EXHIBIT 5

(additions are <u>underlined</u>; deletions are [bracketed])

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Rules of Cboe BZX Exchange, Inc.

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CHAPTER XVI. GENERAL PROVISIONS – BZX OPTIONS

Rule 16.1. Definitions

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BZX Options

The term "BZX Options" means the Cboe BZX Exchange Options Market, an options trading facility of the Exchange under Section 3(a)(2) of the Exchange Act.

BZX Options Book and Simple Book

The term "BZX Options Book" <u>and "Simple Book"</u> means the electronic book of <u>simple</u> options orders maintained by the Trading System.

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Closing Writing Transaction

The term "closing writing transaction" means a BZX Options Transaction that reduces or eliminates a long position in an options contract.

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 in any ratio 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.

Rule 20.6. Nullification and Adjustment of Options Transactions including Obvious Errors

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Interpretations and Policies

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.04 Complex Orders

(a) If a complex order executes against individual legs and at least one of the legs qualifies as an Obvious Error under subparagraph (c)(1) of Rule 20.6 or a Catastrophic Error under subparagraph (d)(1) of Rule 20.6, then the leg(s) that is an Obvious or Catastrophic Error will be adjusted in accordance with subparagraph (c)(4)(A) or (d)(3) of Rule 20.6, respectively, regardless of whether one of the parties is a Customer. However, any Customer order subject to this paragraph (a) will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer's limit price on the complex order or individual leg(s). If any leg of a complex order is nullified, the entire transaction is nullified.

(b) If a complex order executes against another complex order and at least one of the legs qualifies as an Obvious Error under subparagraph (c)(1) of Rule 20.6 or a Catastrophic Error under subparagraph (d)(1) of Rule 20.6, then the leg(s) that is an Obvious or Catastrophic Error will be adjusted or busted in accordance with subparagraph (c)(4) or (d)(3) of Rule 20.6, respectively, so long as either: (1) the width of the National Spread Market for the complex order strategy just prior to the erroneous transaction was equal to or greater than the amount set forth in the wide quote table of subparagraph (b)(3) of Rule 20.6 or (2) the net execution price of the complex order is higher (lower) than the offer (bid) of the National Spread Market for the complex order strategy just prior to the erroneous transaction by an amount equal to at least the amount shown in the table in subparagraph (c)(1) of Rule 20.6. If any leg of a complex order is nullified, the entire transaction is nullified. For purposes of Rule 20.6, the National Spread Market for a complex order strategy is determined by the National Best Bid/Offer of the individual legs of the strategy.

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Rule 21.1. Definitions

(d) The term "Order Type" shall mean the unique processing prescribed for designated orders, subject to the restrictions set forth in paragraph (l) below with respect to orders and bulk messages submitted through bulk ports, that are eligible for entry into the System. An Order Type applied to a bulk message applies to each bid and offer within that bulk message. Unless otherwise specified in the Rules or the context indicates otherwise, the Exchange determines which of the following Order Types are available on a class or system basis. Rule 21.18 sets forth the order types, Order Instructions, and Times-in-Force the Exchange may make available for complex orders.

- (10) Stop Order. A Stop Order is an order that becomes a Market Order when the stop price is elected. A Stop Order to buy is elected when the consolidated last sale in the option (excluding prices from complex order trades if outside of the NBBO) occurs at or above, or the NBB is equal to or higher than, the specified stop price. A Stop Order to sell is elected when the consolidated last sale in the option (excluding prices from complex order trades if outside of the NBBO) occurs at or below, or the NBO is equal to or lower than, the specified stop price. A Stop Order will not be elected if the underlying security is in a "Limit State" as defined in the Limit Up-Limit Down Plan. Such order will be held until the end of the Limit State, at which point the order will again become eligible to be elected. Users may not designate bulk messages as Stop Orders.
- (11) Stop Limit Order. A Stop Limit Order is an order that becomes a limit order when the stop price is elected. A Stop Limit Order to buy is elected and becomes a buy limit order when the consolidated last sale in the option (excluding prices from complex order trades if outside of the NBBO) occurs at or above, or the NBB is equal to or higher than, the specified stop price. A Stop Limit Order to sell is elected and becomes a sell limit order when the consolidated last sale in the option (excluding prices from complex order trades if outside of the NBBO) occurs at or below, or the NBO is equal to or lower than, the specified stop price. Users may not designate bulk messages as Stop Limit Orders.

Rule 21.5. Minimum Increments

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(e) *Complex Orders*. Notwithstanding any other provision of this Rule 21.5, the minimum trading increment for bids and offers on complex orders shall be determined in accordance with Rule 21.18.

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Rule 21.6. Entry of Orders

Users can enter orders into the System, subject to the following requirements and conditions:

(a) Users shall be permitted to transmit to the System multiple orders at a single as well as multiple price levels. However, a User may enter only one bid and one offer for a series or a complex strategy per EFID per bulk port. Each order shall indicate the amount of Reserve Size (if applicable).

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Rule 21.7. Opening Auction Process

(a) Definitions. For purposes of the opening auction process in this Rule 21.7, the following terms have the meaning below. A term defined elsewhere in the Rules has the same meaning with respect to this Rule 21.7, unless otherwise defined below.

