



January 29, 2020

Christopher J. Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581

Re: Cboe Futures Exchange, LLC Rule Certification
Submission Number CFE-2020-002

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (“Act”), and §40.6(a) of the regulations promulgated by the Commodity Futures Trading Commission (“CFTC” or “Commission”) under the Act, Cboe Futures Exchange, LLC (“CFE” or “Exchange”) hereby submits a CFE rule amendment (“Amendment”) to amend CFE’s rules in order to implement quoting functionality on CFE’s trading system (“CFE System”). Exhibit 1 to this submission sets forth the rule changes included in the Amendment. The Amendment will become effective on or after February 12, 2020, on an implementation date for the quoting functionality to be announced by the Exchange through the issuance of an Exchange notice.

CFE Trading Privilege Holders (“TPHs”) currently utilize match capacity allocations to submit orders to the CFE System. These match capacity allocations may be used for the submission of single orders to the CFE System utilizing either the Financial Information Exchange (“FIX”) or Binary Order Entry (“BOE”) protocol. A single order refers to an order that is submitted to the CFE System through a message type that may include one order in each message. Going forward, these match capacity allocations will be referred to as order match capacity allocations.

In connection with the implementation of quoting functionality on the CFE System, CFE will provide all TPHs with the option to use order match capacity allocations and/or quoting match capacity allocations. A quoting match capacity allocation is an additional type of match capacity allocation that will provide the ability to submit single orders and bulk messages to the CFE System utilizing the BOE protocol. A bulk message is a new message type that may be utilized to submit multiple quotes to the CFE System in a single message. A quote refers to the entry, modification, or cancellation of a bid or offer for a CFE contract through a bulk message.

The primary CFE rule changes relating to the implementation of the quoting functionality include the following:

- CFE is amending Chapter 1 (Definitions) of the CFE Rulebook to amend the definition of “match capacity allocation” to include reference to both an “order match capacity allocation” and a “quoting match capacity allocation”, to add defined terms for “bulk message” and “quote”, and to reference a “quote” as a type of “order”. CFE is also making

clear in the definition of “match capacity allocation” that a quoting match capacity allocation may or may not be subject to a message rate limit as designated by the Exchange, as is currently the case with an order match capacity allocation.

- CFE Rule 403 (Order Entry and Maintenance of Front-End Audit Trail Information) currently requires that orders contain specified information and that orders that do not contain this information are rejected or canceled back to the sender. CFE is modifying Rule 403 to provide that these existing provisions apply to single orders, to set forth the information that is required to be included within a bulk message and within a quote, and to provide that bulk messages and quotes that do not contain the required information will be rejected or canceled back to the sender.
- CFE Rule 404 (Acceptable Orders) currently lists the types of orders that may be submitted to the CFE System. CFE is making the following three revisions to the existing provisions of Rule 404, which will now be set forth within Rule 404(a):
 - CFE is amending Rule 404 to define a single order and to provide that the existing order types listed in Rule 404 are types of single orders.
 - CFE is clarifying that the scope of the term “cancel order” also includes a cancel request submitted either through the portal (an internet-based interface component of the CFE System made available to TPHs to manage orders described in CFE Rule 513(a)) or through a kill switch (a risk control described in CFE Rule 513A(j)).
 - CFE is augmenting the description of a cancel replace/modify order to make clear that a cancel replace/modify order may only be used to modify certain order information fields in an existing order, that the replacement order retains the other order information from the existing order, and that a cancel order must be submitted followed by the submission of a separate new order in order to change other order information.
- CFE is adding new Rule 404(b) to address bulk messages and quotes and to provide that any TPH may submit bulk messages and quotes in a form and manner prescribed and provided by the Exchange.
- New Rule 404(b)(i) provides that bulk messages are subject to the following parameters:
 - The Exchange may designate a maximum number of quotes that may be submitted in a bulk message.
 - Subject to two exceptions described below, a bulk message may be utilized to submit quotes in multiple contracts with the same trading symbol root and may not be utilized to submit quotes for different trading symbol roots in the same CFE product or in different CFE products.
 - For example, each CFE product has a different trading symbol root and thus a single bulk message may not be used to submit quotes in multiple products.
 - There is also a different trading symbol root for trade at settlement (“TAS”) transactions in a CFE product than for non-TAS transaction in a product. Thus, a

single bulk message may not be utilized to submit both TAS and non-TAS quotes in the same product.

