

## EXHIBIT 5A

(additions are underlined; deletions are [bracketed])

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Rules of Cboe Exchange, Inc.

(currently effective)

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[Rule 6.53B. S&P 500 Variance Trades

(a) General. The Exchange may allow for trading, via a single transaction, of an option portfolio replicating S&P 500 implied variance (“S&P 500 variance trades”). The Exchange will determine the days on which S&P 500 variance trades will be allowed. Matched S&P 500 variance trades will be deconstructed into individual constituent SPX option series trades that comprise the portfolio. The Exchange will make publicly available a detailed description of the formulas and methodology used to deconstruct S&P 500 variance trades into constituent SPX option series. For each day in which S&P 500 variance trades are allowed, the Exchange will publish, after the close of trading on the previous day, the options comprising the portfolio for the next day. The options comprising the portfolio are out-of-the-money SPX puts and calls centered around an at-the-money strike price; all constituent options have the same expiration date. Each portfolio will have a unique symbol. Market orders will not be allowed. S&P 500 variance trades may only trade electronically.

(b) Pricing Convention and Order Information. Market prices for S&P 500 variance trades will be expressed and quoted in volatility terms, and trade quantity will be expressed in contracts. Each contract will have a multiplier of \$10,000 or greater, as determined and published by the Exchange. The multiplier cannot be changed intraday.

(c) Order Execution. S&P 500 variance trade orders shall be ranked pursuant to one of the matching algorithms set forth in Rule 6.45, as determined by the Exchange. Once an S&P 500 variance trade match is received by the System, it will deconstruct the match into individual trades in constituent SPX option series. The process used to deconstruct S&P 500 variance trades into constituent SPX option legs involves 2-steps.

The first step assigns the number of contracts traded for each SPX option series. The number of SPX contracts is a function of the S&P 500 variance trade price and trade quantity, as well as time to expiration, interest rates and the strike prices of constituent SPX option legs.

The second step assigns trade prices for each SPX option in the S&P 500 variance trade. The System first constructs a baseline implied volatility for each constituent SPX option based on mid-quote prices prevailing at the time of the S&P 500 variance trade execution.

All of the implied volatilities of the constituent SPX options are then increased or decreased by an equal amount such that when the resulting theoretical option prices are fed back into the VIX formula, the formula value matches the S&P 500 variance trade price.

Once trade prices are determined for each constituent series, the System executes and reports the trades. The execution prices are unrelated to the existing market for the applicable series, therefore constituent trades are executed and reported without regard for existing bids and offers on the Exchange.

#### Rule 6.53C. Complex Orders on the Hybrid Trading System

(a) Definition: For purposes of the electronic trading of complex orders pursuant to this Rule, a complex order is any order for the same account as defined below:

(1) A “complex order” is any order involving the execution of two or more different options series in the same underlying security occurring at or near the same time in a ratio that is equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) (or such lower ratio as may be determined by the Exchange on a class-by-class basis) and for the purpose of executing a particular investment strategy. For the purpose of applying the aforementioned ratios to complex orders comprised of both mini-option contracts and standard option contracts, ten (10) mini-option contracts will represent one (1) standard option contract. Only those complex orders with no more than the applicable number of legs, as determined by the Exchange on a class-by-class basis, are eligible for processing.

(2) A “stock-option order” is an order to buy or sell a stated number of units of an underlying stock or a security convertible into the underlying stock (“convertible security”) coupled with the purchase or sale of options contract(s) on the opposite side of the market representing either (i) the same number of units of the underlying stock or convertible security, or (ii) 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 to the total number of units of the underlying stock or convertible security in the stock leg (or such lower ratio as may be determined by the Exchange on a class-by-class basis). Only those stock-option orders with no more than the applicable number of legs, as determined by the Exchange on a class-by-class basis, are eligible for processing.

(b) Types of Complex Orders: Complex orders may be entered as fill-or-kill, immediate or cancel, all-or-none orders, or as good-’til-cancelled.

(c) Complex Order Book:

(i) Routing of Complex Orders: The Exchange will determine which classes and which complex order origin types (i.e., non-broker-dealer public customer, broker-dealers that are not Market-Makers or specialists on an options exchange, and/or Market-Makers or specialists on an options exchange) are eligible for entry into the

COB and whether such complex orders can route directly to the COB and/or from PAR to the COB. In a class in which the Exchange determines complex orders of Market-Makers and specialists on an options exchange are not eligible for entry into the COB, the Exchange may determine that Market-Makers and specialists may enter complex orders into the COB if:

(A) their complex orders are on the opposite side of (1) a priority customer complex order(s) resting in the COB with a price not outside the national spread market; or (2) order(s) on the same side of the market in the same strategy that initiated a COA(s) if there are “x” number of COAs within “y” milliseconds, counted on a rolling basis (the Exchange determines the number “x” (which must be at least 2) and time period “y” (which may be no more than 2,000)); and

(B) they cancel their complex orders, if they remain unexecuted, no later than a specified time (which the Exchange determines and may be no more than five minutes) after the time the COB receives the Market-Maker order.

Complex orders not eligible to route to COB (either directly or from PAR to COB) will route via the order handling system pursuant to Rule 6.12.

(i) Execution of Complex Orders in the COB: Notwithstanding the provisions of Rule 6.42, the Exchange will determine on a class-by-class basis whether complex orders that are submitted to the COB may be expressed on a net price basis in a multiple of the minimum increment (i.e., \$0.10 or \$0.05 or \$0.01, as applicable) or in a smaller increment that may not be less than \$0.01. Complex orders that are submitted to the COB may be executed without consideration to prices of the same complex orders that might be available on other exchanges, and the legs of a complex order may be executed in \$0.01 increments, regardless of the minimum quoting increments otherwise appropriate to the individual legs of the order. Complex orders that are submitted to the COB may trade in the following way:

(1) Orders and Quotes in the EBook: A complex order in the COB will automatically execute against individual orders or quotes residing in the EBook provided the complex order can be executed in full (or in a permissible ratio) by the orders and quotes in EBook.

(2) Orders in COB: Complex orders in the COB that are marketable against each other will automatically execute. The allocation of a complex order within the COB shall be pursuant to the rules of trading priority otherwise applicable to incoming electronic orders in the individual component legs or another electronic matching algorithm from Rule 6.45, as determined by the Exchange on a class-by-class basis.

