

Required fields are shown with yellow backgrounds and asterisks.

Filing by Cboe Exchange, Inc.  
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) *
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Rule		
Pilot	Extension of Time Period for Commission Action *	Date Expires *	<input type="checkbox"/> 19b-4(f)(1)	<input type="checkbox"/> 19b-4(f)(4)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> 19b-4(f)(2)	<input type="checkbox"/> 19b-4(f)(5)	
			<input type="checkbox"/> 19b-4(f)(3)	<input checked="" type="checkbox"/> 19b-4(f)(6)	

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010	Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 806(e)(1) *	Section 806(e)(2) *
<input type="checkbox"/>	<input type="checkbox"/>
	Section 3C(b)(2) *
	<input type="checkbox"/>

Exhibit 2 Sent As Paper Document	Exhibit 3 Sent As Paper Document
<input type="checkbox"/>	<input type="checkbox"/>

**Description**

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

The Exchange proposes a rule change to adopt an Index Combo order.

**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 * Laura G.	Last Name * Dickman
Title * Vice President, Associate General Counsel	
E-mail * dickman@cboe.com	
Telephone * (312) 786-7572	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.

(Title \*)

Date 12/19/2019	Vice President, Associate General Counsel
By Laura G. Dickman	
(Name *)	

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.

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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

**Form 19b-4 Information \***

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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 \***

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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 \***

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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**

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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**

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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**

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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**

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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**

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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. Text of the Proposed Rule Change**

(a) Cboe Exchange, Inc. (the “Exchange” or “Cboe Options”) proposes to amend its Rules regarding complex orders. The text of the proposed rule change is provided in Exhibit 5.

(b) Not applicable.

(c) Not applicable.

**Item 2. Procedures of the Self-Regulatory Organization**

(a) The Exchange’s President (or designee) pursuant to delegated authority approved the proposed rule change on December 6, 2019. The Exchange will issue an Exchange Notice announcing the implementation date of the proposed rule change.

(b) Please refer questions and comments on the proposed rule change to Pat Sexton, Executive Vice President, General Counsel, and Corporate Secretary, (312) 786-7467, or Laura G. Dickman, (312) 786-7572, Cboe Exchange, Inc., 400 South LaSalle, Chicago, Illinois 60605.

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

(a) Purpose

The Exchange proposes to amend its Rules to adopt a new complex order instruction, Index Combo orders, to further facilitate delta neutral transactions for investors that use complex orders to trade index options. Under the Exchange’s current Rules, a “complex order” is an order involving the concurrent execution of two or more different series in the same class (the “legs” or “components” of the complex order), for the same account, occurring at or near the same time and for the purpose of executing a particular investment strategy with no more than the applicable number of legs (which number the Exchange determines on a

class-by-class basis). For purposes of Rules 5.33 (regarding electronic processing of complex orders) and 5.85(b)(1) (regarding priority of complex orders with respect to open outcry trading), the term “complex order” means a complex order with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00), a stock-option order, or a security future-option order.<sup>1</sup> In other words, the Exchange only accepts for electronic processing complex orders with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00). The Exchange accepts for manual handling complex orders with any ratio; however, only those with a ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) are eligible for complex order increments and complex order priority.<sup>2</sup> The ratio of a complex order is determined by comparing the size of the smallest-sized option component and the largest-sized option component. For example, a complex order with a leg to buy 30 XYZ May 18 calls and sell 10 XYZ April 16 calls is three-to-one (30:10).

A complex order can also be a “stock-option order.” A stock-option order is the purchase or sale of a stated number units of an underlying stock or a security convertible into the stock (“convertible security”) coupled with the purchase or sale of an option contract(s) on the opposite side of the market representing either (1) the same number of units of the underlying stock or convertible security or (2) the number of units of the underlying stock necessary to create a delta neutral position, but in no case in a ratio greater than eight-to-one (8.00), where the ratio represents the total number of units of the underlying stock or

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<sup>1</sup> See Rule 1.1 (definition of complex order).

<sup>2</sup> See id.; see also Rules 5.4(b) and 5.85(b).

convertible security in the option leg(s) to the total number of units of the underlying stock or convertible security in the stock leg.<sup>3</sup>

An option's price can be influenced by a number of different factors. Some of these are known as the "Greeks" because they are commonly abbreviated with Greek letters: Delta, Gamma, Theta, and Vega.

- Delta: The Delta ( $\Delta$ ) is a measure of the change in an option's price (premium of an option) resulting from a change in the underlying security. The value of Delta ranges from -100 to 0 for puts and 0 to 100 for calls (multiplied by 100 to shift the decimal). Puts generate negative delta because they have a negative relationship with the underlying; that is, put premiums fall when the underlying rises and vice versa. Conversely, call options have a positive relationship with the price of the underlying: if the underlying rises, so does the call premium provided there are no changes in other variables such as implied volatility or time remaining until expiration. If the price of the underlying falls, the call premium will also decline provided all other things remain constant.<sup>4</sup> Delta changes as an option becomes more valuable or in-the-money. In-the-money means that the value of the option increases due to the option's strike price being more favorable to the underlying's price. As the option gets further in the money, Delta approaches 100 on a call and -100 on a put with the extremes eliciting a one-for-one relationship between changes in the option price and changes

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<sup>3</sup> See Rule 5.33(b)(5) (definition of stock-option order). The Rules also permit complex orders to be security future-option orders.

<sup>4</sup> See John Summa, Option Greeks: The 4 Factors to Measure Risks, INVESTOPEDIA, available at <https://www.investopedia.com/trading/getting-to-know-the-greeks/> (October 11, 2019).

in the price of the underlying. In effect, at Delta values of -100 and 100, the option behaves like the underlying in terms of price changes.<sup>5</sup>

- Gamma: The Gamma ( $\Gamma$ ), sometimes referred to as the option's curvature, is the rate of change in the delta as the underlying price changes. The gamma is usually expressed in deltas gained or lost per one-point change in the underlying, with the delta increasing by the amount of gamma when the underlying rises and falling by the amount of the gamma when the underlying falls. If an option has a gamma of five, for each point rise (fall) in the price of the underlying, the option will gain (lose) five deltas. If the option initially has a delta of 25 and the underlying moves up (down) one full point, the new delta will be 30 (20).<sup>6</sup>

- Theta: An option's value is made up of intrinsic value<sup>7</sup> and time value.<sup>8</sup> As time passes, the time-value portion gradually disappears until, at expiration, the option is worth exactly its intrinsic value. The theta ( $\Theta$ ), or time decay, is the rate at which an option loses value as time passes, assuming that all other market conditions remain unchanged. It is usually expressed as value lost per one day's passage of time. An option with a theta of 0.05 will lose 0.05 in value for each day that passes with no movement in the underlying. If an option's theoretical value today is 4.00, one day later, it will be worth 3.95. Two days later, it will be worth 3.90.<sup>9</sup>

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<sup>5</sup> See id.

<sup>6</sup> See SHELDON NATENBERG, OPTION VOLATILITY & PRICING 105 (McGraw Hill Education, 2ND ED. 2015).

<sup>7</sup> The intrinsic value of an option is the difference between the price of the underlying asset and the strike price.

<sup>8</sup> The time value of an option is equal to the option premium minus its intrinsic value.

<sup>9</sup> See NATENBERG, supra note 5 at 108.