Queuing Period

The term "Queuing Period" means the time period prior to the initiation of an opening rotation during which the System accepts orders and quotes in the Queuing Book for participation in the opening rotation for the applicable trading session.

(b) Queuing Period.

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- (2) Orders and Quotes. Orders and quotes on the Queuing Book are not eligible for execution until the opening rotation pursuant to paragraph (e) below. During the Queuing Period, the System accepts all orders and quotes that are available for a class and trading session pursuant to Rule 21.8, and they are all eligible for execution during the opening rotation, except as follows:
 - (A) (D). No change.
 - (E) complex orders do not participate in the opening auction process described in this Rule 21.7 and instead may participate in the COB Opening Process pursuant to Rule 21.18(c).

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Rule 21.14. Message Traffic Mitigation

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(e) Auction Response Processing. At the conclusion of an auction response period, the System will continue to process any messages in its inbound queue that were received by the System before the end of the auction response or exposure period, as identified by each message's timestamp, for up to an Exchange-determined period of time on a class-by-class basis, not to exceed 100 milliseconds which shall be announced with reasonable advance notice via Exchange Notice. An auction will execute once all messages, including auction responses, received before the end of the auction response or exposure period have been processed or the Exchange-determined time limit of up to 100 milliseconds has elapsed, whichever occurs first. This subparagraph applies to the Exchange's auction mechanism Complex Order Auction ("COA").

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Rule 21.16. Risk Monitor Mechanism

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(f) Complex Orders. The System counts individual trades executed as part of a complex order (or COA response) when determining whether the volume, notional, count, or risk trips limit

has been reached. The System counts the percentage executed of a complex order (or COA response) when determining whether the percentage limit has been reached.

Rule 21.17. Additional Price Protection Mechanisms and Risk Controls

The System's acceptance and execution of orders, quotes, and bulk messages, as applicable, are subject to the price protection mechanisms and risk controls in Rule 21.16, this Rule 21.17 and as otherwise set forth in the Rules. All numeric values established by the Exchange pursuant to this Rule will be maintained by the Exchange in publicly available specifications and/or published in a Regulatory Circular. Unless otherwise specified the price protections set forth in this Rule, including the numeric values established by the Exchange, may not be disabled or adjusted. The Exchange may share any of a User's risk settings with the Clearing Member that clears transactions on behalf of the User.

(a) Simple Orders.

(1) Market Order NBBO Width Protection. If a User submits a Market Order to the System when the NBBO width is greater than x% of the midpoint of the NBBO, subject to minimum and maximum dollar values established by the Exchange, the System will reject or cancel back to the User the Market Order. The Exchange will establish "x" and the minimum and maximum values on a class-by-class basis. This protection does not apply to bulk messages This protection does not apply to bulk messages or to Stop (Stop-Loss) or Market-on-Close orders.

[(b) Limit Order Fat Finger Check. If a User submits a buy (sell) limit order to the System with a price that is more than a buffer amount established by the Exchange above (below) the NBO (NBB), or, in the case of an order received prior to 9:30 a.m., above (below) the midpoint of the NBBO at the close of the market on the previous trading day, the System will reject or cancel back to the User the limit order. This check does not apply to bulk messages, Limit-on-Close orders, or Stop-Limit Orders.]

([c]2) Buy Order Put Check. If a User enters a buy limit order for a put with a price that is higher than or equal to the strike price of the option, the System will reject or cancel back to the User the limit order. If a User enters a buy Market Order for a put that would execute at (or the remaining portion would execute at) a price higher than or equal to the strike price of the option, the System will reject or cancel back to the User the Market Order (or remaining portion). This check does not apply to adjusted options or bulk messages.

([d]3) *Drill-Through Price Protection*.

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([e]4) Market Orders in No-Bid (Offer) Series.

- ([f]5) Bulk Message Fat Finger Check. The System cancels or rejects any bulk message bid (offer) more than a buffer amount above (below) the NBO (NBB), subject to a minimum and maximum dollar value, determined by the Exchange on a class-by-class basis. This check does not apply to bulk messages submitted prior to the conclusion of the Opening Process or when no NBBO is available.
- [(g) Rejection of Bulk Message Updates. If, pursuant to the Rules, the System cancels or rejects a bulk message bid (offer) to update a resting bulk message bid (offer) submitted for the same EFID and bulk port, the System also cancels the resting bulk message bid (offer).]

(b) Complex Orders.