(3) Trading Permit Holders and PAR Officials may submit orders or quotes to trade against orders in the COB. Trading Permit Holders and PAR Officials entering orders or quotes that are not eligible to rest in the COB

pursuant to subparagraph (c)(i) above may only enter IOC orders and such other order or quote types as the Exchange may determine on a class-by-class basis. Order or quote types that are not eligible to rest or trade against the COB will be automatically cancelled. The Exchange may determine on a class-by-class basis which electronic matching algorithm from Rule 6.45 applies to executions of complex orders in the COB.

(iii) Complex orders in the COB may be designated as day orders or good-till-cancelled orders.

(d) Process for Complex Order RFR Auction: Prior to routing to the COB or once on PAR, eligible complex orders may be subject to an automated request for responses (“RFR”) auction process.

(i) For purposes of paragraph (d):

(1) “COA” is the automated complex order RFR auction process.

(2) A “COA-eligible order” means a complex order that, as determined by the Exchange on a class-by-class basis, is eligible for a COA considering the order’s size, complex order type (as defined in paragraphs (a) and (b) above) and complex order origin types (as defined in subparagraph (c)(i) above). Complex orders processed through a COA may be executed without consideration to prices of the same complex orders that might be available on other exchanges.

(ii) Initiation of a COA:

(A) The System will send an RFR message to all Trading Permit Holders who have elected to receive RFR messages on receipt of (1) a COA-eligible order with two or more legs (including orders submitted for electronic processing from PAR) that is better than the same side of the Exchange spread market or (2) a complex order with three or more legs that meets the class, size, and complex order type parameters of subparagraph (d)(i)(2) and is marketable against the Exchange spread market. Complex orders as described in subparagraph (ii)(A)(2) will initiate a COA regardless of the order’s routing parameters or handling instructions (except for orders routed for manual handling). Immediate or cancel orders that are not marketable against the Exchange spread market in accordance with subparagraph (ii)(A)(2) will be cancelled. The RFR message will identify the component series, the size and side of the market of the COA-eligible order and any contingencies, if applicable.

(B) Notwithstanding subparagraph (ii)(A)(1), Trading Permit Holders may request on an order-by-order basis that an incoming COA-eligible order with two legs not COA (a “do-not-COA” request). Notwithstanding subparagraph (ii)(A)(2), the System will reject back to a Trading Permit

Holder any complex order described in that subparagraph that includes a do-not-COA request. Any complex order in subparagraph (ii)(A)(2) on PAR will COA even if the PAR operator includes a do-not-COA request. If a two-legged order with a do-not-COA request rests on PAR, then the PAR operator may not request that the order COA. An order initially submitted to the Exchange with a do-not-COA request may still COA after it has rested on the COB pursuant to Interpretation and Policy .04.

(iii) Bidding and Offering in Response to RFRs: Market-Makers with an appointment in the relevant option class and Trading Permit Holders acting as agent for orders resting at the top of the COB in the relevant options series opposite the order submitted to COA may submit responses to the RFR message (“RFR Responses”) during the Response Time Interval, unless the Exchange determines, on a class-by-class basis, to allow all Trading Permit Holders to submit responses to the RFR message.

(1) RFR Responses must be on the opposite side of the market of the COA-eligible order. RFR Response sizes will be limited to the size of the COA-eligible order for allocation purposes and may be expressed on a net price basis in a multiple of the minimum increment (i.e., \$0.10, \$0.05 or \$0.01, as applicable) or in a smaller increment that may not be less than \$0.01, as determined by the Exchange on a class-by-class basis. RFR Responses will not be visible (other than by the COA system).

(2) The “Response Time Interval” means the period of time during which responses to the RFR may be entered. The Exchange will determine the length of the Response Time Interval on a class-by-class basis; provided, however, that the duration shall not exceed three (3) seconds.

(iv) Processing of COA-Eligible Orders: At the expiration of the Response Time Interval, COA-eligible orders will be allocated in accordance with subparagraph (v) below or routed in accordance with subparagraph (vi) below.

(v) Execution of COA-Eligible Orders: COA-eligible orders may be executed without consideration to prices of the same complex orders that might be available on other exchanges, and the legs of a COA-eligible order may be executed in one cent increments, regardless of the minimum quoting increments otherwise appropriate to the individual legs of the order. COA-eligible orders will trade first based on the best net price(s) and, at the same net price, will be allocated in the following way:

(1) The individual orders and quotes residing in the EBook have first priority to trade against a COA-eligible order, provided the COA-eligible order can be executed in full (or in a permissible ratio) by the orders and quotes in the EBook. The allocation of a COA-eligible order against the EBook is pursuant to the aggregated pro-rata priority electronic allocation algorithm

with priority customer overlay described in Rule 6.45(a)(i)(B) and (ii)(A), with order and quote sizes capped for allocation purposes.

(2) Priority customer complex orders resting in the COB before, or that are received during, the Response Time Interval and priority customer RFR Responses, collectively, have second priority to trade against a COA-eligible order. If there are two or more priority customer complex orders at the same price, priority is afforded to such priority customer orders in the sequence in which the Hybrid System received them.

(3) Broker-dealer orders resting in the COB before the Response Time Interval have third priority to trade against a COA-eligible order. The allocation of a COA-eligible order against broker-dealer orders resting in the COB is pursuant to the aggregated pro-rata priority electronic allocation algorithm with priority customer overlay described in Rule 6.45(a)(i)(B) and (ii)(A), with order sizes capped for allocation purposes.

(4) Broker-dealer orders resting in the COB that are received during the Response Time Interval and broker-dealer RFR responses, collectively, have fourth priority. The allocation of a COA-eligible order against these opposing orders is pursuant to the aggregated pro-rata priority electronic allocation algorithm with priority customer overlay described in Rule 6.45(a)(i)(B) and (ii)(A), with order and response sizes capped for allocation purposes.

(vi) Routing of COA-Eligible Orders: If a COA-eligible order cannot be filled in whole or in a permissible ratio, the order (or any remaining balance) will route to the COB or back to PAR, as applicable.