- Vega: Just as option values are sensitive to changes in the underlying price (delta) and to the passage of time (theta), they are also sensitive to changes in volatility. Although the terms delta, gamma, and theta are generally used by all option traders, there is no one generally accepted term for the sensitivity of an option's theoretical value to a change in volatility. The most commonly used term in the trading community is vega.<sup>10</sup> The vega of an option is usually expressed as the change in theoretical value for each one percentage point change in volatility. Because all options gain value with rising volatility, the vega for both calls and puts is positive. If an option has a vega of 0.15, for each percentage point increase (decrease) in volatility, the option will gain (lose) 0.15 in theoretical value. If the option has a theoretical value of 3.25 at a volatility of 20%, then it will have a theoretical value of 3.40 at a volatility of 21% and a theoretical value of 3.10 at a volatility of 19%.<sup>11</sup>

Options can be traded not only for profits attributable to movements in the underlying, but also for profits attributable to changes in other factors such as volatility or the amount of time left until expiration. An investor may seek exposure to the Greeks (i.e., Delta, Gamma, Theta, and Vega) while minimizing exposure to movements in the price of the underlying by creating a delta neutral position. An option position could be hedged with options that exhibit a delta that is opposite to that of the current options holding to maintain a delta neutral position. Delta hedging is an options strategy that aims to reduce or hedge the risk associated with price movements in the underlying asset.<sup>12</sup> Strategies that involve creating a delta neutral position

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<sup>10</sup> See id. at 110.

<sup>11</sup> See id.

<sup>12</sup> See James Chen, Delta Hedging, INVESTOPEDIA, available at <https://www.investopedia.com/terms/d/deltahedging.asp> (May 22, 2019).

are typically used for one of three main purposes. They can be used to profit from time decay or from volatility, or they can be used to hedge an existing position and protect it against small price movements.<sup>13</sup>

A delta neutral position is one in which the overall delta is approximately zero, which minimizes the options' price movements in relation to the underlying asset. For example, assume an investor holds one call option with a delta of 0.50, which indicates the option is at-the-money and wishes to maintain a delta neutral position. The investor could purchase an at-the-money put option with a delta of -0.50 to offset the positive delta, which would make the position have a delta of zero, thereby minimizing unwanted exposure to the price of the underlying and allowing the investor to focus instead on the desired exposure (i.e., Delta, Gamma, Theta, or Vega). An options position could also be delta hedged using shares of the underlying stock. One share of the underlying stock has a delta of one as the stock's value changes by \$1. For example, assume an investor is long one call option on a stock with a delta of 0.75, or 75 since options have a multiplier of 100. In this case, the investor could delta hedge the call option by selling 75 shares of the underlying stock.<sup>14</sup> The following is an example of a delta neutral stock-option order, which provides the investor with volatility exposure.

#### Example #1

Strategy 1: Buy 8 XYZ May 18 Calls and Sell 100 Shares XYZ Underlying (25 times)

Buy 8 (25x) XYZ May 18 Calls  
Sell 100 (25x) Shares XYZ Underlying

Buy 8 XYZ May 18 Calls (12.5 Delta)

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<sup>13</sup> Delta Neutral Options Strategies, OptionsTrading.Org (December 4, 2019), available at <https://optionstrading.org/strategies/other/delta-neutral/>.

<sup>14</sup> See supra note 11.

Sell 100 XYZ Shares (100 Delta) (where 100 shares of the underlying = 1 option contract)  
 $(8 * 12.5 \text{ delta}) + (-1 * 100 \text{ Delta}) + 100 \text{ Delta} - 100 \text{ Delta} = 0 \text{ Delta}$

Strategy 1 Position = +200 XYZ May 18 Calls – 2500 Shares of XYZ

Buying a call on an equity stock and selling a put on an equity stock (or selling a call on an equity stock and buying a put on an equity stock) with the same expiration date and strike price results in the creation of a synthetic stock position. For example, assume a call and put for XYZ have a strike price of \$15. Buying a call gives the buyer the right, but not the obligation, to purchase the stock (XYZ) at the strike price (\$15). Selling a put imposes upon the seller the obligation (and not just the right) to purchase the stock (XYZ) at the strike price (\$15) should the put be exercised.

If the stock price of XYZ is greater than the strike price of the call option (\$15) at expiration, the call option may be exercised and the holder of the call option has the right to purchase XYZ at \$15 resulting in a long position of 100 shares of XYZ. If the stock price of XYZ is greater than the strike price of the put option (\$15), the put expires worthless as the holder of the put can sell shares on the open market at a price greater than the option's strike price.

If the stock price of XYZ is less than the strike price of the call option (\$15), the call option expires worthless as it is cheaper to purchase the stock on the open market. If the stock price of XYZ is less than the strike price of the put option at expiration, the put will be exercised and the seller of the put will be obligated to purchase 100 shares of XYZ.

The net result is that the combination of buying a call and selling a put with the same expiration date and strike price results in an effective (or synthetic) long position of 100 shares of XYZ stock, regardless of whether the stock price is above or below the strike price of the

call or put option. Similarly, selling the call and buying the put for the same expiration date and strike price would result in an effective (or synthetic) short position of 100 shares of XYZ stock (-100). The following is an example of a synthetic underlying.

Example #2

Strategy 2: Sell 1 XYZ May 15 Call, Buy 1 XYZ May 15 Put and Buy 100 XYZ Stock (25 times)

Combination:

Sell 1(25x) XYZ May 15 Calls

Buy 1(25x) XYZ May 15 Puts

Stock:

Buy 100(25x) shares XYZ Stock

Sell 1 XYZ May 15 Call (55 delta)

Buy 1 XYZ May 15 Put (45 delta)

Buy 100 XYZ shares (100 delta) (where 100 shares of stock = 1 option)

$(-1 * 55 \text{ delta}) + (1 * -45 \text{ delta}) + (1 * 100 \text{ delta})$

$-55 + (-45) + 100 = 0$

Strategy 2 Position = -25 May 15 Calls +25 May 15 Puts + 2500 XYZ Stock

Example #3

Strategy 1 Position: +200 XYZ May 18 Calls – 2500 XYZ Stock

Strategy 2 Position: -25 XYZ May 15 Calls +25 XYZ May 15 Put + 2500 XYZ Stock

Net Position:

+ 200 XYZ May 18 Calls -25 XYZ May 15 Calls +25 XYZ May 15 Puts

+2500 deltas (200 x 12.5)

-2500 deltas (-25 x 55) + (25 x -45)

0 net deltas

Combined the equation may be expressed as:  $(200 \times 12.5) + (-25 \times 55) + (25 \times -45) = 0$

The net position that results from combining Strategy 1 from Example #1 above and Strategy 2 from Example #2 above is a long position of 200 May 18 Calls – the May 15

Combination 25x (a short synthetic stock position of 2,500 shares as a result of selling a call and buying a put with the same expiration date and strike price).<sup>15</sup>

The Exchange proposes to adopt a complex order instruction in Rule 5.33(b)(5) to codify and further facilitate delta neutral hedging for all index options listed for trading on the Exchange.<sup>16</sup> Trading Permit Holders that transact in index options currently have the ability to submit for electronic processing complex orders that are delta neutral, so long as the component ratio conforms to the current rule for complex orders of one-to-three/three-to-one. Additionally, Trading Permit Holders have the ability to submit for manual handling complex orders that are delta neutral in any ratio; however, only those with a one-to-three/three-to-one ratio are not eligible for complex order increments or complex order priority.<sup>17</sup> Specifically, the Exchange proposes to adopt a definition of an “Index Combo” order as an order to purchase or sell one or more index option series and the offsetting number of Index Combinations defined by the delta. For purposes of an Index Combo Order, the Exchange proposes to adopt a definition of an “Index Combination” as a purchase (sale) of an index

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<sup>15</sup> Strategy 1 and Strategy 2 may currently be entered and executed on the Exchange under the Exchange’s current rules.