- (1) Definitions. For purposes of this subparagraph (b):
 - (A) Vertical Spread. A "vertical" spread is a two-legged complex order with one leg to buy a number of calls (puts) and one leg to sell the same number of calls (puts) with the same expiration date but different exercise prices.
 - (B) Butterfly Spread. A "butterfly" spread is a three-legged complex order with two legs to buy (sell) the same number of calls (puts) and one leg to sell (buy) twice as many calls (puts), all with the same expiration date but different exercise prices, and the exercise price of the middle leg is between the exercise prices of the other legs. If the exercise price of the middle leg is halfway between the exercise prices of the other legs, it is a "true" butterfly; otherwise, it is a "skewed" butterfly.
 - (C) Box Spread. A "box" spread is a four-legged complex order with one leg to buy calls and one leg to sell puts with one strike price, and one leg to sell calls and one leg to buy puts with another strike price, all of which have the same expiration date and are for the same number of contracts.
- (2) Credit-to-Debit Parameters. The System cancels or rejects a market order that would execute at a net debit price after receiving a partial execution at a net credit price.
- (3) Debit/Credit Price Reasonability Checks.
 - (A) The Exchange cancels or rejects a complex order (or unexecuted portion) that is a limit order for a debit strategy with a net credit price that exceeds a pre-set buffer, a limit order (or unexecuted portion) for a credit strategy with a net debit price that exceeds a pre-set buffer, or a market order (or unexecuted portion) for a credit strategy that would execute at a net debit price that exceeds a pre-set buffer (the pre-set buffers are determined by the Exchange).
 - (B) The System defines a complex order as a debit or credit as follows:

- (i) a call butterfly spread for which the middle leg is to sell (buy) and twice the exercise price of that leg is greater than or equal to the sum of the exercise prices of the buy (sell) legs is a debit (credit);
- (ii) a put butterfly spread for which the middle leg is to sell (buy) and twice the exercise price of that leg is less than or equal to the sum of the exercise prices of the buy (sell) legs is a debit (credit); and
- (iii) an order for which all pairs and loners are debits (credits) is a debit (credit). For purposes of this check, a "pair" is a pair of legs in an order for which both legs are calls or both legs are puts, one leg is a buy and one leg is a sell, and the legs have the same expiration date but different exercise prices or the same exercise price but different expiration dates. A "loner" is any leg in an order that the System cannot pair with another leg in the order.
 - (a) The System first pairs legs to the extent possible within each expiration date, pairing one leg with the leg that has the next highest exercise price.
 - (b) The System then pairs legs to the extent possible with the same exercise prices across expiration dates, pairing one leg with the leg that has the next nearest expiration date.
 - (c) A pair of calls is a credit (debit) if the exercise price of the buy (sell) leg is higher than the exercise price of the sell (buy) leg (if the pair has the same expiration date) or if the expiration date of the sell (buy) leg is farther than the expiration date of the buy (sell) leg (if the pair has the same exercise price).
 - (d) A pair of puts is a credit (debit) if the exercise price of the sell (buy) leg is higher than the exercise price of the buy (sell) leg (if the pair has the same expiration date) or if the expiration date of the sell (buy) leg is farther than the expiration date of the buy (sell) leg (if the pair has the same exercise price).
 - (e) A loner to buy is a debit, and a loner to sell is a credit.
- (C) The System does not apply this check to an order it cannot define as a debit or credit.
- (D) This check applies to COA Responses in the same manner as it does to orders.
- (4) Buy Strategy Parameters. The System cancels or rejects a limit complex order where all the components of the strategy are to buy and the order has (A) a price of zero, (B) a net credit price that exceeds a pre-set buffer (which the Exchange determines), or (C) a net debit

price that is less than the number of individual legs in the strategy (or applicable ratio) multiplied by \$0.01.

- (5) Maximum Value Acceptable Price Range. The System cancels or rejects an order that is a vertical, true butterfly, or box spread and is a limit order with, or a market order that would execute at, a price that is outside of an acceptable price range, set by the minimum and maximum possible value of the spread, subject to an additional buffer amount (which the Exchange determines).
 - (A) The maximum possible value of a vertical, true butterfly, and box spread is the difference between the exercise prices of (1) the two legs; (2) the middle leg and the legs on either side; and (3) each pair of legs, respectively.
 - (B) The minimum possible value of the spread is zero.
 - (C) This check applies to COA Responses in the same manner as it does to orders.

(6) Drill-Through Price Protection.

- (A) If a User enters a buy (sell) complex order into the System, the System executes the order pursuant to Rule 21.18(e) up to a buffer amount above (below) the SNBO (SNBB) that existed at the time of order entry (the "drill-through price"), or initiates a COA at the drill-through price if the order would initiate a COA pursuant to Rule 21.18(d). The Exchange determines a default buffer amount on a class-by-class basis; however, a User may establish a higher or lower amount than the Exchange default amount.
- (B) The System enters a complex order (or unexecuted portion) not executed pursuant to subparagraph (A) in the COB with a displayed price equal to the drill-through price, unless the terms of the order instruct otherwise.
 - (i) If the inputting User established a buffer amount for the complex order, the complex order (or unexecuted portion) rests in the COB at the drill-through price until the earliest of the following to occur: (a) the complex order fully executes; (b) the end of the duration of one time period (the Exchange determines on a class-by-class basis the length of the time period in milliseconds, which may not exceed three seconds), at the end of which the System cancels the complex order (or unexecuted portion) not executed during the time period; and (c) the complex order's limit price equals or is less than (if a buy order) or greater than (if a sell order) the drill-through price, in which case the complex order rests in the COB at its limit price, subject to a User's instructions.
 - (ii) If the inputting User did not establish a buffer amount for the complex order, the complex order (or unexecuted portion) rests in the COB at the drill-through price for the duration of consecutive time periods (the length of which equals the length determined by the Exchange pursuant to

subparagraph (i)). Following the end of each time period, the System adds (if a buy order) or subtracts (if a sell order) one buffer amount (the Exchange determines the buffer amount on a class-by-class basis) to the drill-through price displayed during the immediately preceding period (each new price becomes the "drill-through price"). The complex order (or unexecuted portion) rests in the COB at that new drill-through price during the subsequent period. The complex order continues through this process until the earliest of the following to occur: (a) the complex order fully executes; (b) the User cancels the complex order; and (c) the complex order's limit price equals or is less than (if a buy order) or greater than (if a sell order) the drill-through price at any time during application of the drill-through mechanism, in which case the complex order rests in the COB at its limit price, subject to a User's instructions.