(vii) Firm Quote Requirement for COA-Eligible Orders: RFR Responses represent non-firm interest that can be modified or withdrawn at any time prior to the end of the Response Time Interval. At the end of the Response Time Interval, RFR Responses shall be firm only with respect to the COA-eligible order for which it is submitted, provided that RFR Responses that exceed the size of a COA-eligible order are also eligible to trade with other incoming COA-eligible orders that are received during the Response Time Interval. Any RFR Responses not accepted in whole or in a permissible ratio will expire at the end of the Response Time Interval.

(viii) Handling of Unrelated Complex Orders and Changes in Leg Markets: Incoming complex orders that are received and changes in the leg markets that occur prior to the expiration of the Response Time Interval for a COA-eligible order (the "original COA") will impact the original COA as follows:

(1) Incoming complex orders that are received prior to the expiration of the Response Time Interval for the original COA that are on the opposite side of the market and are marketable against the starting price of the original COA-eligible order will cause the original COA to end. The processing of the

original COA pursuant to subparagraphs (d)(iv) through (d)(vi) remains the same. For purposes of this Rule, the “starting price,” shall mean the better of the original COA-eligible order’s limit price or the best price, on a net debit or credit basis, that existed in the EBook or COB at the beginning of the Response Time Interval.

(2) Incoming COA-eligible orders that are received prior to the expiration of the Response Time Interval for the original COA that are on the same side of the market, at the same price or worse than the original COA-eligible order and better than or equal to the starting price will join the original COA. The processing of the original COA pursuant to subparagraphs (d)(iv) through (d)(vi) remains the same with the addition that the priority of the original COA-eligible order and incoming COA-eligible order(s) shall be according to time priority.

(3) Incoming COA-eligible orders that are received prior to the expiration of the Response Time Interval for the original COA that are on the same side of the market and at a better price than the original COA-eligible order will join the original COA, cause the original COA to end, and a new COA to begin for any remaining balance on the incoming COA-eligible order. The processing of the original COA pursuant to subparagraphs (d)(iv) through (d)(vi) remains the same with the addition that the priority of the original COA-eligible order and incoming COA-eligible order shall be according to time priority.

(4) Incoming complex orders with a do-not-COA request or that are not COA-eligible that are received prior to the expiration of the Response Time Interval for the original COA that are on the same side of the market and at a price better than or equal to the starting price will cause the original COA to end. The processing of the original COA pursuant to subparagraphs (d)(iv) through (d)(vi) remains the same with the addition that the priority of the original COA-eligible order and the incoming order with a do-not-COA request or that is not COA-eligible, as applicable, shall be according to time priority.

(5) If the leg markets were not marketable against a COA-eligible order when the order entered the System but become marketable with the COA-eligible order prior to the expiration of the Response Time Interval, the original COA will end. The processing of the original COA pursuant to subparagraphs (d)(iv) through (d)(vi) remains the same.

(ix) Limit Up-Limit Down State. If during a COA of a market order, the underlying security of an option in a complex order of a COA-eligible order enters a limit up-limit down state, as defined in Rule 6.3A, the COA will end upon the entering of the limit up-limit down state and the remaining portion of the order will be cancelled.

*... Interpretations and Policies:*

.01 All pronouncements regarding determinations by the Exchange pursuant to Rule 6.53C and the Interpretations and Policies thereunder will be announced to the Trading Permit Holders via Regulatory Circular.

.02 If the Exchange determines to list SPX or VIX on a group basis pursuant to Rule 8.14, a marketable complex order consisting of legs in different groups of series in the class does not automatically execute against individual orders residing in the EBook pursuant to Rule 6.53C(c)(ii)(1) or (d)(v)(1) and automatically executes against complex orders (or COA responses) in accordance with Rules 6.53C(c)(ii)(2) or (d)(v)(2) through (4). A marketable complex order consisting of legs in the same group of series in SPX or VIX executes against individual orders in the EBook in accordance with Rule 6.53C(c)(ii) and (d)(v). Complex orders consisting of legs in different groups of series that are marketable against each other may only execute at a net price that has priority over the individual orders and quotes resting in the EBook.

.03 The N-second timer for complex order transactions will be established at the same length as for non-complex order transactions.

.04 For each class where COA is activated, the Exchange may also determine to activate COA for complex orders resting in COB. For such classes, any non-marketable order resting at the top of COB may be automatically subject to COA if the order is within a number of ticks away from the opposite side of the current Exchange spread market. The Exchange may also determine on a class-by-class and strategy basis to limit the frequency of COAs initiated for complex orders resting in COB. Notwithstanding the foregoing, if a leg order has been generated for a complex order resting in the COB pursuant to paragraph (c)(iv) of this Rule, the complex order will not be eligible for COA.

.05 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 4.1. Redistributing the RFR messages provided by the Exchange to persons not eligible to respond to such messages pursuant to paragraph (d) (iii) above is prohibited, except in classes in which the Exchange allows all Trading Permit Holders to respond to such messages.

.06 Special Provisions Applicable to Stock-Option Orders: Stock-option orders may be executed against other automated stock-option orders. Stock-option orders will not be legged against the individual component legs, except as provided in paragraph (d) below.

(a) Stock Component. Trading Permit Holders may only submit complex orders with a stock component if such orders comply with the Qualified Contingent Trade Exemption from Rule 611(a) of Regulation NMS. Trading Permit Holders submitting such complex orders represent that such orders comply with the Qualified Contingent Trade Exemption. To participate in stock-option order automated processing, the Trading Permit Holder shall give up a Clearing Trading Permit Holder previously identified to, and processed by the Exchange as a Designated Give Up for that Trading Permit Holder in accordance with Rule



6.21 and which has entered into a brokerage agreement with one or more Exchange-designated broker-dealers that are not affiliated with the Exchange to electronically execute the stock component of the stock-option order at a stock trading venue selected by the Exchange-designated broker-dealer on behalf of the Trading Permit Holder. The stock component of a stock-option order shall be electronically communicated by the Exchange to an Exchange-designated broker-dealer for execution on behalf of the Trading Permit Holder or, in the case of a stock-option order represented in open outcry, routed from PAR to the Exchange-designated broker-dealer for automated processing in accordance with the order's terms. A stock-option order shall not be executed on the Hybrid System unless the stock leg is executable at the price(s) necessary to achieve the desired net price.