- The ability to utilize a bulk message to submit quotes in multiple contracts with the same trading symbol root is subject to the following exceptions:
 - A bulk message may be utilized to enter, modify, or cancel only one bid and/or one offer in a contract. A bulk message may not be utilized enter, modify, or cancel bids in a contract at multiple price levels and/or offers in a contract at multiple price levels. In order to simultaneously maintain bids at multiple price levels and/or offers at multiple price levels in a contract through the use of bulk messages, the bulk messages to enter, modify, or cancel the bids and/or offers at the multiple price levels must be submitted with a different Executing Firm ID (“EFID”) or through a different quoting match capacity allocation for each price level.
 - Any bulk message submitted during a queuing period may not be utilized to enter, modify, or cancel a bid and/or offer in more than one TAS single leg expiration. A queuing period is a period outside of trading hours during which orders may be submitted to the CFE System but are not executed by the CFE System. In order to utilize bulk messages to enter, modify, or cancel bids and/or offers in more than one TAS single leg expiration during a queuing period, multiple bulk messages must be used.
- The Exchange may allow for the use of different types of bulk messages. For example, the Exchange may allow for bulk message types with respect to which the information for certain information fields designated by the Exchange is provided as a default at the match capacity allocation level instead of being provided in each bulk message, the Bulk Message does not include certain non-required information fields, and/or the bulk message uses a smaller format for certain information fields.
- New Rule 404(b)(ii) provides that quotes are subject to the following parameters:
 - A quote is treated the same as an order, and the term “order” encompasses a quote, unless the Exchange rules specify otherwise.
 - A bid or offer submitted through a quote is treated the same as a limit order, and a quote may not be utilized to submit a market order or a stop limit order.
 - A bid or offer submitted through a quote is treated the same as a day order, and a quote may not have any time in force condition other than day.
 - A quote may only be submitted for a single contract leg, and a quote may not be utilized to submit a spread order.
 - For purposes of time priority in the order book, each quote submitted in a bulk message receives as its time stamp the time stamp for the time at which the bulk message was received by the CFE System matching engine. Accordingly, each quote submitted in a bulk message receives the same time stamp for its receipt by the matching engine. Each quote is then processed by the matching engine as a separate order.

- A quote is unique per quoting match capacity allocation, EFID, and side. A quote with a bid for a contract replaces any existing bid for that contract established by a previous quote submitted with the same EFID through the same quoting match capacity allocation, and a quote with an offer for a contract replaces any existing offer for that contract established by a previous quote submitted with the same EFID through the same quoting match capacity allocation.
 - Accordingly, a bid or offer submitted through a quote may be modified or canceled by submitting a subsequent quote that replaces the existing bid or offer. For example, a bid or offer submitted through a quote may be cancelled by submitting a subsequent quote that changes the existing bid or offer size to zero or the existing bid or offer price to zero.
 - Unless otherwise specified, references in the Exchange rules to a cancel order will also be deemed to include reference to a quote with a bid size or price of zero or with an offer size or price of zero. Any reference in the Exchange rules to a cancel replace/modify order will not be deemed to include reference to a quote.
- A mass cancel, purge request, portal cancel request, or kill switch request submitted through the use of CFE System functionality that enables the cancellation of all or a subset of a TPH's pending orders with a single message may be utilized to cancel existing bids and offers submitted through quotes.
- CFE is amending CFE Rule 406 (Execution of Orders by CFE System) by adding new CFE Rule 406(d)(iii) to describe how quote modifications impact order priority. Specifically, if the quantity of an existing bid or offer established by a quote is decreased by means of a subsequent quote and the subsequent quote does not change the price or any other information field of the existing bid or offer other than quantity, the bid or offer established by the subsequent quote retains the priority position of the existing bid or offer with the decreased quantity. If the quantity of an existing bid or offer established by a quote is increased or the price or any other information field of the existing bid or offer other than quantity is changed by means of a subsequent quote, the bid or offer established by the subsequent quote is placed in priority position behind all orders in the order book at the same price with respect to time priority. This is the same priority treatment that applies when a cancel replace/modify order changes the quantity or price of an existing single order.
- CFE is amending CFE Rule 406B (Match Trade Prevention) in the following respects:
 - CFE is revising Rule 406B(a) to provide that quotes may be marked with a match trade prevention ("MTP") modifier at the quoting match capacity allocation level, such that the MTP modifier applies to all quotes submitted through the quoting match capacity allocation while that particular setting is in place.
 - CFE is modifying Rule 406B(a) to note that single orders may be marked with an MTP modifier at the order level and that an incoming quote or resting bid or offer established by a quote is treated the same as an order for MTP purposes.
- CFE is making the following revisions to CFE Rule 513A (Risk Controls):
 - CFE is updating the provisions regarding order rate limits to provide that the Exchange

