SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66265; File No. SR–CBOE–2011–007]

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Order Approving a Proposed Rule Change To Adopt Rules Governing S&P 500 Option Variance Basket Trades

January 27, 2012.

I. Introduction

On October 26, 2011, Chicago Board Options Exchange, Incorporated (''Exchange'' or ''CBOE'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to adopt rules in connection with a mechanism to quote for, and trade, at a single aggregate price, a basket of S&P 500 Index Options comprising a pre-specified series of listed calls and puts that are constructed to assist market participants who use such baskets of options as part of a trading strategy to obtain or hedge variance exposure on the S&P 500 Index. The proposed rule change was published for comment in the **Federal Register** on November 16, 2011.[3] The Commission received one comment letter on the proposed rule change.[4] This order approves the proposed rule change.

II. Description of the Proposed Rule Change

The Exchange is proposing a new offering, called S&P 500 Variance Trades (''Variance Trades''), which will allow market participants to trade a basket of pre-specified series of S&P 500 Index options (''SPX options'') in a single transaction. Each pre-specified basket of series of options offered by the Exchange will be constructed using a methodology designed to produce options baskets that can be used by market participants as part of a trading strategy to obtain or hedge variance exposure on the S&P 500 Index.[5] Currently, a trader would need to separately purchase or sell each of the options in a pre-specified Variance Trade basket to acquire this type of options exposure. In its filing, the Exchange notes that demand for volatility products has increased in recent years, and believes that the proposed Variance Trades would provide investors with an additional way to efficiently trade S&P 500 volatility.[6]

A Variance Trade consists of a basket of SPX options across different series, where the constituent options of the basket are put and call options with the same expiration date that are centered around an at-the-money strike price.[7] The Exchange will make one or more Variance Trade baskets available for trading each day. Each basket will consist of a portfolio of SPX options defined by the Exchange the day before it is available for trading. Each basket will have a unique ticker symbol.

Unlike a typical multi-legged option transaction whose price is expressed as a net dollar price, the price of a Variance Trade will be quoted in ''volatility terms'' (*i.e.,* a single number that reflects an aggregate implied volatility for the entire options basket). Trade quantities will be expressed in contracts, and each contract will have a multiplier of $10,000 or more, as determined and announced by the Exchange in advance.[8] The Exchange expects typically to specify a higher multiplier than $10,000, but has proposed to establish a $10,000 minimum to allow greater flexibility for short-dated options and low volatility levels.[9]

A participant will submit a Variance Trade order with a limit price expressed in terms of volatility (market orders would not be permitted) and a contract size.[10] Market makers also will be allowed to provide quotes for Variance Trade baskets. Orders and quotes will be ranked pursuant to one of the matching algorithms set forth in CBOE Rule 6.45A, which may be different from the matching algorithm in place for other option products, including SPX. Once a Variance Trade match occurs, the Exchange will use a formula to deconstruct the trade into individual trades in the constituent SPX options that compose the basket, and those individual trades each will be sent to OPRA as separate trades.[11]

The algorithm that deconstructs a Variance Trade into its constituent SPX option legs uses a two step process. First, based on the matched implied volatility (*i.e.,* the price of the trade), the system will calculate the exact number of contracts for each SPX option series composing the Variance Trade.[12] Second, the system will calculate resulting trade prices for each SPX option series through an iterative process in which current implied volatilities for each option series are collectively adjusted upwards or downwards until the aggregate implied volatility of the overall basket equals the matched implied volatility as quoted. The individual price of any given option series in the basket generally would not be the same as (or directly related to) the prevailing market price for that series because the entire basket will be priced in the aggregate in order to reflect the desired volatility level.

The Exchange's proposal will allow the constituent SPX option trades of a Variance Trade to be executed and reported without regard to existing bids and offers on the Exchange in the individual SPX options series at the time of the transaction.[13] Once prices are determined for a trade in each constituent series, the system will execute and report the constituent trades to OPRA.[14] In addition, the executions in the individual constituent series will be sent to the Options

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

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 65725 (November 10, 2011), 76 FR 71092 (''Notice'').

[4] *See* Letter dated December 14, 2011, from Angelo Evangelou, Assistant General Counsel, Legal Division, CBOE, to Elizabeth M. Murphy, Secretary, Commission (''CBOE Letter'').

[5] The Exchange notes that Variance Trades do not replicate variance swaps. *See* Notice, *supra* note 3, 76 FR 71092, n.4. The Commission understands that Variance Trades could be useful to market participants who employ trading strategies to hedge or replicate variance swaps on the S&P 500 Index. A variance swap is a derivative in which two counterparties agree to exchange future cash flows based on the realized level of volatility of a tradable financial instrument over a pre-specified, future period of time.