(b) Option Component. Notwithstanding the special priority provisions contained in paragraphs (c) and (d) below, the option leg(s) of a stock-option order shall not be executed on the Hybrid System (i) at a price that is inferior to the Exchange's best bid (offer) in the series or (ii) at the Exchange's best bid (offer) in that series if one or more priority customer orders are resting at the best bid (offer) price on the book in each of the component option series and the stock-option order could otherwise be executed in full (or in a permissible ratio). The option leg(s) of a stock-option order may be executed in a one-cent increment, regardless of the minimum quoting increment applicable to that series.

(1) To the extent that a marketable stock-option order cannot automatically execute in full (or in a permissible ratio) when it is routed to COB or after being subject to COA, any part of the order that may be executed will be executed automatically and the part that cannot automatically execute will route via the order handling system pursuant to Rule 6.12.

(2) To the extent that a stock-option order resting in COB becomes marketable against the Exchange Spread Market, the full order will be subject to COA (and the processing described in paragraph (b)(1) of this Interpretation and Policy).

(c) Complex Order Book. Stock-option orders in the COB that are marketable against each other will automatically execute, subject to the condition noted in paragraph (b) above. The allocation of a stock-option order within the COB shall be pursuant to the rules of trading priority otherwise applicable to incoming electronic orders in the individual component legs or another electronic matching algorithm from Rule 6.45, as determined by the Exchange on a class-by-class basis. Orders and quotes may be submitted by Trading Permit Holders and PAR Officials to trade against orders in the COB as set forth in subparagraph (c)(ii)(3) of this Rule.

(d) Complex Order Auction. Stock-Option Orders executed via COA shall trade in the sequence set forth in subparagraph (d)(v)(1)-(4) of this Rule except that subparagraph (d)(v)(1) will not be applicable and such execution will be subject to the condition noted in paragraph (b) of this Interpretation and Policy. Notwithstanding subparagraph (d)(vi), on a class-by-class basis, the Exchange may determine to route eligible market orders in the following manner: If at the conclusion of COA an eligible market order cannot be filled in whole or in a permissible ratio, then any remaining balance of the option leg(s) will route to the Hybrid System for processing as a simple market order(s) and any remaining balance of

the stock leg will route to a designated dealer for processing as a market order. For purposes of this legging functionality, an “eligible market order” means a stock-option order that is within the designated size and order type parameters, determined by the Exchange on a class-by-class basis, and for which the NBBO is within designated size and price parameters, as determined by the Exchange for the individual leg. The designated NBBO price parameters will be determined based on a minimum bid price for sell orders. The Exchange may also determine on a class-by-class basis to limit the trading times within regular trading hours that the legging functionality will be available.

(e) Marking Requirement. If the stock leg of a stock-option order submitted to COB or COA is a sell order, then the stock leg must be marked “long,” “short,” or “short exempt” in compliance with Regulation SHO under the Exchange Act.

(f) Limit up-Limit Down State. When the underlying security on a Stock-option order is in a limit up-limit down state as defined in Rule 6.3A, such order will only execute if the calculated stock price is within the permissible Price Bands as defined in Rule 52.15. If the calculated price is not within the permissible Price Bands, the Stock-option order will be routed for manual handling.

(g) QCC with Stock Orders. The System processes QCC with Stock Orders as follows:

(1) Entry of QCC with Stock Order. When a Trading Permit Holder enters a QCC with Stock Order on the Exchange, it enters a QCC order pursuant to Rule 6.53 with a stock component (pursuant to Rule 6.53). When entering a QCC with Stock Order, the Trading Permit Holder must:

(A) include a net price for the stock and option components;

(B) give up a Clearing Trading Permit Holder in accordance with Rule 6.21; and

(C) designate a specific broker-dealer to which the stock components will be communicated, which broker-dealer the Exchange must have identified as having connectivity to electronically communicate the stock components of QCC with Stock Orders to stock trading venues and with which the TPH must have entered into a brokerage agreement (the “designated broker-dealer”). The Exchange will have no financial arrangements with the broker-dealers it has identified with respect to communicating stock orders to them.

(2) Option Component.

(A) If the option component (i.e., the QCC order) of a QCC with Stock Order can execute, the System executes it in accordance with Rule 6.45(a) or 6.53C(c), as applicable, but does not immediately send the Trading Permit Holder a trade execution report. The System then automatically communicates the stock component to the designated broker-dealer for execution.

(B) If the option component of a QCC with Stock Order cannot execute, the System cancels the QCC with Stock Order, including both the stock and option components.

(3) Stock Component.

(A) If the System receives an execution report for the stock component of a QCC with Stock Order from the designated broker-dealer, the Exchange sends the Trading Permit Holder the trade execution report for the QCC with Stock Order, including execution information for both the stock and option components.

(B) If the System receives a report from the designated broker-dealer that the stock component of a QCC with Stock Order cannot execute, the Exchange nullifies the option component trade and notifies the Trading Permit Holder of the reason for the nullification.

QCC with Stock Orders are available to Trading Permit Holders on a voluntary basis.

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[.09 Reserved.

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.11 Execution of Complex Orders on the COB Open:

(a) Complex orders, including stock-option orders, do not participate in opening rotations for individual component option series legs conducted pursuant to Rule 6.2. When the last of the individual component option series legs that make up a complex order strategy has opened (and, in the case of a stock-option order, the underlying stock has opened), the COB for that strategy will open. The COB will open with no trade, except as follows:

(i) The COB will open with a trade against the individual component option series legs if there are complex orders on only one side of the COB that are marketable against the opposite side of the Exchange spread market. The resulting execution will occur at the Exchange spread market price to the extent marketable pursuant to the rules of trading priority otherwise applicable to incoming electronic orders in the individual component legs. To the extent there is any remaining balance, the complex orders will trade pursuant to subparagraph (ii) below or, if unable to trade, be processed as they would on an intra-day basis under Rule 6.53C. This subparagraph (i) is not applicable to stock-option orders because stock-option orders do not trade against the individual component option series legs when the COB opens.