may designate order rate limits for order match capacity allocations and/or quoting match capacity allocations; that the Exchange shall disseminate to TPHs in a form and manner determined by the Exchange any order rate limits designated by the Exchange; and that the Exchange may permit TPHs to designate order rate limits for order match capacity allocations and/or quoting match capacity allocations that are lower than any order rate limit designated by the Exchange for that type of match capacity allocation.

- CFE is adding reference to the portal as a mechanism to cancel all or a subset of pending orders.
- CFE is setting forth that cancel on match capacity allocation disconnect functionality and cancel on matching engine disconnect functionality are enabled for each quoting match capacity allocation (with respect to both single orders and quotes); that cancel on drop disconnect functionality is available for use with quoting match capacity allocations (with respect to both single orders and quotes); and that cancel on reject functionality is enabled for each quoting match capacity allocation with respect to quotes. A TPH will also have the option to enable cancel on reject functionality for each quoting match capacity allocation with respect to single orders. Additionally, all of these features will continue to be available for use with order match capacity allocations, and a TPH may choose whether or not to enable each of these features for an order match capacity allocation as is currently the case.

CFE believes that the quoting functionality will improve the overall functioning and operation of the CFE System. Currently, when there are changes in market conditions, the CFE System often receives large bursts of single orders as market participants respond to changes in the market by updating their existing bids and offers and submitting additional bids and offers. Each of these single orders is submitted by a TPH to the CFE System in an individual message, and thus the CFE System must handle each of these individual messages one by one. As a result, the CFE System performs more functions and takes a longer period of time to process these messages than would be the case if many of these updated and additional bids and offers were submitted through bulk messages that contained multiple quotes in a single message.

CFE believes that the improved processing efficiency that quoting functionality will introduce to the CFE System will inure to the benefit of TPHs and other market participants whether or not they utilize the quoting functionality. In particular, CFE expects that the average time for a TPH to receive an acknowledgment from the CFE System that a request to submit or update a bid or offer has been received by the CFE System will be lower than it otherwise would be in the absence of quoting functionality (regardless of whether a TPH uses a single order or bulk message to submit or modify a bid or offer or utilizes an order match capacity allocation or a quoting match capacity allocation to do so). CFE also expects that, all things being equal, the CFE System will disseminate fewer update messages as part of CFE's market data distribution for the same number of bid and offer submissions and updates. As a result, CFE expects that recipients of CFE market data will have fewer market data update messages to process within their own systems than would otherwise be the case which should improve the operational efficiency of those systems. CFE believes that these reductions in overall latency for the receipt of acknowledgments and the dissemination of market data will benefit TPHs and other market participants by enabling them to receive and act upon this information more quickly.

The quoting functionality that CFE is making available is similar to quoting functionality made available by securities exchanges affiliated with CFE. CFE believes that having a technology offering that is consistent with respect to this functionality will simplify technology implementation, changes, and maintenance by TPHs, many of which are also participants on these affiliated markets.