[6] *See* Notice, *supra* note 3, 76 FR 71092, text accompanying n.4. *See also* CBOE Letter, *supra* note 4, at 3.

[7] Detailed examples of how Variance Trades would be constructed and executed on the Exchange are provided in the Notice. *See* Notice, *supra* note 3.

[8] The multiplier for Variance Trades represents the aggregate ''vega'' exposure of the SPX option series that comprise the Variance Trade portfolio. Vega describes the change in value of a contract corresponding to a one-point change in volatility.

[9] *See* Notice, *supra* note 3, at n.6.

[10] Variance Trades will trade only electronically.

[11] *See* Notice, *supra* note 3, 76 FR 71093 (setting forth the formula).

[12] Unlike a typical complex order, the terms of a Variance Trade order would not pre-specify the number of contracts for each individual series composing the trade. These quantities instead depend on the implied volatility of the options basket itself, which is not known until a matched implied volatility for a trade has been determined.

[13] *See* Notice, *supra* note 3, 76 FR 71093.

[14] To highlight that executions of Variance Trades are not associated with the quoted prices in the respective SPX series at the time of execution, each constituent SPX option execution will be reported to OPRA with the ''benchmark'' indicator. The benchmark indicator was created to facilitate the execution of benchmark orders as contemplated by the Options Order Protection and Locked/Crossed Market Plan (the ''Linkage Plan''). A benchmark order is an order for which the price is not based, directly or indirectly, on the quoted price of the option at the time of the order's execution and for which the material terms were not reasonably determinable at the time a commitment to trade the order was made.

Clearing Corporation (''OCC'') for clearing.

As there are no position limits for SPX options, the Exchange did not propose any position limits for executions associated with Variance Trades. Reporting limits applicable to SPX options will apply pursuant to CBOE Rule 24.4, Interpretation and Policy .03.

The Exchange expects Variance Trades to appeal to institutional users and not to retail customers.[15] Because of the complex nature of Variance Trades, the Exchange will only allow orders in Variance Trades to be submitted by members who have affirmatively communicated to the Exchange a desire to submit orders in Variance Trades. Thus, retail brokerage firms (or any other firms) that have not specifically opted to submit orders in Variance Trades will not be allowed to send such orders to CBOE (any such orders from such firms will be rejected).

The Exchange represents that appropriate surveillance will be in place in connection with Variance Trades.[16] Further, the Exchange states that it has analyzed its capacity and represents that it and the Options Price Reporting Authority have the necessary systems capacity to handle the additional traffic that it expects will be associated with Variance Trades.[17]

III. Discussion and Commission's Findings

After careful review, the Commission finds that the proposed rule change is consistent with the requirements of Section 6 of the Act [18] and the rules and regulations thereunder applicable to a national securities exchange.[19] In particular, the Commission finds that the proposed rule change is consistent with Section 6(b)(5) of the Act,[20] which requires, among other things, that the Exchange's rules 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 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.

The introduction of Variance Trades is designed to allow professional market participants to more efficiently trade an entire option portfolio to obtain or hedge variance exposure on the S&P 500 Index. Such traders otherwise would need to purchase or sell each option individually to acquire exposure to such a basket of options in a complex web of simultaneously-executed transactions that is very difficult to reproduce as a series of individual trades. To the extent that traders currently seek out similar products offered on the over-the-counter securities markets, the proposed rule change will permit them to trade Variance Trades on a registered national securities exchange. The Commission believes that the proposal will benefit participants by providing an alternative to the over-the-counter market through the functionality to trade these baskets of exchange-listed options in a national securities exchange environment that offers the potential of enhanced liquidity, transparency, and oversight, and where counterparty risk can be mitigated through the role of OCC. Moreover, the requirement that permit holders affirmatively indicate to the Exchange a desire to transact in Variance Trades before the Exchange accepts and processes orders from such firms will serve as an additional safeguard to protect against the inadvertent submission of Variance Trade orders.

In the Notice, the Commission sought comment on two particular issues relating to the proposed Variance Trades: (1) Allowing the constituent SPX option trades of a Variance Trade to be executed and reported without regard to existing bids and offers on the Exchange in SPX at the time of the transaction; and (2) use of the benchmark indicator when reporting the constituent legs of a Variance Trade.[21] CBOE submitted a letter in response to the Commission's request for comments, urging the Commission to approve its proposal.[22] The Commission did not receive any other comments.