<sup>16</sup> The Exchange currently lists options on 24 indexes: Dow Jones Industrial Average (DJX), MSCI EAFE Index (MXEA), MSCI Emerging Markets Index (MXEF), S&P 100 Index (OEX), Russell 1000 Growth Index (RLG), Russell 1000 Value Index (RLV), Russell 1000 Index (RUI), Russell 2000 Index (RUT), S&P Materials Select Sector Index (SIXB), S&P Communication Services Select Sector Index (SIXC), S&P Energy Select Sector Index (SIXE), S&P Industrials Select Sector Index (SIXI), S&P Financial Select Sector (SIXM), S&P Consumer Staples Select Sector Index (SIXR), S&P Real Estate Select Sector Index (SIXRE), S&P Technology Select Sector Index (SIXT), S&P Utilities Select Sector Index (SIXU), S&P Health Care Select Sector Index (SIXV), S&P Consumer Discretionary Select Sector Index (SIXY), S&P 500 Index (SPX), FTSE 100 Index (reduced-value) (UKXM), Cboe Volatility Index (VIX), Mini-S&P 100 Index (XEO), and Mini-S&P 500 Index (XSP).

<sup>17</sup> See Rules 5.4(b) and 5.85(b).

option call and sale (purchase) of an index option put with the same underlying index, expiration date, and strike price. Additionally, the Exchange proposes to adopt a definition of “delta” as the positive (negative) number of Index Combinations that must be sold (purchased) to establish a market neutral hedge with one or more series of the same index option.<sup>18</sup>

As noted above, the Exchange lists multiple index options for trading. MIAX currently only lists options on one index – the SPIKE Index. The primary basis for MIAX’s adoption of a SPIKES Combo Order was the lack of an underlying for the SPIKES Index that investors may use for hedging purposes.<sup>19</sup> There was nothing about the SPIKES Combo Order specific to the SPIKES Index itself. While MIAX adopted a combo order for a single index, all index options, including those the Exchange lists for trading, lack an underlying that investors may use for hedging purposes. Therefore, the Exchange believes it is appropriate to offer investors a combo order for all index options. Additionally, MIAX is an electronic only exchange, while the Exchange has a trading floor for open outcry trading. As noted above, Trading Permit Holders may currently engage in delta neutral hedging for index options electronically or on the trading floor, subject to certain ratio restrictions. The Exchange believes all Trading Permit Holders should be able to use Index Combo orders in the same manner, regardless of whether they choose to submit them for electronic or open outcry trading.

The Exchange also proposes to adopt a provision that states an Index Combo order may not have a ratio greater than eight options to one Index Combination (8.00). The

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<sup>18</sup> See Rule 5.33(b)(5).

<sup>19</sup> See Securities Exchange Act Release No. 87199 (October 2, 2019), 84 FR 53786 (October 8, 2019) (SR-MIAX-2019-37).

Exchange proposes to use this ratio as it is already a defined conforming ratio in the System<sup>20</sup> used for stock-option orders, and it will allow the Exchange to implement the trading of Index Combo orders in a fashion similar to stock-option orders. Currently, stock-options may be traded in a ratio of eight-to-one, where the ratio represents contracts to the underlying security. Similarly, the Exchange proposes to use the same ratio for Index Combo orders where the ratio would represent contracts to Index Combinations. Lastly, the Exchange proposes to add an internal cross reference to state that Index Combo orders will be subject to all provisions applicable to complex orders (excluding the one-to-three/three-to-one ratio) in the Rules.<sup>21</sup>

Index options do not have an underlying that can serve as a hedge, as the option is based on an index. However, a synthetic underlying position may be created by purchasing a call and selling a put (or selling a call and purchasing a put), as discussed above. An Index Combination creates a synthetic underlying position that is the functional equivalent of the stock leg in stock-option orders. Therefore, the Exchange proposes to amend the ratio from one-to-three/three-to-one to eight-to-one for Index Combo orders to align the treatment of these orders to that of stock-option orders. This will allow for more transactions with better hedging opportunities in all index options.

Below is an example of an index option delta neutral strategy that provides the investor exposure to the Greeks that may be created under the Exchange's proposal to allow Index Combo orders to leverage the eight-to-one ratio afforded stock-option orders.

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<sup>20</sup> The "System" means the Exchange's hybrid trading platform that integrates electronic and open outcry trading of option contracts on the Exchange, and includes any connectivity to the foregoing trading platform that is administered by or on behalf of the Exchange, such as a communications hub.

<sup>21</sup> The Exchange makes conforming changes to Rules 1.1 (definition of complex order), 5.4(b), 5.6(c) (definition of complex order), 5.30(a) and (b), 5.83(b), and 5.85(b).

Example #4

Strategy A: Buy 8 ABC Index May 18 Calls, Sell 1 ABC Index May 15 Calls, and Buy 1 ABC Index May 15 Put (25 times)

Calls: Buy 8 (25) ABC Index May 18 Calls

Combination: Sell 1 (25) ABC Index May 15 Call  
Buy 1 (25) ABC Index May 15 Put

Buy 8 ABC Index May 18 Calls (12.5 Delta)  
Sell 1 ABC Index May 15 Call (55 Delta)  
Buy 1 ABC Index May 15 Put (45 Delta)

$$(8 * 12.5) + (-1 * 55) + (1 * -45)$$

$$100 - 55 - 45 = 0$$

Net Position: + 200 ABC Index May 18 Calls -25 ABC Index May 15 Calls + 25 ABC Index May 15 Puts

$$+2500 \text{ Deltas } (200 \times 12.5)$$

$$\underline{- 2500 \text{ Deltas } (-25 \times 55) + (25 \times -45)}$$

$$0 \text{ Net Deltas}$$

Combined, the equation may be expressed as:  $(200 \times 12.5) + (-25 \times 55) + (25 \times -45) = 0$

Example #4 illustrates a delta neutral position in an index option which is identical to the net delta neutral position demonstrated in Example #1 for a stock-option order. This position may be accomplished in a single transaction by using the proposed Index Combo order, which includes an Index Combination. The Index Combination (sell call, buy put with the same underlying index, expiration date, and strike price) creates the synthetic underlying position for the index option, similar to the way selling the XYZ call and buying the XYZ put creates the synthetic stock position demonstrated in Example #3.

Under the Exchange's proposal, Index Combinations would be treated similar to the stock-leg component of a stock-option order. As demonstrated in Example #3 above, the stock leg component of a stock-option order can be created synthetically by selling a call and

buying a put option with the same expiration date and strike price. The Exchange proposes to define this transaction as an Index Combination and allow Index Combo orders to be treated similarly to stock-option orders by permitting these orders to leverage the eight-to-one ratio defined for stock-option orders. The Exchange believes that a ratio greater than three-to-one, but not greater than eight-to-one, would allow investors the opportunity to create additional delta neutral transactions with index options.

The Exchange represents that it has the System capacity and capability to handle the potential increase in transaction rates. Further, the Exchange represents that it has surveillances in place to surveil for conduct that violates the Exchange's Rules, specifically as it pertains to delta neutral transactions as described herein.

(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.<sup>22</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>23</sup> requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the

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<sup>22</sup> 15 U.S.C. 78f(b).

<sup>23</sup> 15 U.S.C. 78f(b)(5).

Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>24</sup> 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 the proposed rule change promotes just and equitable principles of trade and removes impediments to and perfects the mechanisms of a free and open market and a national market system and, in general, protects investors and the public interest, by further facilitating the creation of delta neutral transactions in index options. Delta neutral strategies protect investors and the public interest by providing a means to gain exposure to other elements related to the price of an option while reducing the risk associated with changes in the price of the underlying. Permitting additional delta neutral transactions will improve liquidity in the marketplace which will benefit all investors. Additionally, the Exchange's proposal protects investors and the public interest as all the rules applicable to complex orders on the Exchange will apply equally to Index Combo orders, with the exception of the one-to-three/three-to-one ratio limitation.

