

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-54192; File No. SR-CBOE-2006-27)

July 21, 2006

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Notice of Filing and Order Granting Accelerated Approval of Proposed Rule Change and Amendment No. 1 Thereto Relating to Strike Price Intervals for VIX Options

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> notice is hereby given that on March 15, 2006, the Chicago Board Options Exchange, Incorporated (“CBOE” or “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. On July 19, 2006, the CBOE filed Amendment No. 1 to the proposed rule change.<sup>3</sup> The Commission is publishing this notice and order to solicit comments on the proposal from interested persons and to approve the proposed rule change, as amended, on an accelerated basis.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes rules that would permit the Exchange to list and trade VIX options in \$1 strike price intervals within certain parameters. The text of the proposed rule change, as amended, is below. Proposed new language is underlined.

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Rule 24.9 Terms of Index Option Contracts

No change

...Interpretations and Policies:

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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> Amendment No. 1 replaced and superseded the original rule filing in its entirety.

.01 The procedures for adding and deleting strike prices for index options are provided in Rule 5.5 and Interpretations and Policies related thereto, as otherwise generally provided by Rule 24.9, and include the following:

(a) – (d) No change

(e) (i) Notwithstanding paragraph (a), the interval between strike prices for options on the CBOE Volatility Index (VIX) will be no less than \$2.50; provided, that subject to the following conditions, the interval between strike prices for VIX will be no less than \$1.00:

(A) The Exchange may open for trading series at \$1.00 or greater strike price intervals for each expiration on up to 5 VIX option series above and 5 VIX option series below the current index level;

(B) The Exchange may open for trading additional series at \$1.00 or greater strike price intervals for each expiration as the current index level of VIX moves from the exercise price of those VIX options series that already have been opened for trading on the Exchange so as to maintain at least 5 VIX option series above and 5 VIX option series below the current index level;

(C) The Exchange may not open for trading series with \$1.00 intervals within \$0.50 of an existing \$2.50 strike price with the same expiration month; and

(D) The interval between strike prices for VIX LEAPs will be no less than \$2.50.

(ii) For the purposes of adding strike prices on options on VIX at \$1.00 or greater strike price intervals, as well as at \$2.50 or greater strike price intervals, the "current index level" shall mean the implied forward level based on VIX futures prices.

.02 - .14 No change.

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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. The text of these statements may be examined at the places specified in Item III 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 the Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of the proposed rule change is to permit the Exchange to list and trade options on the CBOE Volatility Index ("VIX") in \$1 strike price intervals within certain parameters described below.<sup>4</sup> VIX is calculated using real-time quotes of out-of-the-money and at-the-money nearby and second nearby index puts and calls on the S&P 500 Index ("SPX"). Generally, VIX provides investors with up-to-the-minute market estimates of expected volatility of the S&P 500 Index.

VIX is quoted in absolute numbers that represent the volatility of the S&P 500 Index in percentage points per annum. For example, an index level of 12.66 (the closing value of the VIX on March 7, 2006) represents an annualized volatility of 12.66% in the S&P 500 Index. The VIX level fluctuates quite differently than individual equity securities or indexes of individual equity securities. Specifically, the Exchange states that indices such as VIX that track volatility are

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<sup>4</sup> The Commission has also granted approval for CBOE to list options on the increased-value version of VIX ("Increased-Value VIX") (see Securities Exchange Act Release No. 49698 (May 13, 2004), 69 FR 29152 (May 20, 2004) (Notice of Filing and Order Granting Accelerated Approval of a Proposed Rule Change by the Chicago Board Options Exchange, Incorporated Relating to Options on Certain CBOE Volatility Indexes)). This proposed rule change does not apply to options on Increased-Value VIX.

“mean-reverting,” which is a statistical way of saying that there is a strong tendency for the volatility index to move toward its long-term historical average level. In other words, at historically low volatility index levels, there is a higher probability that the next big move will be up rather than down. Conversely, at historically high volatility index levels, the next big move is more likely to be down rather than up.

Thus, as exemplified by VIX, the Exchange states volatility indexes tend to move within set ranges, and even when a level moves outside that range, the tendency towards mean-reversion often results in the volatility index returning to a level within the range. In the case of VIX, the historical average of VIX since 1990 is 19.4 and has closed at levels from a low of 9.3 to a high of 45.7. Since January 1, 2004, VIX has fluctuated in a narrow range between a level of 10.2 and a level of 21.6. Furthermore, VIX closed under 25 for 82% of the days on which the level was calculated since 1990 (3,360 days out of a total of 4,078 days) and has closed under 30 for 93% of the days on which the level was calculated since 1990 (3,791 days out of a total of 4,078 days).

