder.

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[12] 15 U.S.C. 78s(b)(3)(A).

[13] 17 CFR 240.19b-4(f)(6).

(b) The Exchange designates that the proposed rule change effects a change that (i) does not significantly affect the protection of investors or the public interest; (ii) does not impose any significant burden on competition; and (iii) by its terms, does not become operative for 30 days after the date of the filing, or such shorter time as the Commission may designate if consistent with the protection of investors and the public interest. Additionally, the Exchange has given 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 does not believe that its current proposal is novel or controversial. The proposed rule does not seek to modify any rules relating to or impacting the way in which options transactions are handled, represented, executed, or reported on the Exchange or seek to change any permitted trading practices on the Exchange. Rather, the Exchange is simply proposing to make additional information regarding the indicative market value(s) of select SPX options available to market participants under certain circumstances in which such information may be informative or useful. This information would not be disseminated during trading hours and would be clearly marked to denote that it is informational only. The Exchange has worked with industry groups and other markets to develop a specific message indicator for these after-market derived values ensure that it will be clear that the Exchange is disseminating after-hours indicative value data for information purposes only and, through the process of developing this message indicator with other industry groups and markets, has educated market participants as to the meaning of the after-market messages the Exchange proposes to send out.

Furthermore, the Exchange's proposal is consistent with current Rules 6.2, 6.2A, 6.2B and 24.13, which provide that the Exchange may, in the interests of a fair and orderly market, decide to employ the end-of-day indicative value process after the normal close of a trading session.[14]

The proposed end-of-day indicative value process is similar in concept and construct to the end-of-month indicative value process (i.e., proposed paragraph (a) of that is currently in place. As such, this proposal is not novel or controversial and is consistent with the Exchange's trading rules and with the Act. The Exchange does not propose to modify any trading rules or practices on the Exchange, but rather simply seeks to adopt a procedure to provide additional after-market information to market participants that may be useful or informative when, for example, market participants believe the end-of-day indicative values are more accurate than the actual end-of-day values. Accordingly, the Exchange believes that this rule filing qualifies as a "non-controversial" rule change under Rule 19b-4(f)(6), which renders the proposed rule change effective upon filing with the Commission. At any time within 60 days of the filing of this proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission will institute proceedings to determine whether the proposed rule change should be approved or disapproved.

(c) Not applicable.

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[14] See Rules 6.2.02, 6.2.03, 6.2.05, 6.2B(h), 6.2B(f), and 24.13.01.

(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.

Exhibit 5. Proposed rule text.

EXHIBIT 1

**SECURITIES AND EXCHANGE COMMISSION**

[Release No. 34- ; File No. SR-CBOE-2017-062]

[Insert date]

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Permit the Exchange to Publish End-of-Day Indicative Values in SPX After the Close of Regular Trading Hours in SPX

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),[1] and Rule 19b-4 thereunder,[2] notice is hereby given that on [insert date], Chicago Board Options Exchange, Incorporated (the “Exchange” or “CBOE”) 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 Exchange filed the proposal as a “non-controversial” proposed rule change pursuant to Section 19(b)(3)(A)(iii) of the Act[3] and Rule 19b-4(f)(6) thereunder.[4] 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 adopt a process for disseminating two-sided indicative values in non-expiring series of S&P 500 Index ("SPX") options, when necessary, in the interests of fair and orderly markets (“End-of-Day Indicative Values”).

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1 15 U.S.C. 78s(b)(1).

2 17 CFR 240.19b-4.

3 15 U.S.C. 78s(b)(3)(A)(iii).

4 17 CFR 240.19b-4(f)(6).

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 Exchange proposes to amend Interpretation and Policy .06 to Rule 6.2B (Hybrid Opening (and Sometimes Closing) System ("HOSS")) to establish its aftermarket procedure for generating two-sided indicative values in certain series of SPX options (including series of SPX and SPXW). Specifically, proposed paragraph (a) would contain the current text of Interpretation and Policy .06 to Rule 6.2B, which the Exchange is not proposing to change, regarding the Exchange's end-of-month process for disseminating after the close of trading bid and offer quotations that reflect a designated Lead Market-Maker's ("LMM's") calculated theoretical fair value of non-expiring series of SPX options as of time of the close of trading in the underlying cash market on the last business day of each calendar month. Proposed paragraph (b) of Interpretation and Policy .06 to Rule 6.2B would establish the Exchange's process for generating two-sided indicative values for non-expiring series of SPX options when the Exchange determines that it is necessary to publish such values in the interests of fair and orderly markets on trading days other than the final business day of a calendar month. The specific provisions of proposed paragraph (b) to Interpretation and Policy .06 to Rule 6.2B are discussed in detail below.