The proposed eight-to-one ratio for Index Combo orders is already a conforming ratio on the Exchange for stock-option orders. The Exchange's proposal promotes just and equitable principles of trade and removes impediments to and perfects the mechanisms of a free and open market and a national market system and, in general, protects investors and the public interest, by providing similar hedging capabilities as afforded stock-option orders.

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<sup>24</sup>

Id.

Additionally, another options exchange that offers options on an index provides for the creation of delta neutral strategies.<sup>25</sup> Providing investors the ability to create delta neutral transactions similar to those created on another exchange reduces investor confusion and in turn strengthens investor confidence in the marketplace by providing consistency among exchanges.

**Item 4. 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 Exchange does not believe the proposed rule change will impose any burden on intramarket competition, as it will be applicable to all Trading Permit Holders equally. Any Trading Permit Holder may trade index options and submit Index Combo orders, and all Trading Permit Holders can benefit from the creation of delta neutral transactions as described in this proposal. The System will handle all Index Combo orders in the same manner. The Exchange does not believe the proposed rule change will impose any burden on intermarket competition, because another exchange options offers the same order type for the index option listed on that exchange.<sup>26</sup> The Exchange believes that the proposed rule change will relieve any burden on, or otherwise promote, competition, because it will provide index options with similar hedging capabilities currently afforded stock-option orders. Additionally, providing investors the ability to create delta neutral transactions similar to those created on another exchange reduces investor confusion and

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<sup>25</sup> See Miami International Securities Exchange, LLC (“MIAX”) Rule 518, Interpretation and Policy .07.

<sup>26</sup> See id.

in turn strengthens investor confidence in the marketplace by providing consistency among exchanges.

**Item 5. Self-Regulatory Organization’s Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others**

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

**Item 6. Extension of Time Period for Commission Action**

Not applicable.

**Item 7. 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)**

(a) The proposed rule change is filed for immediate effectiveness pursuant to Section 19(b)(3)(A) of Act<sup>27</sup> and Rule 19b-4(f)(6)<sup>28</sup> thereunder.

(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 the proposed rule change will significantly affect the protection of investors or the public interest, because it will further facilitate the

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<sup>27</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>28</sup> 17 CFR 240.19b-4(f)(6).

creation of delta neutral transactions in index options. Delta neutral strategies protect investors and the public interest by providing a means to gain exposure to other elements related to the price of an option while reducing the risk associated with changes in the price of the underlying. Permitting additional delta neutral transactions will improve liquidity in the marketplace which will benefit all investors. Additionally, the all the rules applicable to complex orders on the Exchange will apply equally to Index Combo orders, with the exception of the one-to-three/three-to-one ratio limitation. The proposed eight-to-one ratio for Index Combo orders is already a conforming ratio on the Exchange for stock-option orders, and the proposed rule change will provide index options with similar hedging capabilities as afforded stock-option orders.

The Exchange believes the proposed rule change will not impose any significant burden on competition, because it will be applicable to all Trading Permit Holders equally. Any Trading Permit Holder may trade index options and submit Index Combo orders, and all Trading Permit Holders can benefit from the creation of delta neutral transactions as described in this proposal. The System will handle all Index Combo orders in the same manner. Additionally, another options exchange offers the same order type for the index option listed on that exchange.<sup>29</sup> Providing investors the ability to create delta neutral transactions similar to those created on another exchange reduces investor confusion and in turn strengthens investor confidence in the marketplace by providing consistency among exchanges. As noted above, the Exchange lists multiple index options for trading. MIAX currently only lists options on one index – the SPIKE Index. The primary basis for MIAX's adoption of a SPIKES Combo Order was the lack of an underlying for the SPIKES Index

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<sup>29</sup> See id.

that investors may use for hedging purposes.<sup>30</sup> There was nothing about the SPIKES Combo Order specific to the SPIKES Index itself. While MIAX adopted a combo order for a single index, all index options, including those the Exchange lists for trading, lack an underlying that investors may use for hedging purposes. Therefore, the Exchange believes it is appropriate to offer investors a combo order for all index options. Additionally, MIAX is an electronic only exchange, while the Exchange has a trading floor for open outcry trading. As noted above, Trading Permit Holders may currently engage in delta neutral hedging for index options electronically or on the trading floor, subject to certain ratio restrictions. The Exchange believes all Trading Permit Holders should be able to use Index Combo orders in the same manner, regardless of whether they choose to submit them for electronic or open outcry trading.

For the foregoing reasons, 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. The Exchange respectfully requests that the Commission waive 30-day operative delay period after which a proposed rule change under Rule 19b-4(f)(6) becomes effective. Waiver of the operative

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<sup>30</sup> See Securities Exchange Act Release No. 87199 (October 2, 2019), 84 FR 53786 (October 8, 2019) (SR-MIAX-2019-37).

delay period will benefit investors by providing them as soon as possible with similar hedging capabilities for index options that they already have for stock-option orders. Additionally, the proposed rule change is not novel or unique, as another exchange currently offers the same order type for the index option it lists for trading, which index option is a competitive product to index options the Exchange lists for trading.<sup>31</sup> Therefore, waiver of the operative delay period will provide investors who trade index options listed for trading on the Exchange with the same delta hedging opportunities as those available for a competitive product on another exchange as soon as possible.

(c) Not applicable.

(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 virtually identical to MIAX Rule 518, Interpretation and Policy .07, except as follows:

- The MIAX Rule applies to SPIKES Options, which is the only index option currently listed for trading on MIAX. The proposed rule change applies to all index options, as the Exchange lists multiple index options (both traditional equity index options and volatility index options) for trading. As noted above, the Exchange lists multiple index options for trading. MIAX currently only lists options on one index – the SPIKE Index. The primary basis for MIAX’s adoption of a SPIKES Combo

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<sup>31</sup> See MIAX Rule 518, Interpretation and Policy .07. The Commission recently approved MIAX Rule 518, Interpretation and Policy .07, after no comments were submitted during the public comment period. See Securities Exchange Act Release No. 87199 (October 2, 2019), 84 FR 53786 (October 8, 2019) (SR-MIAX-2019-37).

Order was the lack of an underlying for the SPIKES Index that investors may use for hedging purposes.<sup>32</sup> There was nothing about the SPIKES Combo Order specific to the SPIKES Index itself. While MIAX adopted a combo order for a single index, all index options, including those the Exchange lists for trading, lack an underlying that investors may use for hedging purposes. Therefore, the Exchange believes it is appropriate to offer investors a combo order for all index options.

- The proposed rule change states Index Combo orders will be subject to all provisions applicable to complex orders in the Rules, rather than in a single Rule as the MIAX Rule does. Because the Exchange offers electronic and open outcry trading, rule provisions applicable to trading complex orders are located throughout the Rules (which Rules the proposed rule change modifies to incorporate Index Combo orders). However, the proposed rule change has the same effect as the MIAX Rule, including permitting Index Combo orders to trade in complex order increments and receive complex order priority (which are provided for SPIKES Combo Orders pursuant to MIAX Rule 518).
- MIAX is an electronic only exchange, and therefore, SPIKES Combo Orders are available only for electronic trading. The Exchange has a trading floor for open outcry trading, and therefore proposes to offer Index Combo orders for both electronic and open outcry trading. As noted above, Trading Permit Holders may currently engage in delta neutral hedging for index options electronically or

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<sup>32</sup> See Securities Exchange Act Release No. 87199 (October 2, 2019), 84 FR 53786 (October 8, 2019) (SR-MIAX-2019-37).

on the trading floor, subject to certain ratio restrictions. The Exchange believes all Trading Permit Holders should be able to use Index Combo orders in the same manner, as they can do for all other complex orders, regardless of whether they choose to submit them for electronic or open outcry trading.