(iii) Notwithstanding the above, if the SBBO changes prior to the end of any period but the complex order cannot Leg, and the new SBO (SBB) crosses the drill-through price, the System changes the displayed price of the complex order to the new SBO (SBB) minus (plus) the applicable minimum increment for the class, and the order rests in the COB at that displayed price, subject to a User's instructions.

(iv) The System applies a timestamp to the complex order (or unexecuted portion) based on the time it enters or is re-priced in the COB for priority purposes.

(c) All Orders.

- (1) Limit Order Fat Finger Check. If a User submits a buy (sell) limit order to the System with a price that is more than a buffer amount established by the Exchange above (below) the NBO (NBB) for simple orders or the SNBO (SNBB) for complex orders, or, in the case of an order received prior to 9:30 a.m., above (below) the midpoint of the NBBO at the close of the market on the previous trading day, the System will reject or cancel back to the User the limit order. This check does not apply to bulk messages, Limit-on-Close orders, or Stop-Limit Orders. The check does not apply to complex orders prior to the conclusion of the Opening Process.
- (2) Rejection of Bulk Message Updates. If, pursuant to the Rules, the System cancels or rejects a bulk message bid (offer) to update a resting bulk message bid (offer) submitted for the same EFID and bulk port, the System also cancels the resting bulk message bid (offer).
- (3) Maximum Contract Size. The System cancels or rejects an incoming order or quote with a size that exceeds the maximum contract size (which the Exchange determines). The size of a complex order for purposes of this check is the size of the largest leg of the order.

- (4) Maximum Notional Value. If a User enables this functionality, the System cancels or rejects an incoming order or quote with a notional value that exceeds the maximum notional value a User establishes for each of its ports.
- (5) Duplicate Order Protection. If a User enables this functionality for a port, after the System receives a specified number of duplicate orders with the same EFID, side, price, quantity, and class (the User determines the number of duplicative orders), the System will (A) reject additional duplicate orders until it receives instructions from the User to reset this control or (B) reject all incoming orders submitted through that port for that EFID until the User contacts the Trade Desk to request it reset this control. The User may continue to submit cancel requests prior to reset.

Rule 21.18. Complex Orders

<u>Trading of complex orders is subject to all other Rules applicable to trading of orders, unless otherwise provided in this Rule 21.18.</u>

(a) Definitions. For purposes of this Rule, the following terms have the meanings below. A term defined elsewhere in the Rules has the same meaning with respect to this Rule 21.18, unless otherwise defined below.

Complex Order

The term "complex order" is defined in Rule 16.1.

Complex Order Auction or COA

The terms "Complex Order Auction" or "COA" mean an auction of a complex order as set forth in paragraph (d) below.

Complex Order Book and COB

The terms "Complex Order Book" and "COB" mean the Exchange's electronic book of complex orders used for all trading sessions.

Complex Strategy

The term "complex strategy" means a particular combination of components and their ratios to one another. New complex strategies can be created by the Exchange or as the result of the receipt of a complex instrument creation request or complex order for a complex strategy that is not currently in the System. The Exchange may limit the number of new complex strategies that may be in the System or entered for any EFID (which EFID limit would be the same for all Users) at a particular time.

Legging

The term "Legging" is defined in Rule 21.18(g).

Regular Trading

The term "regular trading" means trading of complex orders that occurs during a trading session other than (a) at the opening of the COB or re-opening of the COB for trading following a halt (described in paragraph (c) below) or (b) during the COA process (described in paragraph (d) below).

Synthetic Best Bid or Offer or SBBO

The terms "Synthetic Best Bid or Offer" or "SBBO" mean the best bid and offer on the Exchange for a complex strategy calculated using the best price available on the Simple Book for each component (or the NBBO for a component if there is no resting interest on the Exchange for that component) of a complex strategy.

Synthetic National Best Bid or Offer or SNBBO

The terms "Synthetic National Best Bid or Offer" or "SNBBO" mean the national best bid and offer for a complex strategy calculated using the NBBO for each component of a complex strategy to establish the best net bid and offer for a complex strategy.

(b) Types of Complex Orders. The Exchange determines which Times-in-Force of Day, GTC, GTD, IOC, or OPG are available for complex orders (including for eligibility to enter the COB and initiate a COA). The Exchange determines which Capacities (*i.e.*, non-broker-dealer customers, broker-dealers that are not Market-Makers on an options exchange, or Market-Makers on an options exchange) are eligible for entry onto the COB. Complex orders may be market or limit orders. Users may designate complex orders as Attributable or Non-Attributable. The System also accepts the following instructions for complex orders:

(1) Complex Only Orders. A Market-Maker may designate a Day or IOC order as "Complex Only," which may execute only against complex orders in the COB and may not Leg into the Simple Book. Unless designated as Complex Only, and for all other Times-in-Force and Capacities, a complex order may execute against complex orders in the COB and may Leg into the Simple Book.