(ii) The COB will open (or continue to open with another trade if a trade occurred pursuant to subparagraph (i) above) with a trade against complex orders if there are complex orders in the COB (including any remaining balance of an order that enters the COB after a partial trade with the legs pursuant to subparagraph (i)) that are marketable against each other and priced within the Exchange spread market. The resulting execution will occur at a market clearing price that is inside the Exchange spread market and that matches complex orders to the extent marketable pursuant to the electronic allocation algorithm from Rule 6.45, as determined by the Exchange on a class-by-class basis with the addition that the COB gives priority to complex orders whose net price is better than the market clearing price first, and then to complex orders at the market clearing price. To the extent there is any remaining balance, the complex orders will be processed as they would on an intra-day basis under Rule 6.53C. This subparagraph (ii) is applicable to stock-option orders.

(b) The Exchange may also use the process described in paragraph (a) of this Interpretation and Policy .11 when the COB reopens a strategy after a time period during which trading of that strategy was unavailable.

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## EXHIBIT 5B

(additions are underlined; deletions are [bracketed])

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Rules of Cboe Exchange, Inc.

(effective as of October 7, 2019)

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**Rule 1.1. Definitions**

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

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**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), 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 5.33. 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) *Definitions.* For purposes of this Rule 5.33, the following terms have the meanings below. A term defined elsewhere in the Rules has the same meaning with respect to this Rule 5.33, unless otherwise defined below.

**Complex Order**

The term “complex order” has the meaning set forth in Rule 1.1.

**Complex Order Auction and COA**

The terms “Complex Order Auction” and “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 maintained by the System, which single book is used during both the RTH and GTH 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 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 at a particular time.

**Legging**

The term “Legging” is defined in paragraph (g) below.

**Regular Trading**

The term “regular trading” means trading of complex orders that occurs during a trading session other than: (1) at the opening of the COB or re-opening of the COB for trading following a halt (described in paragraph (c) below) or (2) during the COA process (described in paragraph (d) below).

**Synthetic Best Bid or Offer and SBBO**

The terms “Synthetic Best Bid or Offer” and “SBBO” mean the best bid and offer on the Exchange for a complex strategy calculated using:

(1) for complex orders, the BBO for each component (or the NBBO for a component if the BBO for that component is not available) of a complex strategy from the Simple Book; and

(2) for stock-option orders, the BBO for each option component (or the NBBO for a component if the BBO for that component is not available) and the NBBO of the stock component of a complex strategy.

**Synthetic National Best Bid or Offer and SNBBO**

The terms “Synthetic National Best Bid or Offer” and “SNBBO” mean the national best bid and offer for a complex strategy calculated using:

(1) for complex orders, the NBBO for each component of a complex strategy, and

(2) for stock-option orders, the NBBO for each option component and the NBBO of the stock component of a complex strategy.

(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) The Exchange determines which Times-in-Force of Day, GTC, GTD, IOC, or OPG as such terms are defined in Rule 5.6(d) are available for complex orders (including for eligibility to enter the COB and initiate a COA).

(2) 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 COA or for entry into the COB. Complex orders submitted to the Exchange with Capacities not eligible for COA or entry into the COB route to PAR for manual handling or are cancelled, subject to a User's instructions.

(A) In a class in which the Exchange determines complex orders with Capacity M or N are not eligible for entry into the COB, the Exchange may determine that a complex order with Capacity M or N may enter the COB if:

(i) the complex order is on the opposite side of (a) a Priority Customer complex order(s) resting in the COB with a price not outside the SNBBO; or (b) orders on the same side of the market in the same complex strategy that initiated a COA(s) if there are "x" number of COAs within "y" milliseconds, counted on a rolling basis (the Exchange determines the number "x" (which must be at least two) and the time period "y" (which may be no more than 2,000); and

(ii) the User cancels the complex order, if it remains unexecuted, no later than a specified time (which the Exchange determines and may be no more than five minutes) after the time the COB receives the M or N complex order.

(3) Users may designate complex orders as Attributable or Non-Attributable.

(4) Users may not submit complex orders through bulk ports.

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

### **All Sessions**

An "All Sessions" complex order is a complex order a User designates as eligible to trade during both GTH and RTH. An unexecuted All Sessions complex order on the COB at the end of a GTH trading session remains on the COB and becomes eligible

for execution during the RTH COB Opening Process or trading session on that same trading day, subject to a User's instructions. A User may not designate an All Sessions complex order as Direct to PAR.

### **AON**

An "AON" complex order is a complex order that is to be executed in its entirety or not at all. An AON complex order may only execute following a COA, and is not eligible to rest in the COB.

### **Book Only**

A "Book Only" complex order is a complex order the System ranks and executes pursuant to this Rule 5.33 or cancels or rejects, as applicable (in accordance with the User's instructions). A User may not designate a Book Only order as Direct to PAR.

### **COA-Eligible and Do-Not-COA**

(A) *COA-Eligible*. A "COA-eligible" complex order is a buy (sell) complex order with User instructions to (or which default to) initiate a COA that is priced (i) equal to or lower (higher) than the SBO (SBB) (provided that if any of the bids or offers on the Simple Book that comprise the SBO (SBB) is represented by a Priority Customer order, the complex order must be priced at least one minimum increment lower (higher) than the SBO (SBB)) and (ii) lower (higher) than the price of sell (buy) complex orders resting at the top of the COB.

(B) *Do-Not-COA*. A "do-not-COA" complex order is a complex order with User instructions to not (or which default to not) initiate a COA (including a Post Only complex order) or that does not satisfy the COA-eligibility requirements in subparagraph (A).

(C) *Default Instructions*.

(i) 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.

(ii) Upon receipt of a complex order with any Time-in-Force other than IOC (except OPG), the System initiates a COA unless a User marked the order to not initiate a COA.

(iii) A Post Only complex order with any Time-in-Force does not initiate a COA, and if a User marks a Post Only complex order to initiate a COA, the System cancels that order.

(iv) An incoming AON complex order initiates a COA, and if a User marks an AON complex order to not initiate a COA, or an AON complex order



does not satisfy the COA eligibility criteria in subparagraph (d)(1) below, the System cancels the AON complex order.