**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-2019-126]

[Insert date]

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend Rules Regarding Complex Orders

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on [insert date], Cboe Exchange, Inc. (the “Exchange” or “Cboe Options”) filed with the Securities and Exchange Commission (the “Commission”) the proposed rule change as described in Items I, 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<sup>3</sup> and Rule 19b-4(f)(6) thereunder.<sup>4</sup> The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

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

The Exchange proposes to amend its Rules to adopt a new complex order instruction, Index Combo orders, to further facilitate delta neutral transactions for investors that use complex orders to trade index options.

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

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

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

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

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 its Rules to adopt a new complex order instruction, Index Combo orders, to further facilitate delta neutral transactions for investors that use complex orders to trade index options. Under the Exchange's current Rules, a "complex order" is an order involving the concurrent execution of two or more different series in the same class (the "legs" or "components" of the complex order), for the same account, occurring at or near the same time and for the purpose of executing a particular investment strategy with no more than the applicable number of legs (which number the Exchange determines on a class-by-class basis). For purposes of Rules 5.33 (regarding electronic processing of complex orders) and 5.85(b)(1) (regarding priority of complex orders with respect to open outcry trading), the term "complex order" means a complex order with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00), a stock-option order, or

a security future-option order.<sup>5</sup> In other words, the Exchange only accepts for electronic processing complex orders with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00). The Exchange accepts for manual handling complex orders with any ratio; however, only those with a ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) are eligible for complex order increments and complex order priority.<sup>6</sup> The ratio of a complex order is determined by comparing the size of the smallest-sized option component and the largest-sized option component. For example, a complex order with a leg to buy 30 XYZ May 18 calls and sell 10 XYZ April 16 calls is three-to-one (30:10).

A complex order can also be a “stock-option order.” A stock-option order is the purchase or sale of a stated number units of an underlying stock or a security convertible into the stock (“convertible security”) coupled with the purchase or sale of an option contract(s) on the opposite side of the market representing either (1) the same number of units of the underlying stock or convertible security or (2) the number of units of the underlying stock necessary to create a delta neutral position, but in no case in a ratio greater than eight-to-one (8.00), where the ratio represents the total number of units of the underlying stock or convertible security in the option leg(s) to the total number of units of the underlying stock or convertible security in the stock leg.<sup>7</sup>

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<sup>5</sup> See Rule 1.1 (definition of complex order).

<sup>6</sup> See id.; see also Rules 5.4(b) and 5.85(b).

<sup>7</sup> See Rule 5.33(b)(5) (definition of stock-option order). The Rules also permit complex orders to be security future-option orders.

An option's price can be influenced by a number of different factors. Some of these are known as the "Greeks" because they are commonly abbreviated with Greek letters: Delta, Gamma, Theta, and Vega.

- Delta: The Delta ( $\Delta$ ) is a measure of the change in an option's price (premium of an option) resulting from a change in the underlying security. The value of Delta ranges from -100 to 0 for puts and 0 to 100 for calls (multiplied by 100 to shift the decimal). Puts generate negative delta because they have a negative relationship with the underlying; that is, put premiums fall when the underlying rises and vice versa. Conversely, call options have a positive relationship with the price of the underlying: if the underlying rises, so does the call premium provided there are no changes in other variables such as implied volatility or time remaining until expiration. If the price of the underlying falls, the call premium will also decline provided all other things remain constant.<sup>8</sup> Delta changes as an option becomes more valuable or in-the-money. In-the-money means that the value of the option increases due to the option's strike price being more favorable to the underlying's price. As the option gets further in the money, Delta approaches 100 on a call and -100 on a put with the extremes eliciting a one-for-one relationship between changes in the option price and changes in the price of the underlying. In effect, at Delta values of -100 and 100, the option behaves like the underlying in terms of price changes.<sup>9</sup>

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<sup>8</sup> See John Summa, Option Greeks: The 4 Factors to Measure Risks, INVESTOPEDIA, available at <https://www.investopedia.com/trading/getting-to-know-the-greeks/> (October 11, 2019).

<sup>9</sup> See id.

- Gamma: The Gamma ( $\Gamma$ ), sometimes referred to as the option's curvature, is the rate of change in the delta as the underlying price changes. The gamma is usually expressed in deltas gained or lost per one-point change in the underlying, with the delta increasing by the amount of gamma when the underlying rises and falling by the amount of the gamma when the underlying falls. If an option has a gamma of five, for each point rise (fall) in the price of the underlying, the option will gain (lose) five deltas. If the option initially has a delta of 25 and the underlying moves up (down) one full point, the new delta will be 30 (20).<sup>10</sup>
- Theta: An option's value is made up of intrinsic value<sup>11</sup> and time value.<sup>12</sup> As time passes, the time-value portion gradually disappears until, at expiration, the option is worth exactly its intrinsic value. The theta ( $\Theta$ ), or time decay, is the rate at which an option loses value as time passes, assuming that all other market conditions remain unchanged. It is usually expressed as value lost per one day's passage of time. An option with a theta of 0.05 will lose 0.05 in value for each day that passes with no movement in the underlying. If an option's theoretical value today is 4.00, one day later, it will be worth 3.95. Two days later, it will be worth 3.90.<sup>13</sup>
- Vega: Just as option values are sensitive to changes in the underlying price (delta) and to the passage of time (theta), they are also sensitive to changes in

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<sup>10</sup> See SHELDON NATENBERG, OPTION VOLATILITY & PRICING 105 (McGraw Hill Education, 2ND ED. 2015).

<sup>11</sup> The intrinsic value of an option is the difference between the price of the underlying asset and the strike price.

<sup>12</sup> The time value of an option is equal to the option premium minus its intrinsic value.

<sup>13</sup> See NATENBERG, supra note 9 at 108.

volatility. Although the terms delta, gamma, and theta are generally used by all option traders, there is no one generally accepted term for the sensitivity of an option's theoretical value to a change in volatility. The most commonly used term in the trading community is vega.<sup>14</sup> The vega of an option is usually expressed as the change in theoretical value for each one percentage point change in volatility. Because all options gain value with rising volatility, the vega for both calls and puts is positive. If an option has a vega of 0.15, for each percentage point increase (decrease) in volatility, the option will gain (lose) 0.15 in theoretical value. If the option has a theoretical value of 3.25 at a volatility of 20%, then it will have a theoretical value of 3.40 at a volatility of 21% and a theoretical value of 3.10 at a volatility of 19%.<sup>15</sup>

Options can be traded not only for profits attributable to movements in the underlying, but also for profits attributable to changes in other factors such as volatility or the amount of time left until expiration. An investor may seek exposure to the Greeks (i.e., Delta, Gamma, Theta, and Vega) while minimizing exposure to movements in the price of the underlying by creating a delta neutral position. An option position could be hedged with options that exhibit a delta that is opposite to that of the current options holding to maintain a delta neutral position. Delta hedging is an options strategy that aims to reduce or hedge the risk associated with price movements in the underlying asset.<sup>16</sup> Strategies that involve creating a delta neutral position are typically used for one of three main purposes. They can be used to profit from time decay

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<sup>14</sup> See id. at 110.

<sup>15</sup> See id.