(2) COA-Eligible and Do-Not-COA Orders. Upon receipt of an IOC complex order, the System does not initiate a COA unless a User marked the order to initiate a COA, in which case the System cancels any unexecuted portion at the end of the COA. Upon receipt of a Post Only complex order with any Time-in-Force, the System does not initiate a COA, and if a User marks the Post Only complex order to initiate a COA, the System cancels the order. Upon receipt of a complex order with any other Time-in-Force (except OPG), the System initiates a COA unless a User marked the order to not initiate a COA. Buy (sell) complex orders with User instructions to (or which default to) initiate a COA that are priced higher (lower) than the SBB (SBO) and higher (lower) than the price of complex orders resting at the top of the COB are "COA-eligible orders," while buy (sell) complex orders with User instructions not to (or which default to not) initiate a COA, that are marked Post

- Only, or that are priced equal to or lower (higher) than the SBB (SBO) or equal to or lower (higher) than the price of complex orders resting at the top of the COB are "do-not-COA orders."
- (3) Complex Orders with MTP Modifiers. Users may apply the following MTP Modifiers to complex orders: MTP Cancel Newest, MTP Cancel Oldest, and MTP Cancel Both. If a complex order would execute against a complex order in the COB with an MTP Modifier and the same Unique Identifier, the System handles the complex orders with these MTP Modifiers as described in Rule 1.1. If a complex order with an MTP Modifier would Leg into the Simple Book and execute against any leg on the Simple Book with an MTP Modifier and the same Unique Identifier, the System cancels the complex order.
- (4) Book Only Complex Order. A "Book Only complex order" is a complex order the System ranks and executes pursuant to this Rule 21.18 or cancels or rejects, as applicable (in accordance with the User's instructions).
- (5) Post Only Complex Order. A "Post Only complex order" is a complex order the System ranks and executes pursuant to this Rule 21.18 or cancels or rejects, as applicable (in accordance with the User's instructions), except the order may not remove liquidity from the COB or the Simple Book. The System cancels or rejects a Post Only market complex order unless it is subject to the drill-through protection in Rule 21.17(b)(6).
- (6) Complex Reserve Orders. A "Complex Reserve Order" is a complex limit order with both a portion of the quantity displayed ("Display Quantity") and a reserve portion of the quantity ("Reserve Quantity") not displayed. Both the Display Quantity and Reserve Quantity of the Complex Reserve Order are available for potential execution pursuant to paragraphs (c) through (e) below. When entering a Complex Reserve Order, a User must instruct the Exchange as to the quantity of the Complex Reserve Order to be initially displayed by the System ("Max Floor"). If the Display Quantity of a Complex Reserve Order is fully executed, the System will, in accordance with the User's instruction, replenish the Display Quantity from the Reserve Quantity using one of the below replenishment instructions. If the remainder of a Complex Reserve Order is less than the replenishment amount, the System will display the entire remainder of the Complex Reserve Order. The System creates a new timestamp for both the Display Quantity and Reserve Quantity of the Complex Reserve Order each time it is replenished from reserve.
 - (A) Random Replenishment. An instruction that a User may attach to a Complex Reserve Order where the System randomly replenishes the Display Quantity for the Complex Reserve Order with a number of contracts not outside a replenishment range, which equals the Max Floor plus and minus a replenishment value established by the User when entering a Complex Reserve Order with a Random Replenishment instruction.
 - (B) Fixed Replenishment. For any Complex Reserve Order for which a User does not select Random Replenishment, the System will replenish the Display Quantity of the Complex Reserve Order with the number of contracts equal to the Max Floor (or

the entire remainder of the Complex Reserve Order if it is less than the replenishment amount).

(c) COB Opening Process (Including After a Trading Halt). The COB Opening Process occurs at the beginning of each trading session and after a trading halt.