Quoting match capacity allocations also provide efficiencies that can allow for reduced latency in comparison to the use of order match capacity allocations. The CFE System has a gateway layer through which bid and offer submissions and updates pass before reaching the CFE System matching engine. The gateway layer consists of central processing unit (“CPU”) cores. Each quoting match capacity allocation has a dedicated CPU core whereas more than one order match capacity allocation may share the same CPU core. When there is a lot of message traffic, having a dedicated CPU core may allow for a bulk message or single order submitted through a quoting match capacity allocation to be received by the matching engine sooner than a single order submitted through an order match capacity allocation. Additionally, because less software code is required to process a quote at the gateway layer, a bulk message submitted through a quoting match capacity allocation may be received by the matching engine sooner than a single order submitted through a quoting match capacity allocation. To the extent that the Exchange allows for different types of bulk messages, the same may occur as between different types of bulk messages since there may be differences in the amount of software code required to process each type of bulk message at the gateway layer.

All TPHs will have the option of using quoting match capacity allocations and/or order match capacity allocations as they see fit. Additionally, TPHs that obtain quoting match capacity allocations may choose to use them solely for bulk messages, solely for single orders, or for both bulk messages and single orders. All of the types of single orders that TPHs may submit through order match capacity allocations may be submitted through quoting match capacity allocations and there are no types of single orders that may be submitted through quoting match capacity allocations that are not able to be submitted through order match capacity allocations. CFE will not require all TPHs to switch to quoting match capacity allocations and will not discontinue the availability of order match capacity allocations. Thus, TPHs that prefer to continue to use order match capacity allocations will continue to be able to do so.

At the same time, CFE expects that there are some TPHs that may find it beneficial to use quoting match capacity allocations given the nature of their trading activity. For example, TPHs that act as designated primary market makers (“DPMs”) or lead market makers (“LMMs”) in CFE products or that regularly maintain two-sided markets or bids and offers for multiple contracts in a product may find it beneficial to use the quoting functionality. DPMs and LMMs in CFE products are subject to market performance benchmarks relating to the maintenance of two-sided markets with minimum sizes and maximum widths in multiple contracts for the applicable product. Other TPHs trade in a similar manner in CFE products.

These TPHs that function as liquidity providers on CFE’s market will be able to utilize the quoting functionality to submit bulk messages that update multiple bids and offers in a single message rather than having to submit multiple single order messages to do so. CFE believes that the quoting functionality will allow liquidity providers to update their bids and offers in a more efficient manner and better enable them to manage their risk exposure, such as when updating their bids and offers in response to changing market conditions.

CFE intends to introduce options on futures to its market at a later date and believes that the quoting functionality would be particularly useful to liquidity providers that trade those options contracts given the large number of individual option series with different strike prices that CFE would expect to list and the number of price changes in options that can occur as the price of the underlying future and market conditions change. Liquidity providers that maintain two-sided markets in the option series for a particular futures product would be able to update all of these bids and offers with a bulk message instead of needing to submit large numbers of single orders to achieve the same outcome.

CFE believes that by enabling TPHs to more efficiently enter and update bids and offers, the quoting functionality will serve to encourage the provision of more aggressive liquidity, which in turn will foster tighter spreads, improved price discovery, and enhanced trading opportunities and competition within CFE's market. As a result, CFE believes that the quoting functionality will positively impact liquidity and market quality on CFE's market to the benefit of all CFE market participants.

CFE believes that the Amendment is consistent with the Designated Contract Market ("DCM") Core Principles under Section 5 of the Act. In particular, CFE believes that the Amendment is consistent with:

(i) DCM Core Principle 2 (Compliance Rules) in that all TPHs will have the option to use the quoting functionality if they desire to do so;

(ii) DCM Core Principle 4 (Prevention of Market Disruption) in that TPHs will be able to utilize the automated risk controls in the CFE System for their trading activity through quoting match capacity allocations that are available for use for trading activity conducted through order match capacity allocations;

(iii) DCM Core Principle 7 (Availability of General Information) because the Amendment describes in CFE's rules the manner of operation of the quoting functionality, including with respect to quoting match capacity allocations, bulk messages, and quotes;

(iv) DCM Core Principle 9 (Execution of Transactions) because the quoting functionality will contribute to the provision by CFE of a competitive, open, and efficient market and mechanism for executing transactions that protects the price discovery process of trading on CFE's centralized market;

(v) DCM Core Principle 10 (Trade Information) because the Amendment addresses information that is required to be included in bulk message and quote submissions to the CFE System and this information will be included as part of CFE's audit trail;

(vi) DCM Core Principle 11 (Financial Integrity of Transactions) in that CFE clearing members will be able to utilize automated pre-trade risk controls within the CFE System to facilitate the management of their financial risk in relation to the trading activity through quoting match capacity allocations of the TPHs for which they act as a clearing member; and

(vii) DCM Core Principle 20 (System Safeguards) in that CFE will have conducted internal testing as well as testing with external parties prior to the implementation of the quoting functionality.