Under current CBOE rules, the Exchange may only list strikes on VIX options with intervals no less than \$2.50. Therefore, the Exchange currently lists strikes on puts and calls on VIX options at 10, 12.50, 15, 17.50, 20, 22.5 and 25. However, because of the generally limited range in which VIX has fluctuated, the Exchange believes that investors will be better served if the Exchange is able to list \$1 strike price intervals in VIX option series. To address this, the Exchange is proposing to list series at \$1 or greater strike price intervals for each expiration on up to 5 VIX option series above and 5 VIX option series below the current index level. Additional series at \$1.00 or greater strike price intervals could be listed for each expiration as the current index level of VIX moves from the exercise price of the VIX options series that already have been

opened for trading on the Exchange in order to maintain at least 5 VIX option series above and 5 VIX option series below the current index level. For purposes of adding strike prices at \$1.00 or greater strike price intervals, as well as at \$2.50 or greater strike price intervals, the “current index level” would be defined as the “implied forward level” of VIX for each expiration.<sup>5</sup> The Exchange intends to determine implied forward levels of VIX through the use of VIX futures prices. Its reasons for using this approach are explained below.

By way of background, the Exchange states that option prices reflect the market’s expectation of the price of the underlying at expiration, which is referred to as the “forward” level. For stock indexes such as the SPX and the S&P 100 (“OEX”), the best estimate of the forward level is the current, or “spot,” price adjusted for the “carry,” which is the financing cost of owning the component stocks in the index less the dividends paid by those stocks. For VIX, the Exchange states that a better estimate than the standard “cash and carry” model for calculating the forward levels of VIX at each expiration is reflected in the prices of the options that will be used to calculate VIX on that expiration day. For example, September SPX options will be used to calculate VIX on the August VIX expiration date. Likewise, November VIX options are tied to the implied volatility of December SPX options, and so on.

The Exchange states that one important property of implied volatility is that it exhibits a “term structure.” In other words, the VIX volatility of options expiring on different dates can

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<sup>5</sup> With respect to \$2.50 or greater strikes, the \$2.50 or greater strike price intervals will be reasonably related to the current index value of VIX at or about the time such series are first opened for trading. The term “reasonably related to the current index value of the underlying index” means that the exercise price is within 30% of the current index value. The Exchange may also open additional \$2.50 or greater strike price series that are more than 30% away from the current index value, provided that demonstrated customer interest exists for such series, as expressed by institutional, corporate, or individual customers or their brokers. See Interpretations and Policies .01(d) and .04 of Rule 24.9.

trade at different levels and can move independently. Another property related to the term structure is that implied volatility tends to trend toward the market's expectation of a long-term "average" value. As a result, the Exchange states that a large spike in one-month implied volatility might not affect implied volatility of longer-dated options very much at all. For example, the following table illustrates the recent behavior of forward VIX levels relative to dramatic change in the current VIX price.

<b>VIX Expiration Month</b>	<b>Based on SPX options expiring in...</b>	<b>VIX Forward Prices (5/5/06)</b>	<b>VIX Forward Prices (5/19/06)</b>	<b>Change</b>
<b>Spot VIX</b>		<b>11.62</b>	<b>17.18</b>	<b>+5.56</b>
<b>JUN 2006</b>	<b>JUL 2006</b>	<b>12.55</b>	<b>14.86</b>	<b>+2.31</b>
<b>AUG 2006</b>	<b>SEP 2006</b>	<b>13.66</b>	<b>14.67</b>	<b>+1.01</b>
<b>NOV 2006</b>	<b>DEC 2006</b>	<b>14.59</b>	<b>15.10</b>	<b>+0.51</b>
<b>FEB 2007</b>	<b>MAR 2007</b>	<b>15.27</b>	<b>15.46</b>	<b>+0.19</b>
<b>MAY 2007</b>	<b>JUN 2007</b>	<b>15.75</b>	<b>15.93</b>	<b>+0.18</b>
<b>MAY 2008</b>	<b>JUN 2008</b>	<b>17.13</b>	<b>17.36</b>	<b>+0.23</b>

On May 5, 2006, "spot" VIX closed at 11.62. Forward VIX levels at different points along the term structure ranged from 12.55 (June 2006) to 17.13 (May 2008). Two weeks later, spot VIX closed at 17.18 - a gain of more than 5.5 points from the May 5th spot VIX. However, June forward VIX levels increased by only 2.31 points, August forward VIX rose by 1.01 points, and November rose by 0.51 point. The increase in forward levels for contracts expiring 9 months and longer was only approximately 0.2 points.