- (1) Complex Order Entry Period. The System accepts complex orders for inclusion in the COB Opening Process at the times and in the manner set forth in Rule 21.7, except the Order Entry Period for complex orders ends when the complex strategy opens. Complex orders entered during the Order Entry Period are not eligible for execution until the COB Opening Process occurs. Beginning at 7:30 a.m. and updated every five seconds thereafter until the initiation of the COB Opening Process, the Exchange disseminates indicative prices and order imbalance information based on complex orders queued in the System for the COB Opening Process.
- (2) Initiation of COB Opening Process. The System initiates the COB Opening Process for a complex strategy after a number of seconds (which number the Exchange determines) after all legs of the strategy in the Simple Book are open for trading. All complex orders the System receives prior to opening a complex strategy as set forth in this subparagraph (2) (including any delay applied by the Exchange pursuant to this subparagraph (2) and subparagraph (C) below) are eligible to be matched in the Opening Process pursuant to this subparagraph (2) and not during the Opening Process described in Rule 21.7.
 - (A) COB Opening Price. If there are matching complex orders in a complex strategy, the System determines the COB opening price, which is the price at which the most complex orders can trade. If there are multiple prices that would result in the same number of complex orders executed, the System chooses the price that would result in the smallest remaining imbalance as the COB opening price. If there are multiple prices that would result in the same number of complex orders executed and the same smallest imbalance, the System chooses the price closest to the midpoint of the (i) SNBBO or (ii) if there is no SNBBO available, the highest and lowest potential opening prices as the COB opening price. If the midpoint price would result in an invalid increment, the System rounds the COB opening price up to the nearest permissible increment. If the COB opening price equals the SBBO, the System adjusts the COB opening price to a price that is better than the corresponding bid or offer in the Simple Book by \$0.01.
 - (B) Transition to Regular Trading. After the System determines a COB opening price, the Exchange executes matching complex orders in accordance with the priority in Rule 21.8(a) applicable to the class at the COB opening price. The System enters any remaining complex orders (or unexecuted portions) into the COB, subject to a User's instructions.
 - (C) No Matching Complex Orders or No Valid COB Opening Price. If there are no matching complex orders in a complex strategy, the System opens the complex strategy without a trade. If after an Exchange-established period of time that may not exceed 30 seconds, the System cannot match orders because (i) the System cannot

determine a COB opening price (i.e., all queued orders are market orders) or (ii) the COB opening price is outside the SNBBO, the System opens the complex strategy without a trade. In both cases, the System enters any orders in the complex strategy in the COB (in time priority), except it Legs any complex orders it can into the Simple Book (as described below).

(d) Complex Order Auctions (COAs).

- (1) Commencement of COA. Upon receipt of a COA-eligible order, the System initiates the COA process by sending a COA auction message to all subscribers to the Exchange's data feeds that deliver COA auction messages. A COA auction message identifies the COA auction ID, instrument ID (i.e., complex strategy), Capacity, quantity, and side of the market of the COA-eligible order. If the COA eligible order is a Complex Reserve Order, the COA auction message only identifies the Display Quantity; however, the entire quantity (both the Display Quantity and Reserve Quantity) may execute following the COA pursuant to subparagraph (5) below. The Exchange may also determine to include the price in COA auction messages, which will be the limit order price or the SBO (SBB) (if initiated by a buy (sell) market complex order), or the drill-through price if the order is subject to the drill-through protection in Rule 21.17(b)(6).
- (2) Concurrent COAs. The System may initiate a COA in a complex strategy even though another COA in that complex strategy is ongoing.
 - (A) If there are multiple COAs ongoing for a specific complex strategy, each COA concludes sequentially based on the time each COA commenced, unless terminated early pursuant to paragraph (d)(3) below. At the time each COA concludes, the System allocates the COA-eligible order pursuant to this Rule and takes into account all COA Responses for that COA, orders in the Simple Book, and unrelated complex orders on the COB at the time the COA concludes.
 - (B) If there are multiple COAs ongoing for a specific complex strategy that are each terminated early pursuant to paragraph (d)(3) below, the System processes the COAs sequentially based on the order in which they commenced.
 - (C) If a COA Response is not fully executed at the end of the identified COA to which the COA Response was submitted, the System cancels or rejects the COA Response (or unexecuted portion) at the conclusion of the specified COA.
- (3) Response Time Interval. The "Response Time Interval" means the period of time during which Users may submit responses to the COA auction message ("COA Responses"). The Exchange determines the duration of the Response Time Interval, which may not exceed 500 milliseconds. However, the Response Time Interval terminates prior to the end of that time duration:
 - (A) when the System receives a non-COA-eligible order on the same side as the COA-eligible order that initiated the COA but with a price better than the COA

- price, in which case the System terminates the COA and processes the COA-eligible order pursuant to subparagraph (5) below and posts the new order to the COB; or
- (B) when the System receives an order in a leg of the complex order that would improve the SBBO on the same side as the COA-eligible order that initiated the COA to a price equal to or better than the COA price, in which case the System terminates the COA and processes the COA-eligible order pursuant to subparagraph (5) below, posts the new order to the Simple Book, and updates the SBBO.
- (4) COA Responses. The System accepts a COA Response(s) with any Capacity in \$0.01 increments during the Response Time Interval.
 - (A) A COA Response must specify the price, size, side of the market (i.e., a response to a buy COA as a sell or a response to a sell COA as a buy) and COA auction ID for the COA to which the User is submitting the COA Response.
 - (B) COA Responses may be larger than the COA-eligible order. The System aggregates the size of COA Responses submitted at the same price for an EFID, and caps the size of the aggregated COA Responses at the size of the COA-eligible order (including Display Quantity and Reserve Quantity if the COA-eligible order is a Complex Reserve Order).
 - (C) During the Response Time Interval, COA Responses are not firm, and Users can modify or withdraw them at any time prior to the end of the Response Time Interval, although the System applies a new timestamp to any modified COA Response (unless the modification was to decrease its size), which will result in loss of priority. The Exchange does not display COA Responses. At the end of the Response Time Interval, COA Responses are firm (i.e., guaranteed at their price and size).
 - (D) A COA Response may only execute against the COA-eligible order for the COA to which a User submitted the COA Response. The System cancels or rejects any unexecuted COA Responses (or unexecuted portions) at the conclusion of the COA.

