

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-54643; File No. SR-CBOE-2006-73)

October 23, 2006

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Notice of Filing of Proposed Rule Change and Amendment No. 1 Thereto to Amend Certain of its Rules to Provide for the Listing and Trading of Options on the CBOE Russell 2000 Volatility Index<sup>sm</sup> (“RVX<sup>sm</sup>”)

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 August 31, 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, II and III below, which Items have been prepared by the Exchange. On October 20, 2006, the Exchange filed Amendment No. 1 to the proposed rule change. The Commission is publishing this notice to solicit comments on the proposed rule change, as amended, from interested persons.

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

CBOE proposes to amend certain of its rules to provide for the listing and trading of options on the CBOE Russell 2000 Volatility Index<sup>sm</sup> (“RVX<sup>sm</sup>”). Options on the RVX will be cash-settled and will have European-style expiration. The text of the proposed rule change is available on CBOE’s Web site, <http://www.cboe.org>, at CBOE’s Office of the Secretary, and at the Commission’s Public Reference Room.

---

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

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

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, CBOE 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. CBOE 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 cash-settled, European-style options on the RVX.

**Index Design and Calculation**

The Exchange states that the calculation of this index is based on a methodology that is an up-to-the-minute market estimate of expected volatility that is calculated by using real-time Russell 2000 Index ("RUT") option bid/ask quotes. RVX uses nearby and second nearby options with at least 8 days left to expiration and then weights them to yield a constant, 30-day measure of the expected volatility of the RUT.

For each contract month, CBOE will determine the at-the-money strike price. It will then select the at-the-money and out-of-the money series with non-zero bid prices and determine the midpoint of the bid-ask quote for each of these series. The midpoint quote of each series is then weighted so that the further away that series is from the at-the-money strike, the less weight that is accorded to the quote. Then, to compute the index level, CBOE will calculate a volatility measure for the nearby options and then for the second nearby options. This is done using the weighted mid-point of the prevailing bid-ask quotes for all included option series with the same

expiration date. These volatility measures are then interpolated to arrive at a single, constant 30-day measure of volatility.<sup>3</sup>

As described above, the RVX option will be structured as an option on a group of securities, namely options on the RUT and by extension the stocks underlying the RUT. CBOE will use the actual quotes of the index options to derive the corresponding volatility index. The underlying index options are themselves securities and are based on an index of the broader number of underlying securities.<sup>4</sup> Thus, the pricing components underlying the RVX options will include the RUT options and, by extension, the component stocks of the RUT. These pricing components will provide a measure of the volatility of price movements of the RUT. The Exchange states that this structure is similar to the approach used by CBOE for its interest rate options.<sup>5</sup> Those products use the quotes of debt securities to derive an interest rate yield, which is converted into a measure that serves as the underlying for options. Similarly, quotes from index option securities, which reflect a measure of stock price movements of the RUT, will be used to derive a measure of volatility that will be the underlying for the respective volatility index options.

---

<sup>3</sup> The RVX is calculated in the same manner as other volatility indexes (e.g., the CBOE Volatility Index (“VIX”)), upon which options have been based and previously approved by the Commission. A more detailed explanation of the method used to calculate VIX may be found on CBOE’s Web site at the following internet address: <http://www.cboe.com/micro/vix/vixwhite.pdf>.

<sup>4</sup> RUT measures the performance of the 2000 smallest companies in the Russell 3000 Index, which represent approximately 8% of the total market capitalization of the Russell 3000.

<sup>5</sup> See Securities Exchange Act Release Nos. 26938 (June 15, 1989), 54 FR 26285 (June 22, 1989) (SR-CBOE-87-30) and 33106 (October 26, 1993), 58 FR 58358 (November 1, 1993) (SR-CBOE-93-21).

CBOE will compute the index on a real-time basis throughout each trading day, from 8:30 a.m. until 3:15 p.m. CST. CBOE has calculated historical index values for the new RVX back to January 2004. Volatility index levels will be calculated by CBOE and disseminated at 15-second intervals to market information vendors via the Options Price Reporting Authority.

### **Index Option Trading**

RVX is quoted in absolute numbers that represent the volatility of the RUT in percentage points per annum. For example, an index level of 20.47 (the closing value of the RVX on October 9, 2006) represents an annualized volatility of 20.47% in the RUT. The Exchange states that the RVX level fluctuates quite differently than individual equity securities or indexes of individual equity securities. Specifically, the Exchange states that indexes such as the RVX that track volatility are “mean-reverting,” a statistical term used to describe 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 RVX, the Exchange states that 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 RVX, the historical average index value is 20.89. Since January 2004, RVX has fluctuated in a narrow range between a low of 15.95 to a high of 34.02. Furthermore, RVX closed under 25 for 89% of the days on which the level was calculated since 2004 (621 days out of a total of 695 days) and has closed under 30 for 99% of the days on which the level was calculated since 2004

(689 days out of a total of 695 days). RVX has closed between 18 and 24 for 78% of the days on which the level was calculated since 2004 (544 days out of a total of 695 days).

Because of the generally limited range in which RVX has fluctuated, the Exchange believes that investors will be better served if the Exchange is able to list \$1 strike price intervals in RVX 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 RVX option series above and 5 RVX 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 RVX moves from the exercise price of the RVX options series that already have been opened for trading on the Exchange in order to maintain at least 5 RVX option series above and 5 RVX 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 RVX for each expiration.<sup>6</sup> The Exchange intends to determine implied forward levels of RVX through the use of RVX futures prices. Its reasons for using this approach are explained below.