On the first point, the Commission requested commenters' opinions on whether allowing the constituent SPX option legs of a Variance Trade to be executed and reported without regard for existing bids and offers on the Exchange in SPX at the time of the transaction would be consistent with the Exchange Act and what, if any, potential impact this proposal might have on market participants.[23] As noted above, the Commission received no comments except from CBOE.

While multi-leg complex orders can trade on CBOE at the same price as existing booked interest on CBOE for one or more legs only if they improve the price on another leg,[24] Variance Trades will have no similar restrictions, and the constituent legs could thus trade without regard to quotes and orders with priority on CBOE's book.[25] Exceptions from intra-market priority can raise concerns relating to the protection of resting quotes and orders on an exchange's book and the potential impact on the price discovery process.[26]

In its letter, the Exchange argues that orders and quotes in individual SPX options series would not be disadvantaged when the various legs of a deconstructed Variance Trade execute, because traders in the individual SPX option series are not bidding for or offering the entire Variance Trade, which is the relevant order being executed.[27] While true, that argument is inconsistent with the treatment of other complex orders, noted above, which are required to interact with resting orders with priority except under limited circumstances.

In addition, CBOE believes that requiring the deconstructed components of a Variance Trade to interact with orders resting on the CBOE's SPX book would impede and frustrate traders' desire to enter into Variance Trades and achieve their investment objectives.[28] Rather, CBOE argues that introducing an exchange-traded functionality that allows investors to place a single order expressed in volatility terms and that permits those investors to establish a specific volatility profile is consistent with Section 6(b)(5) of the Act in that it removes impediments to, and perfects the mechanism for, a free and open market.[29] The Exchange asserts that if some constituent trades were required to be executed separately from the Variance Trade it would materially alter the pricing of the Variance Trade as well as its variance exposure, and would require the investor to execute separate trades in one or more constituent SPX options in an attempt to achieve the

[15] *See id.* at 71101.

[16] *See id.*

[17] *See id.*

[18] 15 U.S.C. 78f.

[19] In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[20] 15 U.S.C. 78f(b)(5).

[21] *See* Notice, *supra* note 3, 76 FR 71102.

[22] *See* CBOE Letter, *supra* note 4.

[23] *See* Notice, *supra* note 3, 76 FR 71102.

[24] *See* CBOE Rule 6.45(B)(b)(ii).

[25] Because SPX options are singly-listed on CBOE, and because the only components of a Variance Trade will be SPX options, CBOE's proposal does not implicate inter-market order protection concerns.

[26] *See e.g.,*Securities Exchange Act Release No. 63955 (February 24, 2011), 76 FR 11533, at 11540 (March 2, 2011) (SR–ISE–2010–73).

[27] *See* CBOE Letter, *supra* note 4, at 2.

[28] *See id.* at 3.

[29] *See id.*

objective variance exposure.[30] The Exchange also states that requiring that positions in the individual constituent series be assigned different prices than those assigned by the algorithm would mean that either the Variance Trade execution price must be modified or a different and less efficient algorithm would be required to assign prices to certain constituent SPX options to reach the trade's stated execution price.[31] The Exchange believes both alternatives would destroy the appeal of the Variance Trade process.[32] According to the Exchange, its proposal is narrowly crafted to prevent abuse and would facilitate beneficial volatility trading and hedging activity that would serve the needs of the marketplace.[33]

Further, CBOE argues that the prices of the constituent option series are unrelated to quotes and orders on CBOE's book and that requiring the constituent legs of a Variance Trade to interact with the book could introduce inefficiencies in the pricing of Variance Trades.[34] The Commission notes that the fact that a given trade in a constituent option series may trade through the price of resting interest is a consequence of the Variance Trade methodology and the fact that a Variance Trade is priced not in net dollar terms but in volatility terms. Unlike complex orders (as defined in CBOE's rules),[35] the terms of a Variance Trade order would not pre-specify a quantity for each individual series. Rather, since the exact size (number of contracts) in each constituent series is a function of the matched implied volatility, it can only be computed once a match has occurred. In addition, the trade prices of the individual legs are derived simultaneously using a complex iterative process that is conducted after a match has occurred.