<sup>16</sup> See James Chen, Delta Hedging, INVESTOPEDIA, available at <https://www.investopedia.com/terms/d/deltahedging.asp> (May 22, 2019).

or from volatility, or they can be used to hedge an existing position and protect it against small price movements.<sup>17</sup>

A delta neutral position is one in which the overall delta is approximately zero, which minimizes the options' price movements in relation to the underlying asset. For example, assume an investor holds one call option with a delta of 0.50, which indicates the option is at-the-money and wishes to maintain a delta neutral position. The investor could purchase an at-the-money put option with a delta of -0.50 to offset the positive delta, which would make the position have a delta of zero, thereby minimizing unwanted exposure to the price of the underlying and allowing the investor to focus instead on the desired exposure (i.e., Delta, Gamma, Theta, or Vega). An options position could also be delta hedged using shares of the underlying stock. One share of the underlying stock has a delta of one as the stock's value changes by \$1. For example, assume an investor is long one call option on a stock with a delta of 0.75, or 75 since options have a multiplier of 100. In this case, the investor could delta hedge the call option by selling 75 shares of the underlying stock.<sup>18</sup> The following is an example of a delta neutral stock-option order, which provides the investor with volatility exposure.

#### Example #1

Strategy 1: Buy 8 XYZ May 18 Calls and Sell 100 Shares XYZ Underlying (25 times)

Buy 8 (25x) XYZ May 18 Calls  
Sell 100 (25x) Shares XYZ Underlying

Buy 8 XYZ May 18 Calls (12.5 Delta)  
Sell 100 XYZ Shares (100 Delta) (where 100 shares of the underlying = 1 option)

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<sup>17</sup> Delta Neutral Options Strategies, OptionsTrading.Org (December 4, 2019), available at <https://optionstrading.org/strategies/other/delta-neutral/>.

<sup>18</sup> See supra note 15.

contract)  
 $(8 * 12.5 \text{ delta}) + (-1 * 100 \text{ Delta}) + 100 \text{ Delta} - 100 \text{ Delta} = 0 \text{ Delta}$

Strategy 1 Position = +200 XYZ May 18 Calls – 2500 Shares of XYZ

Buying a call on an equity stock and selling a put on an equity stock (or selling a call on an equity stock and buying a put on an equity stock) with the same expiration date and strike price results in the creation of a synthetic stock position. For example, assume a call and put for XYZ have a strike price of \$15. Buying a call gives the buyer the right, but not the obligation, to purchase the stock (XYZ) at the strike price (\$15). Selling a put imposes upon the sell the obligation (and not just the right) to purchase the stock (XYZ) at the strike price (\$15) should the put be exercised.

If the stock price of XYZ is greater than the strike price of the call option (\$15) at expiration, the call option may be exercised and the holder of the call option has the right to purchase XYZ at \$15 resulting in a long position of 100 shares of XYZ. If the stock price of XYZ is greater than the strike price of the put option (\$15), the put expires worthless as the holder of the put can sell shares on the open market at a price greater than the option's strike price.

If the stock price of XYZ is less than the strike price of the call option (\$15), the call option expires worthless as it is cheaper to purchase the stock on the open market. If the stock price of XYZ is less than the strike price of the put option at expiration, the put will be exercised and the seller of the put will be obligated to purchase 100 shares of XYZ.

The net result is that the combination of buying a call and selling a put with the same expiration date and strike price results in an effective (or synthetic) long position of 100 shares of XYZ stock, regardless of whether the stock price is above or below the strike price of the call or put option. Similarly, selling the call and buying the put for the same expiration date

and strike price would result in an effective (or synthetic) short position of 100 shares of XYZ stock (-100). The following is an example of a synthetic underlying.

Example #2

Strategy 2: Sell 1 XYZ May 15 Call, Buy 1 XYZ May 15 Put and Buy 100 XYZ Stock (25 times)

Combination:

Sell 1(25x) XYZ May 15 Calls

Buy 1(25x) XYZ May 15 Puts

Stock:

Buy 100(25x) shares XYZ Stock

Sell 1 XYZ May 15 Call (55 delta)

Buy 1 XYZ May 15 Put (45 delta)

Buy 100 XYZ shares (100 delta) (where 100 shares of stock = 1 option)

$(-1 * 55 \text{ delta}) + (1 * -45 \text{ delta}) + (1 * 100 \text{ delta})$

$-55 + (-45) + 100 = 0$

Strategy 2 Position = -25 May 15 Calls +25 May 15 Puts + 2500 XYZ Stock

Example #3

Strategy 1 Position: +200 XYZ May 18 Calls – 2500 XYZ Stock

Strategy 2 Position: -25 XYZ May 15 Calls +25 XYZ May 15 Put + 2500 XYZ Stock

Net Position:

+ 200 XYZ May 18 Calls -25 XYZ May 15 Calls +25 XYZ May 15 Puts

+2500 deltas (200 x 12.5)

-2500 deltas (-25 x 55) + (25 x -45)

0 net deltas

Combined the equation may be expressed as:  $(200 \times 12.5) + (-25 \times 55) + (25 \times -45) = 0$

The net position that results from combining Strategy 1 from Example #1 above and Strategy 2 from Example #2 above is a long position of 200 May 18 Calls – the May 15 Combination 25x (a short synthetic stock position of 2,500 shares as a result of selling a call and buying a put with the same expiration date and strike price).<sup>19</sup>

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<sup>19</sup> Strategy 1 and Strategy 2 may currently be entered and executed on the Exchange under the Exchange's current rules.

The Exchange proposes to adopt a complex order instruction in Rule 5.33(b)(5) to codify and further facilitate delta neutral hedging for all index options listed for trading on the Exchange.<sup>20</sup> Trading Permit Holders that transact in index options currently have the ability to submit for electronic processing complex orders that are delta neutral, so long as the component ratio conforms to the current rule for complex orders of one-to-three/three-to-one. Additionally, Trading Permit Holders have the ability to submit for manual handling complex orders that are delta neutral in any ratio; however, only those with a one-to-three/three-to-one ratio are not eligible for complex order increments or complex order priority.<sup>21</sup> Specifically, the Exchange proposes to adopt a definition of an “Index Combo” order as an order to purchase or sell one or more index option series and the offsetting number of Index Combinations defined by the delta. For purposes of an Index Combo Order, the Exchange proposes to adopt a definition of an “Index Combination” as a purchase (sale) of an index option call and sale (purchase) of an index option put with the same underlying index, expiration date, and strike price. Additionally, the Exchange proposes to adopt a definition of “delta” as the positive (negative) number of Index Combinations that must be sold

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<sup>20</sup> The Exchange currently lists options on 24 indexes: Dow Jones Industrial Average (DJX), MSCI EAFE Index (MXEA), MSCI Emerging Markets Index (MXEF), S&P 100 Index (OEX), Russell 1000 Growth Index (RLG), Russell 1000 Value Index (RLV), Russell 1000 Index (RUI), Russell 2000 Index (RUT), S&P Materials Select Sector Index (SIXB), S&P Communication Services Select Sector Index (SIXC), S&P Energy Select Sector Index (SIXE), S&P Industrials Select Sector Index (SIXI), S&P Financial Select Sector (SIXM), S&P Consumer Staples Select Sector Index (SIXR), S&P Real Estate Select Sector Index (SIXRE), S&P Technology Select Sector Index (SIXT), S&P Utilities Select Sector Index (SIXU), S&P Health Care Select Sector Index (SIXV), S&P Consumer Discretionary Select Sector Index (SIXY), S&P 500 Index (SPX), FTSE 100 Index (reduced-value) (UKXM), Cboe Volatility Index (VIX), Mini-S&P 100 Index (XEO), and Mini-S&P 500 Index (XSP).

<sup>21</sup> See Rules 5.4(b) and 5.85(b).