(5) Processing of COA-Eligible Orders.

- (A) At the end of the Response Time Interval, the System executes a COA-eligible order (in whole or in part) against contra-side interest in price priority. If there is contra-side interest at the same price, the System allocates the contra-side interest as follows:
 - (i) COA Responses and unrelated orders with Priority Complex Order Status, if the Exchange has designated the class as eligible for Priority Complex Order status, as described below.
 - (ii) Orders and quotes in the Simple Book (both displayed and nondisplayed orders) for the individual leg components of the complex order through

<u>Legging</u> (subject to paragraph (g)), which the System allocates in accordance with the priority in Rule 21.8(a) applicable to the class.

- (iii) COA Responses and unrelated orders posted to the COB, which the System allocates on a pro-rata basis.
- (B) The System enters any COA-eligible order (or unexecuted portion) that does not execute at the end of the COA into the COB (if eligible for entry), and applies a timestamp based on the time it enters the COB. The System cancels or rejects any COA-eligible order (or unexecuted portion) that does not execute at the end of the COA if not eligible for entry into the COB or in accordance with the User's instructions. Complex orders resting on the COB may execute pursuant to paragraph (e) following evaluation pursuant to paragraph (i) and remain on the COB until they execute or are cancelled or rejected.
- (C) Priority Complex Order Status. Users with contra-side complex interest at the conclusion of the COA and displayed resting quotes and orders in any of the component legs of the COA-eligible order that were at a price equal to the NBBO on the opposite side of the market from any of the components of the COA-eligible order at the time the COA commenced, have priority in their contra-side complex interest ("Priority Complex Orders") up to the largest size of their quotes or orders at the NBBO in a pro-rata manner with other Priority Complex Orders. Priority Complex Order status is only valid for the duration of the particular COA.
- (e) Processing of Do-Not-COA Orders/Orders Resting on the COB. Upon receipt of a do-not-COA order, or if the System determines an order resting on the COB is eligible for execution following evaluation pursuant to paragraph (i), the System executes it (in whole or in part) against contra side interest in price priority. If there is contra side interest at the same price, the System allocates the contra side interest as follows:
 - (1) Orders and quotes in the Simple Book (both displayed and nondisplayed orders) for the individual leg components of the complex order through Legging (subject to paragraph (g)), which the System allocates in accordance with the priority in Rule 21.8(a) applicable to the class.
 - (2) Complex orders resting on the COB, which the System allocates in accordance with the priority in Rule 21.8(a) applicable to the class.

The System enters any do-not-COA order (or unexecuted portion) that does not execute against the individual leg markets or complex orders into the COB (if eligible for entry), and applies a timestamp based on the time it enters the COB. The System cancels or rejects any complex order (or unexecuted portion) that would execute at a price outside of the SBBO, that is not eligible for entry into the COB, or in accordance with the User's instructions. Complex orders resting on the COB may execute pursuant to this paragraph (e) following evaluation pursuant to paragraph (i) and remain on the COB until they execute or are cancelled or rejected.

(f) Minimum Increments and Execution Prices.

- (1) The minimum increment for bids and offers on a complex order is \$0.01, and the components of a complex order may be executed in \$0.01 increments, regardless of the minimum increments otherwise applicable to the individual components of the complex order.
- (2) The System does not execute a complex order pursuant to this Rule 21.18 at a net price:
 - (A) that would cause any component of the complex strategy to be executed at a price of zero;
 - (B) that would cause any component of the complex strategy to be executed at a price worse than the individual component price on the Simple Book;
 - (C) worse than the price that would be available if the complex order Legged into the Simple Book; or
 - (D) worse than the SBBO and:
 - (i) if a complex order has a ratio equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00), at least one component of the complex order must execute at a price that improves the best price available for that component; or
 - (ii) if the complex order has a ratio less than one-to-three (.333) or greater than three-to-one (3.00), the component(s) of the complex order for the leg(s) with a Customer order at the best price available must execute at a price that improves the price of that Customer order(s) on the Simple Book.
- (3) The System executes complex orders without consideration of any prices for the complex strategy that might be available on other exchanges trading the same complex strategy; provided, however, that such complex order price may be subject to the drill-through price protection described in Rule 21.17(b)(6).
- (g) Legging. A complex order may execute against orders and quotes in the Simple Book pursuant to subparagraphs (d)(5)(A)(i) and (e)(1) if it can execute in full or in a permissible ratio and if it has no more than a maximum number of legs (which the Exchange determines on a class-by-class basis and may be up to 16) ("Legging"), subject to the following:
 - (1) All two leg COA-eligible Customer complex orders may Leg into the Simple Book without restriction.
 - (2) Complex orders for any other Capacity with two option legs that are both buy or both sell and that are both calls or both puts may not Leg into the Simple Book.

 These orders may execute against other complex orders in the COB.
 - (3) All complex orders with three or four option legs that are all buy or all sell (regardless of whether the option legs are calls or puts) may not Leg into the Simple Book. These orders may execute against other complex orders in the COB.