### **Complex Only**

A “Complex Only” order is a Day or IOC complex order a Market-Maker may designate to execute only against complex orders in the COB and not Leg into the Simple Book. Unless designated as Complex Only, and for all other Times-in-Force and complex order Capacities, a complex order may execute against complex orders in the COB and may Leg into the Simple Book.

### **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 5.6(c). 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.

### **Post Only**

A “Post Only” complex order is a complex order the System ranks and executes pursuant to this Rule 5.33 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 5.34(b). A User may not designate a Post Only order as Direct to PAR.

### **RTH Only**

An “RTH Only” complex order is a complex order a User designates as eligible to trade only during RTH or not designated as All Sessions. An unexecuted RTH Only complex order with a Time-in-Force of GTC or GTD on the COB at the end of an RTH trading session remains on the COB and becomes eligible for execution during the RTH trading session on the following trading day (but not during the GTH trading session on the following trading day), subject to a User’s instructions.

### **QCC with Stock Order**

A “QCC with Stock Order” is a QCC Order (including a Complex QCC Order), as defined in Rule 5.6(c), entered with a stock component to be electronically communicated by the Exchange to a designated broker-dealer for execution on behalf of the submitting User pursuant to subparagraph (l)(3) below. QCC with Stock Orders are available to Users on a voluntary basis. A User may not designate a QCC with Stock Order as Direct to PAR.

## **Stock-Option Order**

A “stock-option order” is the purchase or sale of a stated number of units of an underlying stock or a security convertible into the underlying stock (“convertible security”) coupled with the purchase or sale of an option contract(s) on the opposite side of the market representing either (i) the same number of units of the underlying stock or convertible security or (ii) 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. Only those stock-option orders in the classes designated by the Exchange with no more than the applicable number of legs are eligible for processing. Stock-option orders execute in the same manner as other complex orders, except as otherwise specified in this Rule.

(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 Rules 5.7 and 5.31(b), except the Queuing Period for complex orders ends when the complex strategy opens. Complex orders entered during the Queuing Period are not eligible for execution until the initiation of the COB Opening Process. Beginning at (A) 2:00 a.m. for All Sessions classes for the GTH trading session and (B) 8:30 a.m. for RTH Only classes and 9:15 a.m. for All Sessions classes for the RTH trading session, 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 COB Opening Process pursuant to this subparagraph (2) and not during the Opening Auction Process described in Rule 5.31.

(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 price levels 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 price levels 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 would require printing at the same price as a Priority Customer on any leg in the Simple Book, the System adjusts the COB opening price to a price that is better than the corresponding bid or offer in the marketplace by at least one minimum increment.

(B) *Transition to Regular Trading.* After the System determines a COB opening price, the System executes matching complex orders at the COB opening price in price priority (i.e., orders better than the COB opening price are executed first and thereafter orders at the COB opening price are executed), and then pursuant to the allocation algorithm applicable to the class pursuant as set forth in subparagraph (d)(5)(A)(ii) below. The System enters any remaining complex orders (or unexecuted portions) into the COB, subject to the 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), subject to a User's instructions, 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 in any class, 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), quantity, and side of the market of the COA-eligible order. The Exchange may also determine to include in COA auction messages the Capacity and/or the price, which is (A) the limit order price, (B) the SBO (SBB) (if initiated by a buy (sell) market complex order), or (C) the drill-through price if the order is subject to the drill-through protection in Rule 5.34(b).

(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;

(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; or

(C) if the System receives a Priority Customer Order that would join or improve the SBBO on the same side as the COA in progress 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 Exchange determines on a class-by-class basis whether (A) all Users or (B) Market-Makers with an appointed in the class and TPHs acting as agent for orders resting at the top of the COB in the relevant complex strategy may submit COA Response(s). The System accepts a COA response(s) with a permissible Capacity in the applicable minimum increment 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) 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.

(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 results in loss of priority. At the end of the Response Time Interval, COA Responses are firm (i.e., guaranteed at their price and size).

(D) The Exchange does not display COA Responses.

(E) A COA Response may only execute against the COA-eligible order for the COA to which a User submitted the COA Response.

(F) 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) Priority Customer orders resting on the Simple Book for the individual leg components of the complex order through Legging (subject to paragraph (g)) in time priority;

(ii) COA Responses and unrelated orders on the COB pursuant to the allocation algorithm applicable to the class, or another allocation algorithm from Rule 5.32 determined by the Exchange on a class-by-class basis; and

(iii) remaining orders in the Simple Book for the individual leg components of the complex order through Legging (subject to paragraph (g)), which the System allocates in accordance with the base allocation algorithm applicable to the class pursuant to Rule 5.32(b).

Notwithstanding the foregoing, at the conclusion of a COA of an AON complex order, the AON complex order may only execute against COA

Responses and unrelated orders on the COB in price-time priority if there is sufficient size to satisfy the AON complex order (and may not execute against orders in the Simple Book). If there is insufficient size to satisfy the AON complex order, the System routes the order to PAR for manual handling or cancels the order, subject to a User's instructions.

(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 to rest), and applies a timestamp based on the time it enters the COB. The System routes to PAR for manual handling 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, subject to 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.

(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) Priority Customer Orders resting on the Simple Book for the individual leg components of the complex order through Legging (subject to paragraph (g)) in time priority;

(2) unrelated orders on the COB pursuant to the allocation algorithm set forth in subparagraph (d)(5)(A)(ii) above; and

(3) remaining orders in the Simple Book for the individual leg components of the complex order through Legging (subject to paragraph (g)), which the System allocates in accordance with the allocation algorithm applicable to the class pursuant to Rule 5.32.

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 to rest), and applies a timestamp based on the time it enters the COB. The System routes to PAR for manual handling any complex order (or unexecuted portion) that does not execute upon entry and is not eligible for entry into the COB, subject to 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, Execution Prices, and Priority.

(1) Minimum Increments.

(A) Complex Orders. The minimum increment for bids and offers on a complex order, and the increments at which components of a complex order may be executed, is set forth in Rule 5.4(b).

(B) Stock-Option Orders. Users may express bids and offers for a stock-option order (including a QCC with Stock Order) in any decimal price the Exchange determines. The minimum increment for the option leg(s) of a stock-option order is \$0.01 or greater, which the Exchange may determine on a class-by-class basis, regardless of the minimum increments otherwise applicable to the option leg(s), and the stock leg of a stock-option order may be executed in any decimal price permitted in the equity market.