(purchased) to establish a market neutral hedge with one or more series of the same index option.<sup>22</sup>

As noted above, the Exchange lists multiple index options for trading. MIAX currently only lists options on one index – the SPIKE Index. The primary basis for MIAX’s adoption of a SPIKES Combo Order was the lack of an underlying for the SPIKES Index that investors may use for hedging purposes.<sup>23</sup> There was nothing about the SPIKES Combo Order specific to the SPIKES Index itself. While MIAX adopted a combo order for a single index, all index options, including those the Exchange lists for trading, lack an underlying that investors may use for hedging purposes. Therefore, the Exchange believes it is appropriate to offer investors a combo order for all index options. Additionally, MIAX is an electronic only exchange, while the Exchange has a trading floor for open outcry trading. As noted above, Trading Permit Holders may currently engage in delta neutral hedging for index options electronically or on the trading floor, subject to certain ratio restrictions. The Exchange believes all Trading Permit Holders should be able to use Index Combo orders in the same manner, regardless of whether they choose to submit them for electronic or open outcry trading.

The Exchange also proposes to adopt a provision that states an Index Combo order may not have a ratio greater than eight options to one Index Combination (8.00). The Exchange proposes to use this ratio as it is already a defined conforming ratio in the System<sup>24</sup>

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<sup>22</sup> See Rule 5.33(b)(5).

<sup>23</sup> See Securities Exchange Act Release No. 87199 (October 2, 2019), 84 FR 53786 (October 8, 2019) (SR-MIAX-2019-37).

<sup>24</sup> The “System” means the Exchange’s hybrid trading platform that integrates electronic and open outcry trading of option contracts on the Exchange, and includes any connectivity to the foregoing trading platform that is administered by

used for stock-option orders, and it will allow the Exchange to implement the trading of Index Combo orders in a fashion similar to stock-option orders. Currently, stock-options may be traded in a ratio of eight-to-one, where the ratio represents contracts to the underlying security. Similarly, the Exchange proposes to use the same ratio for Index Combo orders where the ratio would represent contracts to Index Combinations. Lastly, the Exchange proposes to add an internal cross reference to state that Index Combo orders will be subject to all provisions applicable to complex orders (excluding the one-to-three/three-to-one ratio) in the Rules.<sup>25</sup>

Index options do not have an underlying that can serve as a hedge, as the option is based on an index. However, a synthetic underlying position may be created by purchasing a call and selling a put (or selling a call and purchasing a put), as discussed above. An Index Combination creates a synthetic underlying position that is the functional equivalent of the stock leg in stock-option orders. Therefore, the Exchange proposes to amend the ratio from one-to-three/three-to-one to eight-to-one for Index Combo orders to align the treatment of these orders to that of stock-option orders. This will allow for more transactions with better hedging opportunities in all index options.

Below is an example of an index option delta neutral strategy that provides the investor exposure to the Greeks that may be created under the Exchange's proposal to allow Index Combo orders to leverage the eight-to-one ratio afforded stock-option orders.

#### Example #4

Strategy A: Buy 8 ABC Index May 18 Calls, Sell 1 ABC Index May 15 Calls, and Buy 1 ABC Index May 15 Put (25 times)

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or on behalf of the Exchange, such as a communications hub.

<sup>25</sup> The Exchange makes conforming changes to Rules 1.1 (definition of complex order), 5.4(b), 5.6(c) (definition of complex order), 5.30(a) and (b), 5.83(b), and 5.85(b).

Calls: Buy 8 (25) ABC Index May 18 Calls

Combination: Sell 1 (25) ABC Index May 15 Call  
Buy 1 (25) ABC Index May 15 Put

Buy 8 ABC Index May 18 Calls (12.5 Delta)  
Sell 1 ABC Index May 15 Call (55 Delta)  
Buy 1 ABC Index May 15 Put (45 Delta)

$$(8 * 12.5) + (-1 * 55) + (1 * -45)$$

$$100 - 55 - 45 = 0$$

Net Position: + 200 ABC Index May 18 Calls -25 ABC Index May 15 Calls + 25 ABC Index May 15 Puts

$$+2500 \text{ Deltas } (200 \times 12.5)$$

$$\underline{- 2500 \text{ Deltas } (-25 \times 55) + (25 \times -45)}$$

$$0 \text{ Net Deltas}$$

Combined, the equation may be expressed as:  $(200 \times 12.5) + (-25 \times 55) + (25 \times -45) = 0$

Example #4 illustrates a delta neutral position in an index option which is identical to the net delta neutral position demonstrated in Example #1 for a stock-option order. This position may be accomplished in a single transaction by using the proposed Index Combo order, which includes an Index Combination. The Index Combination (sell call, buy put with the same underlying index, expiration date, and strike price) creates the synthetic underlying position for the index option, similar to the way selling the XYZ call and buying the XYZ put creates the synthetic stock position demonstrated in Example #3.

Under the Exchange's proposal, Index Combinations would be treated similar to the stock-leg component of a stock-option order. As demonstrated in Example #3 above, the stock leg component of a stock-option order can be created synthetically by selling a call and buying a put option with the same expiration date and strike price. The Exchange proposes to define this transaction as an Index Combination and allow Index Combo orders to be treated similarly to stock-option orders by permitting these orders to leverage the eight-to-one ratio

defined for stock-option orders. The Exchange believes that a ratio greater than three-to-one, but not greater than eight-to-one, would allow investors the opportunity to create additional delta neutral transactions with index options.

The Exchange represents that it has the System capacity and capability to handle the potential increase in transaction rates. Further, the Exchange represents that it has surveillances in place to surveil for conduct that violates the Exchange's Rules, specifically as it pertains to delta neutral transactions as described herein.

## 2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the "Act") and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.<sup>26</sup> Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>27</sup> requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)<sup>28</sup>

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<sup>26</sup> 15 U.S.C. 78f(b).

<sup>27</sup> 15 U.S.C. 78f(b)(5).

<sup>28</sup> Id.

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 the proposed rule change promotes just and equitable principles of trade and removes impediments to and perfects the mechanisms of a free and open market and a national market system and, in general, protects investors and the public interest, by further facilitating the creation of delta neutral transactions in index options. Delta neutral strategies protect investors and the public interest by providing a means to gain exposure to other elements related to the price of an option while reducing the risk associated with changes in the price of the underlying. Permitting additional delta neutral transactions will improve liquidity in the marketplace which will benefit all investors. Additionally, the Exchange's proposal protects investors and the public interest as all the rules applicable to complex orders on the Exchange will apply equally to Index Combo orders, with the exception of the one-to-three/three-to-one ratio limitation.

The proposed eight-to-one ratio for Index Combo orders is already a conforming ratio on the Exchange for stock-option orders. The Exchange's proposal promotes just and equitable principles of trade and removes impediments to and perfects the mechanisms of a free and open market and a national market system and, in general, protects investors and the public interest, by providing similar hedging capabilities as afforded stock-option orders.

Additionally, another options exchange that offers options on an index provides for the creation of delta neutral strategies.<sup>29</sup> Providing investors the ability to create delta

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<sup>29</sup> See Miami International Securities Exchange, LLC ("MIAX") Rule 518, Interpretation and Policy .07.

neutral transactions similar to those created on another exchange reduces investor confusion and in turn strengthens investor confidence in the marketplace by providing consistency among exchanges.