CFE sought and received input from TPHs regarding the quoting functionality, particularly in relation to its use for the submission of bids and offers for TAS single leg expirations during a queuing period. Most TPHs that are active in providing liquidity to the TAS market were supportive of the introduction of quoting functionality and believed that the ability to utilize quoting match capacity allocations would have a positive impact on that market. Other liquidity providers in the TAS market had mixed views or preferred the current structure under which only order match capacity allocations may be used or a modified version of that structure. CFE has observed that there often can be large numbers of TAS bids and offers submitted at the beginning of the queuing period for TAS transactions during the pre-open time frame prior to the start of each trading day that are seeking price-time priority in the TAS market. CFE believes that the quoting functionality and the anticipated use of quoting match capacity allocations by liquidity providers in the TAS market will improve the processing of these bids and offers by the CFE System. Additionally, CFE believes that the limitation on the use of

a bulk message to no more than one TAS single leg expiration which CFE is implementing during queuing periods as a feature of the quoting functionality will contribute to the equitable treatment of TAS bids and offers. In particular, with this limitation, it will not be possible for a single bulk message to be used to gain price-time priority in all TAS single leg expirations at the commencement of the pre-open queuing period prior to the beginning of a trading day. Accordingly, CFE believes that the quoting functionality will benefit CFE's TAS market in addition to benefiting CFE's market as a whole.

CFE believes that the impact of the Amendment will be beneficial to the public and market participants. CFE hereby certifies that the Amendment complies with the Act and the regulations thereunder. CFE further certifies that CFE has posted a notice of pending certification with the Commission and a copy of this submission on CFE's Web site (<http://cfe.cboe.com/aboutcfe/rules.aspx>) concurrent with the filing of this submission with the Commission.

Questions regarding this submission may be directed to Arthur Reinstein at (312) 786-7570. Please reference our submission number CFE-2020-002 in any related correspondence.

Cboe Futures Exchange, LLC

/s/ Matthew McFarland

By: Matthew McFarland
Managing Director

EXHIBIT 1

The Amendment, marked to show additions in underlined text and deletions in ~~stricken~~ text, consists of the following:

* * * * *

Cboe Futures Exchange, LLC Rules

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Chapter 1 Definitions

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Bulk Message

The term “Bulk Message” has the meaning set forth in Rule 404.

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Match Capacity Allocation

The term “match capacity allocation” includes different types of match capacity allocations.

A ~~An~~ “order match capacity allocation” provides the ability to submit single Orders to the CFE System ~~within~~ utilizing either the FIX or BOE protocol.

A “quoting match capacity allocation” provides the ability to submit single Orders and Bulk Messages to the CFE System utilizing the BOE protocol.

Match capacity allocations may be subject to an Order rate ~~limit~~ limits designated by the Exchange.

Match capacity allocations are made available in a form and manner prescribed the Exchange.

* * * * *

Order

The term “Order” means any Market Order, Limit Order, Spread Order, Stop Limit Order, Cancel Order, Cancel Replace/Modify Order, Day Order, Good-’til-Canceled Order, Good-’til-Date Order, Immediate or Cancel Order, ~~or~~ Fill or Kill Order or Quote, all having the respective meanings set forth in Rule 404, as well as any other types of Orders that may be approved by the Exchange from time to time.

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Quote

The term “Quote” has the meaning set forth in Rule 404.

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403. Order Entry and Maintenance of Front-End Audit Trail Information

(a) All Orders shall be entered into the CFE System by electronic transmission through a CFE Workstation, and the Exchange shall maintain an electronic record of those entries. Each Trading Privilege Holder (including its Authorized Traders) shall be responsible in every respect for any and all Orders entered by it (including its Related Parties) and for compliance by its Related Parties with this Rule 403. Prior to entering any Order, the relevant Related Party shall connect to the CFE System in a form and manner prescribed by the Exchange.