(2) Execution Prices and Complex Order Priority.

(A) Complex Orders. The System does not execute a complex order pursuant to this Rule 5.33 at a net price:

(i) that would cause any component of the complex strategy to be executed at a price of zero;

(ii) worse than the SBBO or equal to the SBBO when there is a Priority Customer Order at the SBBO, except AON complex orders may only execute at prices better than the SBBO;

(iii) that would cause any component of the complex strategy to be executed at a price worse than the individual component prices on the Simple Book;

(iv) worse than the price that would be available if the complex order Legged into the Simple Book; or

(v) that would cause any component of the complex strategy to be executed at a price ahead of a Priority Customer Order on the Simple Book without improving the BBO of at least one component of the complex strategy.

(B) Stock-Option Orders.

(i) For a stock-option order with one option leg, the option leg may not trade at a price worse than the individual component price on the Simple Book or at the same price as a Priority Customer Order on the Simple Book.

(ii) For a stock-option order with more than one option leg, the option legs must trade at prices pursuant subparagraph (A) above.

(iii) A stock-option order may only execute if the stock leg is executable at the price(s) necessary to achieve the desired net price. To facilitate the execution of the stock leg and options leg(s) of an executable stock-option order at valid increments pursuant to subparagraph (f)(1)(B) above, the legs may trade outside of their expected notional trade value by a specified amount (which the Exchange determines), unless the order has a capacity of "C".

(iv) The System executes the buy (sell) stock leg of a stock-option order pursuant to this Rule 5.33 up to a buffer amount above (below) the NBO (NBB) for the stock leg. The execution price of the buy (sell) stock leg of a QCC with Stock Order may be any price (including outside the NBBO for the stock leg), except the price must be permitted by Regulation SHO and the Limit Up-Limit Down Plan.

(3) *Other Exchanges.* 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 5.34(b).

(g) *Legging Restrictions.* A complex order may execute against orders and quotes in the Simple Book pursuant to subparagraphs (d)(5)(A) and (e) 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 two, three, or four) ("Legging"), subject to the following restrictions:

(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 and AON complex orders may not Leg into the Simple Book.

(5) Stock-option orders may not Leg into the Simple Book and may only execute against other stock-option orders.



(6) If the Exchange determines to list SPX or VIX on a group basis pursuant to Rule 4.14, a complex order consisting of legs in different groups of series in the class may not Leg into the Simple Book. A complex order consisting of legs in the same group of series may Leg, subject to the other restrictions in this paragraph (g).

(h) Additional Complex Order Handling. Processing and execution of complex orders pursuant to this Rule 5.33 (including pursuant to paragraphs (d) and (e), and following evaluation pursuant to paragraph (i)) are subject to the following:

(1) A complex market order or 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 (A) is one minimum increment away from the current opposite side SBBO if the opposite side SBBO is represented by a Priority Customer Order or (B) locks the current opposite side SBBO. 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 5.34(b) 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) The System cancels or rejects an incoming 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.

(3) If there is a zero NBO for any leg, the System replaces the zero with a price equal to one minimum increment 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 equal to one minimum increment, 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 equal to one minimum increment and replaces the zero NBO with a price equal to two minimum increments, and complex orders do not Leg into the Simple Book.

(i) Evaluation. The System evaluates an incoming complex order upon receipt 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, or cancelled. The System re-evaluates 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 day 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.

(1) The System routes to PAR for manual handling or cancels or rejects, subject to a User's instructions, a complex market order it receives when the underlying security is subject to a Limit State or Straddle State, as such terms are defined in the Limit Up-Limit Down Plan.

(2) If during a COA of a market order the underlying security enters a Limit State or Straddle State, the System terminates the COA without trading and cancels or rejects all COA Responses.

(3) The Exchange only executes the stock leg of a stock-option order at a price permissible under the Limit Up-Limit Down Plan. If a stock-option order cannot execute, if it is a limit order, the System calculates the SBBO or SNBBO with a price for the stock leg that would be permissible under that Plan and posts the stock-option order on the COB at that price, or if it is a market order, routes the stock-option order to PAR for manual handling, subject to a User's instructions.

(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, and the System queues a User's complex orders unless the User instructed the Exchange to cancel its complex orders upon a trading halt. The COB remains available for Users to enter and manage complex orders. Incoming complex orders that could otherwise execute or initiate a COA in the absence of a halt are placed on the COB (if eligible to rest) or cancelled, subject to a User's instructions. Incoming complex orders with a Time-in-Force of IOC are cancelled.

(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 to rest) or cancels remaining orders, subject to a User's instructions.

(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 paragraph (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 Auction Process.

(l) Stock-Option Orders. Stock-option orders execute in the same manner as other complex orders pursuant to this Rule, except as follows:

(1) Designated Broker-Dealer. When a User submits to the System a stock-option order, it must designate a specific broker-dealer with which it has entered into a brokerage agreement pursuant to Interpretation and Policy .03 of this Rule (the “designated broker-dealer”) to which the Exchange will electronically communicate the stock component of the stock-option order on behalf of the User.

(2) Execution. A stock-option order may execute against other stock-option orders (or COA Responses, if applicable), but may not execute against orders in the Simple Book. A stock-option order may only execute if the price complies with subparagraph (f)(2)(B) above.

(A) Execution of Option Component. If a stock-option order can execute upon entry or following a COA, or if it can execute following evaluation while resting in the COB pursuant to paragraph (i), the System executes the option component (which may consist of one or more option legs) of a stock-option order against the option component of other stock-option orders resting in the COB or COA responses pursuant to the allocation algorithm applicable to the class pursuant to subparagraph (d)(5)(A)(ii) above, as applicable, but does not immediately send the User a trade execution report, and then automatically communicates the stock component to the designated broker-dealer for execution at a stock trading venue.

(B) Execution of Stock Component. If the System receives an execution report for the stock component from the designated broker-dealer, the Exchange sends the User the trade execution report for the stock-option order, including execution information for the stock and option components. If the System receives a report from the designated broker-dealer that the stock component cannot execute, the Exchange nullifies the option component trade and notifies the User of the reason for the nullification.