Requiring the component legs of a Variance Trade basket to interact with resting orders in CBOE's SPX book would materially alter the computed prices for each component leg and therein would frustrate the ability of participants to consummate such transactions and undermine the objective of the trade. Specifically, the Variance Trade algorithm calculates a series of contract sizes and prices that span a considerable number of series and the interaction of these trades with resting orders would impact that process to an extent that could make it difficult, if not impossible, to consummate a Variance Trade transaction. Accordingly, in light of the unique structure and calculation methodology of the Variance Trade, as discussed more fully above, the Commission believes that allowing Variance Trades to execute without interacting with pre-existing interest on CBOE is appropriate and consistent with the Act.

The second point on which the Commission requested comment in the Notice relates to the use of the benchmark trade reporting indicator when reporting the constituent legs of a Variance Trade. The Exchange's proposal seeks to use the ''benchmark'' indicator for informational purposes when reporting executions of the constituent legs of a Variance Trade transaction, even though such trades would not be ''benchmark'' trades pursuant to Section 5(b)(xi) of the Linkage Plan, which by its terms applies only to inter-market (not intra-market) order protection.[36] The Commission received no comments except from CBOE.

The Exchange believes that the benchmark indicator, while it was created for the reporting of multiply-listed option executions, nevertheless would be useful to append to the execution of constituent series of a Variance Trade so SPX traders know that the executions were not related to the quoted price at the time of the print.[37] In its letter, the Exchange argues that the rationale behind the benchmark indicator also applies to Variance Trades.[38] Specifically, the Exchange believes that the constituent SPX options executions clearly fall within the definition of a benchmark trade in that they are not related to the quoted SPX prices at the time of execution, which is how the benchmark indicator would be used in the context of multiply-listed options.[39] Further, CBOE believes that the fact that SPX options only trade on CBOE should not alter the conclusion that benchmark trades be exempt from certain priority considerations because they utilize transparent pricing methods that do not take into account the quoted market in the applicable security.[40] The Exchange believes that the proposed use of the benchmark trade indicator would appropriately alert SPX market participants that the prices of the executed SPX constituent trades were not related to the quoted SPX prices at the time of the execution, in a way that would avoid any market confusion. The Exchange also believes that it would facilitate its surveillance of the constituent trades.[41]

The Commission believes that the use of an indicator for the trades in the constituent series of a Variance Trade is appropriate to alert market participants that the executions are not regular market transactions in order to guard against investor confusion in seeing individual options trade at prices that may be above or below prevailing market prices.

CBOE has informed the Commission that, at the present time, the benchmark indicator is not used in the options markets.[42] In reliance on this representation, the Commission believes the potential for investor confusion by marking the constituent trades as benchmark trades would be minimal, and that the use of the benchmark indicator for these purposes is reasonable at this time. The Commission notes, however, that use of another indicator may be preferable given that the benchmark indicator was intended for use in the context of inter-market order protection and therefore was not necessarily contemplated for use in the context of singly-listed SPX options that only trade on CBOE. Further, as noted above, a benchmark trade is defined as an order for which the price is not based, directly or indirectly, on the quoted price of the option at the time of the order's execution and for which the material terms were not reasonably determinable at the time a commitment to trade the order was made. As also noted above, however, the price of each leg of a Variance Trade actually would take into account the market price of each series as part of the proposed

[30] *See id.* at 4.

[31] *See id.*

[32] *See id.*

[33] *See id.*

[34] *See id.* The Commission notes that despite CBOE's assertion that the prices of the constituent option series of a Variance Trade would be unrelated to quotes and orders on CBOE's book, the proposed methodology CBOE would use for determining option prices in connection with Variance Trades starts with the actual quoted option prices themselves and then adjusts them upwards or downwards as needed. Thus, the price of each option leg of a Variance Trade actually would take into account the market price of each series.

[35] *See* CBOE Rule 6.53C.

[36] A benchmark order is an order for which the price is not based, directly or indirectly, on the quoted price of the option at the time of the order's execution and for which the material terms were not reasonably determinable at the time a commitment to trade the order was made. *See* CBOE Rule 6.81(b)(10) and Section 5(b)(xi) of the Linkage Plan.

[37] Currently, CBOE does not offer functionality or order types that utilize the benchmark exception to the Linkage Plan. *See* Notice, *supra* note 3, 76 FR 71093, n.7.

[38] CBOE Letter, *supra* note 4, at 3.

[39] CBOE Letter, *supra* note 4, at 5.

[40] *See id.* at 3. *See also supra* note 34.

[41] *See* CBOE Letter, *supra* note 4, at 5.