Background

The Exchange's opening and closing procedures are codified in Rules 6.2 (Trading Rotations), 6.2B (Hybrid Opening System ("HOSS")), and 24.13 (Trading Rotations).[5] In addition to describing the Exchange's normal opening and closing procedures, the Rules also provide for deviations from the Exchange's regular opening and closing procedures, which, from time-to-time, the Exchange employs in the interests of fair and orderly markets under certain circumstances.[6] Pursuant to Rules 6.2, 6.2A, 6.2B and 24.13, the Exchange may, in the interests of a fair and orderly market, decide to

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5 Additional opening procedures for classes that are not traded on the Hybrid Trading System are also contained in Rule 6.2A (Rapid Opening System). The "Hybrid Trading System" refers to the Exchange's trading platform that allows Market-Makers to submit electronic quotes in their appointed classes and any connectivity to the foregoing trading platform that is administered by or on behalf of the Exchange, such as a communications hub. "Hybrid 3.0 Platform" is an electronic trading platform on the Hybrid Trading System that allows one or more quoters to submit electronic quotes which represent the aggregate Market-Maker quoting interest in a series for the trading crowd. References to "Hybrid," "Hybrid System," or "Hybrid Trading System" in the Exchange's Rules include all platforms unless otherwise provided by rule, including both the Hybrid and Hybrid 3.0 platforms. See Rule 1.1(aaa) (Definitions - Hybrid Trading System). Currently, all classes traded on the Exchange are traded on the Hybrid System as defined under Rule 1.1(aaa), with standard SPX options contracts being the only group of series of any class that is traded on the Hybrid 3.0 Platform.

6 Although Rule 6.2 pertains to trading rotations, Interpretation and Policy .02 to Rule 6.2 provides that the Designated Primary Market-Maker ("DPM") or LMM appointed in the class may deviate from any rotation policy or procedure issued by the Exchange with the approval of two Floor Officials. Rule 6.2B(h) is silent as to the type of closing procedure that may be employed in the interests of a fair and orderly market. Rule 24.13 references Rules 6.2 and 6.2B, indicating that the procedures set forth in those rules may be employed with respect to index options.

employ special closing procedures after the normal close of a trading session.[7] For example, Interpretation and Policy .02 to Rule 6.2 provides that a closing trading rotation may be conducted in non-expiring options whenever two Floor Officials conclude, in their judgment, that such action is appropriate. Among the factors that may be considered in determining whether to conduct a closing rotation are whether there has been a recent opening or reopening of trading in the underlying security, a declaration of a "fast market" pursuant to Rule 6.6,[8] a need for a rotation in connection with expiring individual security options, an end of the year rotation, or the restart of a rotation which is already in progress.[9] Notably, Interpretation and Policy .02 to Rule 6.2 explicitly provides that the list of examples identified as factors that may be considered in determining whether to employ a closing rotation are exemplary, not exhaustive. In addition, Rule 6.2 expressly provides that the DPM or LMM appointed in the class may, with the approval of senior Help Desk personnel, deviate from any rotation policy or procedure issued by the Exchange. Such deviations from normal policies and procedures may include, for example, determinations to employ abbreviated closing rotation procedures pursuant to Interpretation and Policy .04 to Rule 6.2.

Similarly, Rule 6.2B(g) permits the Exchange to employ a closing rotation in series traded on the Hybrid Trading System. Under Rule 6.2B(h), the Exchange may decide to employ a closing rotation in a series after the end of the normal close of any

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7 See Rules 6.2.02, 6.2.03, 6.2.05, 6.2B(h), 6.2B(f), and 24.13.01.

8 See Rule 6.6(a) (Unusual Market Conditions) (Whenever in the judgment of any two Floor Officials, because of an influx of orders or other unusual conditions or circumstances, the interest of maintaining a fair and orderly market so require, those Floor Officials may declare the market in one or more classes of option contracts to be "fast.").