The Exchange notes that many traders use VIX futures prices as a proxy for forward VIX levels. The CBOE Futures Exchange, LLC (CFE) lists VIX futures corresponding to each VIX options expiration month. CBOE believes that using these prices is an accurate and transparent method for determining the "current index level" used to center the limited range in which \$1 or greater strikes in VIX options will be listed and the broader range in which \$2.50 or greater

strikes in VIX options will be listed. Thus, the Exchange will use the corresponding VIX futures prices as a method for determining the “current index level” for listing series with both \$1 and \$2.50 strikes in VIX options.

Additionally, the Exchange is proposing that it would not list series with \$1 intervals within \$0.50 of an existing \$2.50 strike price with the same expiration month (e.g., if there is an existing 12.50 strike, the Exchange would not list a 12 or 13 strike). Finally, the interval between strike prices for VIX long-term option series (“LEAPs®”) will continue to be no less than \$2.50.

The Exchange states that the \$1 strike price intervals will more closely bracket the level of VIX when it remains locked within a static range, as currently exists and will enable investors to assume more dynamic volatility index option positions that reflect greater possibilities of settling in-the-money.

Finally, CBOE has analyzed its capacity and represents that it believes the Exchange and the Options Price Reporting Authority (“OPRA”) have the necessary systems capacity to handle the additional traffic associated with the listing and trading of \$1 strike VIX options as proposed herein.

## 2. Statutory Basis

CBOE believes the proposed rule change is consistent with the Act<sup>6</sup> and the rules and regulations under the Act applicable to a national securities exchange and, in particular, the requirements of Section 6(b) of the Act.<sup>7</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>8</sup> requirements that the rules of an exchange be designed to promote just and equitable principles of trade, and to protect investors and the public

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<sup>6</sup> 15 U.S.C. 78a et seq.

<sup>7</sup> 15 U.S.C. 78(f)(b).

<sup>8</sup> 15 U.S.C. 78(f)(b)(5).

interest.

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.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change, as amended, 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-2006-27 on the subject line.

Paper comments:

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

All submissions should refer to File Number SR-CBOE-2006-27. 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 Web site (<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 inspection and copying in the Commission's Public Reference Room. Copies of such filing also will be available for inspection and copying at the principal offices 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-2006-27 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

IV. Commission's Findings and Order Granting Accelerated Approval of the Proposed Rule Change

After careful consideration, the Commission finds that the proposed rule change, as amended, is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange.<sup>9</sup> In particular, the Commission finds that the proposed rule change, as amended, is consistent with Section 6(b)(5) of the Act,<sup>10</sup> which requires, among other things, that the rules of a national securities exchange be designed to promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest.

The Commission believes that this proposal, as amended, is a reasonable means of providing investors with greater flexibility to establish investment positions that can be better tailored to meet their objectives. Specifically, the Commission believes that the implementation

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<sup>9</sup> In approving this rule change, the Commission notes that it has considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

<sup>10</sup> 15 U.S.C. 78f(b)(5).

of \$1 strike price intervals for VIX options is designed to better serve investors in that product in that it will provide more dynamic strike levels that better reflect movements in the VIX. As explained by CBOE, the VIX level fluctuates much differently than individual equity securities or indexes of individual equity securities and has generally remained in a relatively narrow range since its inception. Because of these unique characteristics of the VIX, the Commission believes that the implementation of \$1 strike price intervals in the VIX option product, within the parameters detailed in CBOE's proposal, is appropriate. The Commission notes that CBOE's proposed use of VIX futures as a proxy for the "implied forward level" of VIX used to calculate the "current index value" for purposes of adding strike price intervals is a methodology reasonably designed to reflex the unique properties of the VIX. The Commission further notes that CBOE has represented that the Exchange and OPRA have the necessary systems capacity to absorb the additional options traffic caused by the introduction of VIX \$1 strikes.

The Exchange has requested accelerated approval of the proposed rule change. The Commission finds good cause, consistent with Section 19(b)(2) of the Act,<sup>11</sup> for approving this proposed rule change before the thirtieth day after the publication of notice thereof in the Federal Register. The Commission believes that allowing the Exchange to list and trade options on the VIX in \$1 strike price intervals immediately will provide investors with new means of managing their risk exposures and carrying out their investment objectives, and that any potential concerns about VIX \$1 strikes are mitigated by the parameters detailed in the proposal.

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<sup>11</sup> 15 U.S.C. 78s(b)(2).

V. Conclusion

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Act,<sup>12</sup> that the proposed rule change (SR-CBOE-2006-27), as amended, is approved on an accelerated basis.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.<sup>13</sup>

Nancy M. Morris  
Secretary

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<sup>12</sup> Id.

<sup>13</sup> 17 CFR 200.30-3(a)(12).