[42] *See* email from Angelo Evangelo, CBOE, to Richard Holley, Assistant Director, Commission, dated January 26, 2012.

methodology in which the quoted price for a series is adjusted upwards or downwards as necessary.[43] CBOE should monitor for the future use of the benchmark indicator in the options markets, and if CBOE or any other options market begins to use the benchmark indicator pursuant to the Linkage Plan, then CBOE should consider the impact of the potential for investor confusion, and whether to seek approval for use of a different indicator for Variance Trades to avoid investor confusion.

IV. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[44] that the proposed rule change (SR–CBOE–2011–007) be, and hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[45]

Kevin M. O'Neill,

Deputy Secretary.

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66245; File No. SR–BX–2012–006]

Self-Regulatory Organizations; NASDAQ OMX BX, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Relating To Amend the Definition of Theoretical Price

January 26, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on January 20, 2012, NASDAQ OMX BX, Inc. (the ''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 self-regulatory organization. The Exchange filed the proposed rule change pursuant to Section 19(b)(3)(A) of the Act,[3] and Rule 19b–4(f)(6) thereunder,[4] which renders the proposal effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule from interested persons.

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

The Exchange proposes to amend Chapter V, Section 20 (Obvious and Catastrophic Errors) of the Rules of the Boston Options Exchange Group, LLC (''BOX'') to amend the definition of theoretical price. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's Internet Web site at *http://nasdaqomxbx.cchwallstreet.com/NASDAQOMXBX/Filings/.*

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 self-regulatory organization 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 self-regulatory organization 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 is proposing a change to Chapter V, Section 20 (Obvious and Catastrophic Errors). An obvious error occurs when the execution price of a transaction is above or below the Theoretical Price for the series by a specified amount. The Exchange recently submitted an immediately effective rule change to amend the definition of Theoretical Price.[5] Under the recently effective rule, the ''Theoretical Price'' of an option series is defined, if the series is traded on at least one other options exchange, as the mid-point of the National Best Bid or Offer (''NBBO''), just prior to the trade in question. If there are no quotes for comparison, the Theoretical Price is determined by the Market Regulation Center (''MRC'').[6]

The rule change proposed in BX–2011–086 was immediately effective upon filing, but not operative for 30 days. As such, it is not yet operative. The goal of the rule change in BX–2011–086 was to improve the BOX process for addressing potentially erroneous trades to the benefit of all BOX market participants. While proposing the rule change, BOX discussed BX–2011–086 with several BOX Options Participants, and has continued these discussions following the effective date of the proposal. Based on these discussions with its Participants, BOX, after considering the potential impact of the change on BOX market participants and the liquidity on BOX, believes there is sufficient reason to reverse the rule change proposed in BX–2011–086. In addition, BOX will continue analyzing potential refinements to the BOX process for addressing potentially erroneous trades.

As such, the Exchange is proposing to amend the definition of Theoretical Price so that when the series is traded on at least one other options exchange, the Theoretical Price will be the ''National Best Bid with respect to an erroneous sell transaction, and National Best Offer with respect to an erroneous buy transaction, just prior to the trade in question.'' Alternatively, if there are no quotes for comparison, the Theoretical Price will continue to be determined by the MRC. This proposed rule change would reverse the effective rule change identified in note 1 [sic] and amend this provision of the BOX Rules so that the Theoretical Price continues to be the National Best Bid or Offer.

2. Statutory Basis

This proposed rule change is designed to provide the personnel of the MRC (*i.e.,* BOXR) with a clearly defined measure of the price on which to base a determination as to whether or not a particular transaction was the result of an obvious error and continue utilizing the rule that BOX has had in place prior to the operative date of BX–2011–086. The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations thereunder and, in particular, the requirements of Section 6(b) of the Act.[7]

Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[8] requirements that the rules of an exchange be

[43] *See supra* note 34.

[44] 15 U.S.C. 78s(b)(2).

[45] 17 CFR 200.30–3(a)(12).

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

[2] 17 CFR 240.19b–4.

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

[4] 17 CFR 240.19b–4(f)(6).

[5] *See* Securities Exchange Act Release No. 66093 (January 4, 2012), 77 FR 1543 (January 10, 2012) (SR–BX–2011–086) Notice of Filing and Immediate Effectiveness of a Proposal To Amend the Definition of Theoretical Price (''BX–2011–086'').

[6] MRC is defined in the BOX Rules to mean the Exchange's facilities for surveilling and regulating the conduct of business for options on BOX. MRC personnel are employees of BOXR and are not affiliated with BOX Options Participants.

[7] 15 U.S.C. 78f(b).

[8] 15 U.S.C. 78f(b)(5).