By way of background, 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

---

<sup>6</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 RVX 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 CBOE Rule 24.9.

“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 volatility indexes such as RVX, the Exchange states that a better estimate than the standard “cash and carry” model for calculating the forward levels of RVX at each expiration is reflected in the prices of the options that will be used to calculate RVX on that expiration day. For example, December RUT options will be used to calculate RVX on the November RVX expiration date. Likewise, February 2007 RVX options are tied to the implied volatility of March 2007 RUT 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 implied volatility of options expiring on different dates can 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, a large spike in one-month implied volatility might not affect implied volatility of longer-dated options very much at all.

The CBOE Futures Exchange does not currently list RVX futures; however, CBOE expects that RVX futures corresponding to each RVX options expiration month will be available prior to launch. As a result, the Exchange believes that traders will likely use RVX futures prices as a proxy for forward RVX levels. 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 RVX options will be listed and the broader range in which \$2.50 or greater strikes in RVX options will be listed.

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 \$12.00 or \$13.00 strike). Finally, the

interval between strike prices for RVX long-term option series (“LEAPs®”) will continue to be no less than \$2.50.

The Exchange states that \$1 strike price intervals will more closely bracket the level of RVX 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.

The Exchange also notes that the Commission has approved the listing of options on the CBOE Volatility Index (“VIX”) at \$1.00 strike intervals within certain parameters.<sup>7</sup>

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

The trading hours for options on the volatility indexes will be from 8:30 a.m. to 3:15 p.m. CST. Exhibit 2 to CBOE’s filing presents proposed contract specifications for RVX options.

### **Exercise and Settlement**

The proposed options on each index will expire 30 days prior to the expiration date of the options used in the calculation of that index. For example, September 2006 RVX options would expire on Wednesday, September 20, 2006, exactly 30 days prior to the third Friday of the calendar month immediately following the expiring month. Trading in the expiring contract month will normally cease at 3:15 p.m. CST on the last day of trading. Exercise will result in delivery of cash on the business day following expiration. RVX options will be a.m.-settled. The exercise settlement value will be determined by a Special Opening Quotation (SOQ) of the

---

<sup>7</sup> See Securities Exchange Act Release No. 34-54192 (July 21, 2006), 71 FR 43251 (July 31, 2006) (SR-CBOE-2006-27).

RVX calculated from the sequence of opening prices of the RUT options that comprise that index on the settlement date. The opening price for any series in which there is no trade would be the average of that option's bid price and ask price as determined at the opening of trading.

The exercise-settlement amount is equal to the difference between the exercise-settlement value and the exercise price of the option, multiplied by \$100. When the last trading day is moved because of Exchange holidays, the last trading day for expiring options will be the day immediately preceding the last regularly-scheduled trading day.

### **Surveillance**

The Exchange will use the same surveillance procedures currently utilized for each of the Exchange's other index options to monitor trading in options on each volatility index. The Exchange further represents that these surveillance procedures will be adequate to monitor trading in options on these indexes. For surveillance purposes, the Exchange states that it will have complete access to information regarding trading activity in the pertinent underlying securities.

### **Position Limits**

The Exchange proposes to establish position limits for options on the RVX at 50,000 contracts on either side of the market, and no more than 30,000 of such contracts may be in series in the nearest expiration month. The Exchange states that these position limits for options on the RVX are consistent with the position limits for options on the underlying RUT set forth in CBOE Rule 24.4.<sup>8</sup>

---

<sup>8</sup> Telephone conversation between Jennifer L. Klebes, Senior Attorney, CBOE, and Florence E. Harmon, Senior Special Counsel, Division of Market Regulation, Commission, on October 23, 2006.

## Exchange Rules Applicable

Except as modified herein, the CBOE Rules in Chapter XXIV will be applicable to the RVX options. The RVX will be classified as a “broad-based index” and, under CBOE margin rules, specifically CBOE Rule 12.3(c)(5)(A), the margin requirement for a short put or call on the respective volatility indexes will be 100% of the current market value of the contract plus up to 15% of the respective underlying index value.

Finally, CBOE has analyzed its capacity and represents that it believes the Exchange and the Options Price Reporting Authority have the necessary systems capacity to handle the additional traffic associated with the listing and trading of RVX options as proposed herein.

### 2. Statutory Basis

The Exchange believes that the proposal is consistent with Section 6(b) of the Act,<sup>9</sup> in general, and Sections 6(b)(5) of the Act,<sup>10</sup> in particular, in that it will permit trading in options based on the RVX pursuant to rules designed to prevent fraudulent and manipulative acts and practices and to promote just and equitable principles of trade, and thereby will provide investors with the ability to invest in options based on an additional index.

#### 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

The Exchange did not solicit or receive any written comments with respect to the proposed rule change.

---

<sup>9</sup> 15 U.S.C. 78f(b).

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

### III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the Federal Register or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

- A. by order approve the proposed rule change, or
- B. institute proceedings to determine whether the proposed rule change should be disapproved.

### IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

#### Electronic comments:

- Use the Commission's Internet comment form (<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-2006-73 on the subject line.

#### Paper comments:

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

All submissions should refer to File Number SR-CBOE-2006-73. 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 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-2006-73 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.<sup>11</sup>

Nancy M. Morris  
Secretary

---

<sup>11</sup> 17 CFR 200.30-3(a)(12).