If a stock-option order is not marketable, it rests in the COB (if eligible to rest) or routes to PAR for manual handling, subject to a User’s instructions.

(3) QCC with Stock Orders. The System processes QCC with Stock Orders as follows:

(A) Entry of QCC with Stock Order. When a User submits a QCC with Stock Order to the System, it enters a QCC Order (which may be a Complex

QCC Order) pursuant to Rule 5.6(c) with a stock component (pursuant to this Rule 5.33). When entering a QCC with Stock Order, the User must: (i) include a net price for the stock and option components in accordance with the minimum increments for stock-option orders set forth in paragraph (f) above, and (ii) identify the designated broker-dealer as set forth in subparagraph (l)(2) above.

(B) Execution of Option Component. If the option component (i.e., the QCC Order or Complex QCC Order) of a QCC with Stock Order can execute, the System executes it in accordance with Rule 5.6(c), but does not immediately send the User a trade execution report, and automatically communicates the stock component to the designated broker-dealer for execution at a stock trading venue. If the option component(s) of a QCC with Stock Order cannot execute, the System cancels the QCC with Stock Order, including both the stock and option components.

(C) Execution of Stock Component. If the System receives an execution report for the stock component of a QCC with Stock Order from the designated broker-dealer, the Exchange sends the User the trade execution report for the QCC with Stock order, including execution information for both the stock and option components. If the System receives a report from the designated broker-dealer that the stock component of a QCC with Stock Order cannot execute, the Exchange nullifies the option component trade and notifies the User of the reason for the nullification.

#### (4) Regulation SHO.

(A) If a User submits to the System a stock-option order with a stock leg to sell, the User must mark the stock leg “long,” “short,” or “short exempt” in compliance with Regulation SHO under the Exchange Act.

(B) The Exchange only executes the stock leg of a stock-option order at a price permissible under Regulation SHO. If a stock-option order cannot execute, if it is a limit order, the System calculates the SBBO or SNBBO with a price for the stock leg that would be permissible under Regulation SHO and posts the stock-option order on the COB at that price, or if a market order, routes the stock-option order to PAR for manual handling, subject to a User’s instructions.

#### 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 are applicable to Market Makers in the simple market for individual options series or classes. Volume executed in complex strategies is not taken into consideration when determining whether Market Makers are meeting quoting obligations applicable to Market Makers in the simple market for individual options.

.02 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 8.1.

.03 Stock-Option Orders. A User may only submit a stock-option order (including a QCC with Stock Order) if it complies with the Qualified Contingent Trade Exemption (“QCT Exemption”) from Rule 611(a) of Regulation NMS. A User submitting a stock-option order represents that it complies with the QCT Exemption. To submit a stock-option order to the Exchange for execution, a User must enter into a brokerage agreement with one or more broker-dealers that are not affiliated with the Exchange, which broker-dealer(s) the Exchange has identified as having connectivity to electronically communicate the stock components of stock-option orders to stock trading venues.

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### **Rule 5.41. S&P 500 Variance Trades**

(a) General. The Exchange may allow for trading, via a single transaction, of an option portfolio replicating S&P 500 implied variance (“S&P 500 variance trades”). The Exchange will determine the days on which S&P 500 variance trades will be allowed. Matched S&P 500 variance trades will be deconstructed into individual constituent SPX option series trades that comprise the portfolio. The Exchange will make publicly available a detailed description of the formulas and methodology used to deconstruct S&P 500 variance trades into constituent SPX option series. For each day in which S&P 500 variance trades are allowed, the Exchange will publish, after the close of trading on the previous day, the options comprising the portfolio for the next day. The options comprising the portfolio are out-of-the-money SPX puts and calls centered around an at-the-money strike price; all constituent options have the same expiration date. Each portfolio will have a unique symbol. Market orders will not be allowed.

(b) Pricing Convention and Order Information. Market prices for S&P 500 variance trades will be expressed and quoted in volatility terms, and trade quantity will be expressed in contracts. Each contract will have a multiplier of \$10,000 or greater, as determined and published by the Exchange. The multiplier cannot be changed intraday.

(c) Order Execution.

(1) S&P 500 variance trade orders will be ranked pursuant to one of the base allocation algorithms set forth in Rule 5.32, as determined by the Exchange.

(2) Once an S&P 500 variance trade match is received by the System, it will deconstruct the match into individual trades in constituent SPX option series. The process used to deconstruct S&P 500 variance trades into constituent SPX option legs involves two-steps.

(A) The first step assigns the number of contracts traded for each SPX option series. The number of SPX contracts is a function of the S&P 500 variance

trade price and trade quantity, as well as time to expiration, interest rates and the strike prices of constituent SPX option legs.

(B) The second step assigns trade prices for each SPX option in the S&P 500 variance trade. The System first constructs a baseline implied volatility for each constituent SPX option based on mid-quote prices prevailing at the time of the S&P 500 variance trade execution.

(3) All of the implied volatilities of the constituent SPX options are then increased or decreased by an equal amount such that when the resulting theoretical option prices are fed back into the VIX formula, the formula value matches the S&P 500 variance trade price.

(4) Once trade prices are determined for each constituent series, the System executes and reports the trades. The execution prices are unrelated to the existing market for the applicable series, therefore constituent trades are executed and reported without regard for existing bids and offers on the Exchange.

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

(a) Simple Orders. Pursuant to Rule 5.6(a), the Exchange may make order types, Order Instructions, and Times-in-Force available on a class basis for PAR routing for manual handling (and open outcry trading). The Exchange may make the following order types, Order Instructions, and Times-in-Force available for PAR routing for manual handling (and open outcry trading):

(1) Order Types: limit order and market order.

(2) Order Instructions: AON, Attributable, Minimum Quantity, MTP Modifier, [Multi-Class Spread,] Non-Attributable, Not Held, and RTH Only[, and SPX Combo].

(3) Times-in-Force: Day and GTC.

(b) Complex Orders. The Exchange may make complex orders, including security future-option orders, and stock-option orders available for PAR routing [and] for manual 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) Order Types: limit order and market order.

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

(3) *Times-in-Force*: Day and GTC.

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