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 Exchange does not believe the proposed rule change will impose any burden on intramarket competition, as it will be applicable to all Trading Permit Holders equally. Any Trading Permit Holder may trade index options and submit Index Combo orders, and all Trading Permit Holders can benefit from the creation of delta neutral transactions as described in this proposal. The System will handle all Index Combo orders in the same manner. The Exchange does not believe the proposed rule change will impose any burden on intermarket competition, because another exchange options offers the same order type for the index option listed on that exchange.<sup>30</sup> The Exchange believes that the proposed rule change will relieve any burden on, or otherwise promote, competition, because it will provide index options with similar hedging capabilities currently afforded stock-option orders. Additionally, providing investors the ability to create delta neutral transactions similar to those created on another exchange reduces investor confusion and in turn strengthens investor confidence in the marketplace by providing consistency among exchanges.

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<sup>30</sup> See id.

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

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

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

Because the foregoing proposed rule change does not:

- 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<sup>31</sup> and Rule 19b-4(f)(6)<sup>32</sup> 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 the Act. Comments may be submitted by any of the following methods:

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<sup>31</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>32</sup> 17 CFR 240.19b-4(f)(6).

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-2019-126 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-2019-126. 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-2019-126 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>33</sup>

Secretary

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<sup>33</sup> 17 CFR 200.30-3(a)(12).

## EXHIBIT 5

(additions are underlined; deletions are [bracketed])

\* \* \* \* \*

**Rules of Cboe Exchange, Inc.**

\* \* \* \* \*

**Rule 1.1. Definitions**

When used in the Rules, unless the context otherwise requires:

\* \* \* \* \*

**Complex Order**

The term “complex order” means an order involving the concurrent execution of two or more different series in the same class (the “legs” or “components” of the complex order), for the same account, occurring at or near the same time and for the purpose of executing a particular investment strategy with no more than the applicable number of legs (which number the Exchange determines on a class-by-class basis). The Exchange determines in which classes complex orders are eligible for processing. Unless the context otherwise requires, the term complex order includes stock-option orders and security future-option orders. For purposes of Rules 5.33 and 5.85(b)(1), the term “complex order” means a complex order with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00), an Index Combo order, a stock-option order, or a security future-option order. For the purpose of applying these ratios to complex orders comprised of legs for both mini-options and standard options, ten mini-option contracts represent one standard option contract.

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**Rule 5.4. Minimum Increments for Bids and Offers**

(a) No change.

(b) *Complex Orders*. Except as provided in Rule 5.33, the minimum increment for bids and offers on complex orders with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) for equity and index options, and for Index Combo orders, is \$0.01 or greater, which may be determined by the Exchange on a class-by-class basis, and the legs may be executed in \$0.01 increments. The minimum increment for bids and offers on complex orders with any ratio less than one-to-three (.333) or greater than three-to-one (3.00) for equity and index options (except for Index Combo orders) is the standard increment for the class pursuant to paragraph (a), and the legs may be executed in the minimum increment applicable to the class pursuant to paragraph (a). Notwithstanding the foregoing, the minimum increment for bids and offers on complex orders in options on

the S&P 500 Index (SPX) or on the S&P 100 Index (OEX and XEO), except for box/roll spreads, is \$0.05 or greater, or in any increment, which may be determined by the Exchange on a class-by-class basis.

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### **Rule 5.6. Order Types, Order Instructions, and Times-in-Force**

(a) – (b) No change.

(c) *Order Instructions*. An “Order Instruction” is a processing instruction a User may apply to an order (multiple instructions may apply to a single order), subject to the restrictions set forth in Rule 6.8(c) with respect to orders and bulk messages submitted through bulk ports and any other restrictions set forth in the Rules, when entering it into the System for electronic or open outcry processing and includes:

\* \* \* \* \*

### **Complex Order**

A “complex order” is defined in Rule 1.1. A User may not designate a complex order with a ratio less than one-to-three (.333) or greater than three-to-one (3.00) (except for an Index Combo order) as Electronic Only. See Rule 5.33 for types of complex orders.

\* \* \* \* \*

### **Rule 5.30. Availability of Orders and Quotes for Electronic Processing**

Pursuant to Rule 5.6(a), the Exchange may make order types, Order Instructions, and Times-in-Force available on a system, class, and trading session basis for electronic processing, subject to the restrictions set forth in Rule 5.5 with respect to orders and bulk messages submitted through bulk ports.

(a) *RTH Trading Session*. The Exchange may make the following order types, Order Instructions, and Times-in-Force available for electronic processing during RTH:

(1) – (3) No change.

(4) *Complex Orders*: complex orders (see Rule 5.33 for types of complex orders) with a ratio greater than or equal to one-to-three (.333) and less than or equal to three-to-one (3.00) (except for Index Combo orders).

(b) *GTH Trading Session*. The Exchange may make the following order types, Order Instructions, and Times-in-Force available for electronic processing during GTH:

(1) – (3) No change.

(4) *Complex Orders*: complex orders (see Rule 5.33 for types of complex orders) with a ratio greater than or equal to one-to-three (.333) and less than or equal to three-to-one (3.00) (except for Index Combo orders).

\* \* \* \* \*

### **Rule 5.33. Complex Orders**

Trading of complex orders (as defined in Rule 1.1) is subject to all other Rules applicable to the trading of orders, unless otherwise provided in this Rule 5.33.

(a) No change.

(b) *Types of Complex Orders*. Complex orders are available in all classes listed for trading on the Exchange. Complex orders may be market or limit orders.

(1) – (4) No change.

(5) The System also accepts the following instructions for complex orders:

\* \* \* \* \*

### **Index Combo**

An “Index Combo” order is an order to purchase or sell one or more index option series and the offsetting number of Index Combinations defined by the delta. For purposes of an Index Combo order, the following terms have the following meanings:

(1) An “Index Combination” is a purchase (sale) of an index option call and sale (purchase) of an index option put with the same underlying index, expiration date, and strike price.

(2) A “delta” is the positive (negative) number of Index Combinations that must be sold (purchased) to establish a market neutral hedge with one or more series of the same index option.

(3) An Index Combo order may not have a ratio greater than eight options to one Index Combination (8.00), and will be subject to all provisions applicable to complex orders (excluding the one-to-three/three-to-one ratio) in the Rules.

\* \* \* \* \*

### **Rule 5.83. Availability of Orders**

(a) No change.

(b) *Complex Orders*. The Exchange may make complex orders, including security future-option orders, and stock-option orders available for PAR routing for manual handling. [A]Other than Index Combo orders, which may be submitted for electronic and open outcry handling, a complex order with a ratio less than one-to-three (.333) or greater than three-to-one (3.00) may only be submitted for manual handling and open outcry trading. The Exchange may make the follow complex order types available for PAR routing for manual handling (and open outcry trading):

(1) No change.

(2) *Order Instructions*. AON, Attributable, Complex Only, Index Combo, MTP Modifier, Multi-Class Spread, Non-Attributable, Not Held, RTH Only, SPX Combo, and stock-option order.

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### **Rule 5.85. Order and Quote Allocation, Priority, and Execution**

(a) No change.

(b) *Complex Order Priority*.

(1) A complex order (A) with any ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) or (B) that is an Index Combo order may be executed at a net debit or credit price without giving priority to equivalent bids (offers) in the individual series legs that are represented in the trading crowd or in the Book if the price of at least one leg of the order improves the corresponding bid (offer) of a Priority Customer order(s) in the Book by at least one minimum trading increment as set forth in Rule 5.4(b).

(2) A complex order with any ratio less than one-to-three (.333) and greater than three-to-one (3.00) (except for an Index Combo order) may be executed in open outcry on the trading floor at a net debit or credit price without giving priority to equivalent bids (offers) in the individual series legs that are represented in the trading crowd or in the Book if each leg of the order betters the corresponding bid (offer) of a Priority Customer order(s) in the Book on each leg by at least one minimum trading increment as set forth in Rule 5.4(b).

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