9 See Rule 6.2.02.

trading session whenever the Exchange concludes that such action is appropriate in the interests of a fair and orderly market. Similar to Interpretation and Policy .02 to Rule 6.2, the list of factors that may be considered in determining whether to hold a closing rotation procedure include, but are not limited to, whether there has been a recent opening or reopening of trading in the underlying security, a declaration of a fast market, or a need for a closing procedure in connection with expiring individual security options, an end of the year procedure, or the restart of a procedure which is already in progress. Rule 6.2B(g) provides that senior Help Desk personnel and senior management may deviate from the standard manner of conducting a closing rotation in any option class if necessary in the interests of maintaining a fair and orderly market. Similarly, Rule 24.13 extends the closing rotation procedures in Rules 6.2 and 6.2B to index options products.[10]

In general, the Exchange's end-of-day bid and offer quotations are determined based on actual bids and offers displayed in market as of the close of trading on the Exchange. These final end-of-day bids and offer are used by various market participants, which may include broker-dealers, mutual funds, hedge funds, advisory firms, and clearing houses, for different business and risk-related functions such as portfolio performance analyses, daily profit and loss reports. On certain trading days, however, market conditions may cause Market-Makers to widen or remove their quotes from the market during the final moments of trading in order to mitigate the risk and uncertainty

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[10] Under Rule 24.13 (Trading Rotations), the Exchange may provide for the opening rotation to be conducted using the procedures as described in this Rule 24.13 or in Rule 6.2, or by use of the Exchange's Rapid Opening System as set forth in Rule 6.2A or the Exchange's Hybrid Opening System as set forth in Rule 6.2B. The DPM, LMM or Order Book Official ("OBO"), with the approval of two Floor Officials, may deviate from any rotation policy or procedure issued by the Exchange when they conclude in their judgment that such action is appropriate in the interests of a fair and orderly market.

associated with carrying overnight positions and the possibility of hedges being unavailable to offset such risk after the close of trading. Additionally, synchronization issues may cause Market-Makers to widen or remove their quotes from the market during the final moments of trading if their feed from the underlying futures markets are not synchronized with the Exchange's close of trading. In these instances, resulting quotations may not reflect true market pricing, which may artificially affect the Net Asset Value ("NAV") of mutual funds, portfolio managers' performance indicators, and institutional and retail capital requirements. Consistent with the discretion afforded to the Exchange under Rules 6.2A, 6.2B, and 24.13, as discussed above, the Exchange may conduct special closing procedures to ensure that the end-of-day pricing is consistent with actual market conditions as of the close of trading if it concludes that deviation from the Exchange's standard closing procedures is appropriate in the interests of fair and orderly markets. In such cases, in addition to publishing the actual end-of-day bid and offer quotations displayed in market as of the close of trading, the Exchange provides notice to Trading Permit Holders ("TPHs") that a second set of quotations, determined based on an objectively selected Market-Maker's algorithmically generated bid and offer quotations in affected series, will be disseminated after the close of trading pursuant to special closing procedures. In an effort to enhance and increase transparency around the end-of-day process, the Exchange proposes to change the way that it deals with wide and absent quotations in non-expiring series of SPX on days other than the final business day of each calendar month by adding to the Rules a procedure for disseminating clearly marked two-sided indicative values, derived from previously displayed firm quotations and orders or generally accepted volatility and options pricing models after the close of trading.

Proposal

The Exchange proposes to adopt paragraph (b) to Interpretation and Policy .06 to Rule 6.2B to describe its end-of-day process for formulating two-sided indicative values for certain series of SPX options when necessary in the interests of fair and orderly markets. Specifically, proposed paragraph (b) of Interpretation and Policy .06 to Rule 6.2B would provide that following the close of trading on any trading day that is not the last business day of a calendar month, in addition to the Exchange's regular end-of-day quotations, the Exchange may determine, on a series-by-series basis, to disseminate two-sided indicative values in non-expiring series of SPX options in the interests of fair and orderly markets. Under the proposed rule, the determination to disseminate two-sided end-of-day indicative values would be made by the Exchange based on various sets of objective criteria such as the absence of any bid or offer in the series, whether the bid-ask differential in a series is unreasonably or extraordinarily wide in relation to the quote widths that existed in series during trading, or whether the midpoint between the quotes in the series moved by a certain amount within the final moments of trading.[11]