- (4) Post Only complex orders may not Leg into the Simple Book.
- (5) The entire quantity of a Complex Reserve Order (both the Display Quantity and Reserve Quantity) Legs into the Simple Book at the same time, and any quantity that does not execute pursuant to paragraph (d) or (e) after Legging will rest in the COB in accordance with the Complex Reserve Order instruction.
- (h) Additional Complex Order Handling. Processing and execution of complex orders pursuant to this Rule 21.18 (including pursuant to paragraphs (d) and (e), and following evaluation pursuant to paragraph (i)) are subject to the following:
 - (1) Order Locks/Crosses Opposite Side of SBBO. A complex market order or a limit order with a price that locks or crosses the then-current opposite side SBBO and does not execute because the SBBO is the best price but not available for execution (because it does not satisfy the complex order ratio or the complex order cannot Leg into the Simple Book) enters the COB with a book and display price that improves the then-current opposite side SBBO by \$0.01. If the SBBO changes, the System continuously reprices the book and display price of the complex order (or unexecuted portion) based on the new SBBO (up to the limit price, if it is a limit order), subject to the drill-through price protection described in Rule 21.17(b)(6), until:
 - (A) the complex order has been executed in its entirety; or
 - (B) the complex order (or unexecuted portion) of the complex order is cancelled or rejected.
 - (2) Zero NBB, NBO, or NBBO. If there is a zero NBO for any leg, the System replaces the zero with a price \$0.01 above the NBB to calculate the SNBBO, and complex orders with any buy legs do not Leg into the Simple Book. If there is a zero NBB, the System replaces the zero with a price of \$0.01, and complex orders with any sell legs do not Leg into the Simple Book. If there is a zero NBB and zero NBO, the System replaces the zero NBB with a price of \$0.01 and replaces the zero NBO with a price of \$0.02, and complex orders do not Leg into the Simple Book.
 - (3) The System cancels or rejects a Post Only complex order if it locks or crosses a resting complex order in the COB or the then-current opposite side SBBO. The System cancels a resting Post Only complex limit order after evaluation pursuant to paragraph (i) below if the System determines the resting Post Only complex limit order locks or crosses the updated SBBO.
 - (4) Nondisplayed Orders. Displayed complex orders resting on the COB have priority over nondisplayed portions of Complex Reserve Orders resting on the COB.
- (i) Evaluation. The System evaluates an incoming complex order upon receipt after the open of trading to determine whether it is a COA-eligible order or a do-not-COA order and thus whether it should be processed pursuant to paragraph (d) or (e), respectively. The System reevaluates a

complex order resting on the COB (including an order (or unexecuted portion) that did not execute pursuant to paragraph (d) or (e) upon initial receipt):

- (1) at time the COB opens;
- (2) following a halt; and
- (3) during the trading session when the leg market price or quantity changes to determine whether the complex order:
 - (A) can execute (pursuant to paragraph (e));
 - (B) should be repriced (pursuant to paragraph (h));
 - (C) should remain resting on the COB; or
 - (D) should be cancelled.
- (j) Limit Up-Limit Down State. The System cancels or rejects a complex market order it receives when the underlying security is subject to a limit up-limit down state. If during a COA of a COA-eligible market order, the underlying security enters a limit up-limit down state, the System terminates the COA without trading and cancels or rejects all COA Responses.

(k) Trading Halts.

- (1) Halts During Regular Trading. If a trading halt exists for the underlying security or a component of a complex strategy, trading in the complex strategy is suspended. The System queues a User's open complex orders during a halt, unless the User entered instructions to cancel its open complex orders upon a halt, for participation in the re-opening of the COB as set forth in subparagraph (3) below. The COB remains available for Users to enter and manage complex orders that are not cancelled. The System enters incoming complex orders that could otherwise execute or initiate a COA in the absence of a halt in the COB. The System cancels or rejects incoming complex orders with a Time-in-Force of IOC.
- (2) Halts During a COA. If, during a COA, any component(s) and/or the underlying security of a COA-eligible order is halted, the COA ends early without trading, and the System cancels or rejects all COA Responses. The System enters remaining complex orders on the COB (if eligible for entry) or cancels complex orders that are not eligible to enter the COB.
- (3) Resumption of Trading Following a Halt. When trading in the halted component(s) and/or underlying security of the complex order resumes, the System re-opens the COB pursuant to subparagraph (c) above. The System queues any complex orders designated for a re-opening following a halt until the halt has ended, at which time they are eligible for execution in the Opening Process.

... Interpretations and Policies:

- .01 Market-Maker Quoting. Market-Makers are not required to quote on the COB. Complex strategies are not subject to any quoting requirements that apply to a Market-Maker in its appointed classes. The Exchange does not take into account a Market-Maker's complex orders entered in its appointed classes when determining whether a Market-Maker meets its quoting obligations pursuant to Rule 22.6 in its appointed classes.
- .02 Market-Maker Executions. A Market-Maker's orders for complex strategies executed in classes in which it has no appointment are included in the total number of all contracts the Market-Maker executes on the Exchange in any calendar quarter in determining whether the Market-Maker exceeds the 25% threshold pursuant to Rule 22.6(f).
- .03 Dissemination of COA Information. A Member's dissemination of information related to COAeligible orders to third parties or a pattern or practice of submitting orders that cause a COA to conclude early will be deemed conduct inconsistent with just and equitable principles of trade and a violation of Rule 3.1.