The Exchange would algorithmically derive such two-sided indicative values, on a series-by-series basis, based on the last displayed quotations and orders that meet an objective measure of reasonability (e.g., quotes and orders that create a bid-ask differential that is not wider than a particular amount) prior to the close of trading. The

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11 This process would not change the end-of-month fair value process, which is described in current Interpretation and Policy .06 to Rule 6.2B and which would become paragraph (a) to Interpretation and Policy .06 to Rule 6.2B under the Exchange's proposal. In addition, the rule text would provide that the Exchange may determine, on a series-by-series basis, to disseminate two-sided indicative values in non-expiring series of SPX options only. This process would not be applicable to expiring series of SPX options as those series would be settled at the final cash market closing value (i.e. intrinsic value at expiration).

Exchange notes that quotes and orders that meet the reasonability criteria typically exist within 15 minutes of the close of trading. In the absence of quotes and orders in the series that meet the objective reasonability criteria, two-sided indicative values would be generated using generally accepted volatility and options pricing models (e.g., Black Scholes) as determined by the Exchange. The Exchange would apply the model to a set of data points (i.e. displayed quotations and orders) over a period of time prior to the close of trading to calculate implied volatility for all series within the data set and generate a volatility surface. Outlier data points (wide quotes or no bid series) would be removed from the calculation pursuant to a set of objective criteria. Using the derived volatility surface and ensuring that prices do not cross through closing bid/ask quotes (i.e., model-generated price cannot be lower than the market's highest bid price or greater than the lowest offer price), the Exchange would back out midpoint prices for all series and then generate two-sided indicative values around those midpoints, and the created spread would vary depending on series.

Two-sided indicative values would be disseminated via the Options Price Reporting Authority ("OPRA") and CBOE Streaming Markets ("CSM"). Consistent with the last sentence of proposed Interpretation and Policy .06(b) to Rule 6.2B, which provides that two-sided indicative values would be clearly identified in an appropriate manner as determined by the Exchange, two-sided indicative values would be sent to OPRA with a specific message indicator (i.e. message type "I") that has been adopted by OPRA solely for the purpose of disseminating after-market indicative value information. Pursuant to OPRA message specifications, the new "I" message type would only be applicable to and active for messages sent after the close of trading of regular trading hours, which would be enforced to only allow "I" messages to be disseminated after 4:15 p.m. ET. The "I" indicator will not be disseminated for quotes generated during an extended trading hours session. The Exchange has communicated and worked with other OPRA reporting entities to ensure that within the industry, the transmission of aftermarket messages types marked "I" is defined within the OPRA message specifications and understood to be used to delineate informational two-sided indicative values. Pursuant to the proposed rule text, these OPRA message specifications and the "I" indicator would be further described and communicated to market participants via Regulatory Circular.

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.[12] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[13] 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

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[12] 15 U.S.C. 78f(b).

[13] 15 U.S.C. 78f(b)(5).

the Section 6(b)(5)[14] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In particular, the Exchange believes that generating end-of-day indicative values will serve to protect investors and the public interest by giving market participants another value to reference, if, for example, market participants believe the end-of-day indicative values are more accurate than the actual end-of-day values. The Exchange believes that the proposed procedure is a reasonable procedure permitting the Exchange to disseminate informational indicative values more reflective of actual options values in addition to final end-of-day displayed quotations when members' systems issues or market conditions result in an absence of final quotes or extraordinarily wide final quotes without interfering in the markets or impeding any market functionalities that rely on accurate pricing or end-of-day quotes. The Exchange believes that such procedures may be especially appropriate given the fact that wide or no-bid closing prices may be a reflection of prudent risk control measures, which may cause market participants to widen or pull quotations from the market prior to the close of trading in order to avoid carrying overnight positions or taking on positions while appropriate hedging instruments are unavailable. The Exchange also believes that its proposal is consistent with the Commission's recent emphasis on the need for exchanges to adopt measures to protect investors by dampening the effects of unrepresentative market volatility on market participants.[15]

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[14] Id.

[15] The Exchange also notes the Commission's emphasis on the need for exchanges to adopt measures to dampen and protect against excessive risk and market volatility. See, e.g., 15 U.S.C. 240.15c3-5 (Risk Management Controls for Brokers or Dealers with Market Access); Securities Exchange Act Release No.

Additionally, the Exchange believes that the proposed rule change, which simply proposes to make additional information regarding the indicative market value(s) of select SPX options available to market participants after the close of the markets is consistent with its trading rules and the Act. The proposed rule does not seek to modify any rules relating to or impacting the way in which options transactions are handled, represented, executed, or reported on the Exchange. Rather, the Exchange is simply proposing to make additional information available to market participants under certain circumstances in which such information may be informative or useful. This information would not be disseminated during trading hours and would be clearly marked to denote that it is informational only. The Exchange also believes that its proposal is consistent with current Rules 6.2, 6.2A, 6.2B and 24.13, which provide that the Exchange may, in the interests of a fair and orderly market, decide to employ the end-of-day indicative value process after the normal close of a trading session.

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 proposed rule change merely seeks to describe procedures that may be employed at the Exchange. The proposed procedures will be equally applied to affect all market participants equally in the options market. Furthermore, when the Exchange

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34-67091 (May 31, 2011), (Order Approving, on a Pilot Basis, the National Market System Plan to Address Extraordinary Market Volatility), File No. 4-631. Various exchanges have also instituted precautionary systematic controls to assist market participants in limiting exposure and ensuring against excessive risk-taking. See, e.g., Nasdaq ISE, LLC Rule 804(g) (Automated Quotation Adjustments); Nasdaq Stock Market LLC Rule 6130 (NASDAQ Kill Switch); see also Rule 8.18 (Quote Risk Monitor Mechanism).

employs the end-of-day indicative value process, market participants determine whether to utilize the indicative value.

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 written 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:

A. significantly affect the protection of investors or the public interest;

B. impose any significant burden on competition; and

C. 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) of the Act[16] and Rule 19b-4(f)(6)[17] thereunder. 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 necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission will institute proceedings to determine whether the proposed rule change 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

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[16] 15 U.S.C. 78s(b)(3)(A).

[17] 17 CFR 240.19b-4(f)(6).

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. Please include File Number SR-CBOE-2017-062 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-2017-062. 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, D.C. 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; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-CBOE-2017-062 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.[18]

Secretary

[18] 17 CFR 200.30-3(a)(12).

EXHIBIT 5

(additions are underlined; deletions are [bracketed])

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**Chicago Board Options Exchange, Incorporated**
**Rules**

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**Rule 6.2B. Hybrid Opening (and Sometimes Closing) System ("HOSS")**
(a) – (h) No change.

***. . . Interpretations and Policies:***

**.01 - .05** No change.

**.06** *Aftermarket Valuation Processes:*

(a) End-of-Month Theoretical Fair Value: [*SPX Non-Trading Rotations*.] Following the close of trading on the last business day of each calendar month, the Exchange will conduct special non-trading closing rotations for each series of S&P 500 Index ("SPX") options in order to determine the theoretical "fair value" of such series as of time of the close of trading in the underlying cash market. During such special non-trading closing rotations, an LMM in the SPX options designated by the Exchange in each series of SPX options, will provide bid and offer quotations, the midpoint of which will reflect the theoretical fair value of the series of SPX options, as determined by the LMM pursuant to the LMM's algorithmic analysis of relevant and available data. Notwithstanding that trading in SPX options on the Exchange continues until fifteen minutes after the close of trading in the underlying cash market, on the last business day of each month, after the close of trading, the Exchange shall disseminate the fair value quotations as of the close of trading in the underlying cash market provided by the designated LMM as the quotations used to calculate the theoretical fair value for each series of SPX options, provided, however, that the Exchange may determine, in the interest of fair and orderly markets, not to disseminate such quotations.

(b) End-of-Day Indicative Value: Following the close of trading of Regular Trading Hours on any trading day that is not the last business day of a calendar month, in addition to the Exchange's regular end-of-day quotations, the Exchange may determine, on a series-by-series basis, to disseminate two-sided indicative values in non-expiring series of SPX options in the interests of fair and orderly markets. The Exchange will derive end-of-day indicative values for series of SPX options using an algorithm based on quotations and orders displayed in series of SPX options prior to the close of trading or, in the absence of sufficient quote and order data in a series, using generally accepted volatility and options pricing models as determined by the Exchange. End-of-day indicative values shall be clearly identified and disseminated via the Options Price Reporting Authority in an appropriate manner as determined by the Exchange and announced via Regulatory Circular.

**.07** No change.

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