(b) Each single Order must contain the following information: (i) whether such Order is a buy or sell Order; (ii) Order type; (iii) price or premium (if the Order is not a Market Order); (iv) quantity; (v) Contract identifier or product and contract expiration(s); (vi) Client Order ID; (vii) EFID; (viii) Order Entry Operator ID; (ix) Clearing Corporation origin code (C for Customer or F for Firm); (x) Customer Type Indicator code; (xi) manual Order indicator; (xii) account designation (which shall be the account number of the account of the party for which the Order was placed, except that a different account designation may be included in the case of a bunched Order processed in accordance with Rules 406(g) and 605 or in the case of an Order for which there will be a post-trade allocation of the resulting trade(s) to a different clearing member); (xiii) in the case of Orders for Options, either Contract identifier or each of strike price, type of option (put or call) and expiration; and (xiv) such additional information as may be prescribed from time to time by the Exchange. ~~Any Order that does not contain required information in a form and manner prescribed by the Exchange will be rejected or canceled back to the sender by the CFE System.~~

(c) Each Bulk Message must contain the following information: (i) Quote Update ID; (ii) EFID; (iii) Order Entry Operator ID; (iv) Clearing Corporation origin code (C for Customer or F for Firm); (iv) Customer Type Indicator code; (v) manual Order indicator; (vi) account designation (which shall be the account number of the account of the party for which the Quotes in the Bulk Message were placed, except that a different account designation may be included in the case of a Quote that is a bunched Order processed in accordance with Rules 406(g) and 605 or in the case of a Quote for which there will be a post-trade allocation of the resulting trade(s) to a different clearing member); (vii) at least one Quote; and (vii) such additional information as may be prescribed from time to time by the Exchange.

(d) Each Quote must contain the following information: (i) whether the Quote is to buy or sell; (ii) price or premium; (iii) quantity; (iv) Contract identifier; and (v) such additional information as may be prescribed from time to time by the Exchange.

(e) Any single Order, Bulk Message, or Quote that does not contain required information in a form and manner prescribed by the Exchange will be rejected or canceled back to the sender by the CFE System.

~~(b)(f)~~ (f) With respect to Orders received by a Trading Privilege Holder (including its Authorized Traders) which are immediately entered into the CFE System, no record needs to be kept by such Trading Privilege Holder, except as may be required pursuant to Rule 501 and

Applicable Law. However, if a Trading Privilege Holder (including its Authorized Traders) receives Orders which cannot be immediately entered into the CFE System, such Trading Privilege Holder must prepare an order form in a non-alterable written medium, which shall be time-stamped and include the account designation, date and other required information. Each such form must be retained by the Trading Privilege Holder for at least five years from the time it is prepared. Any such Orders must be entered into the CFE System, in the order they were received, as soon as they can be entered into the CFE System.

~~(e)~~(g) Each Clearing Member and each Trading Privilege Holder that is a Futures Commission Merchant or Introducing Broker shall maintain front-end audit trail information for all electronic Orders entered by that party into the CFE System, including all related modifications and cancellations. Each Clearing Member shall also maintain, or cause to be maintained, front-end audit trail information for all electronic Orders entered into the CFE System by any Trading Privilege Holder for which the Clearing Member is identified in the Order submission by EFID as the Clearing Member for the execution of the Order, including all related modifications and cancellations. This audit trail must contain all Order entry, modification, cancellation and response receipt time(s) as well as all Financial Information Exchange interface (“FIX”) tag information and fields or Binary Order Entry (“BOE”) Order message information, as applicable. Notwithstanding any of the provisions of this Rule 403(c), each Trading Privilege Holder is obligated to comply with the provisions of Commission Regulation §1.35 as applicable to that Trading Privilege Holder.

404. Acceptable Orders

(a) *Single Orders.* At the discretion of the Exchange, any of the following types of Orders, as well as any other types that may be approved from time to time, may be entered into the CFE System with respect to any Contract: Any Trading Privilege Holder may submit the following types of single Orders to the CFE System in a form and manner prescribed and provided by the Exchange. A “single Order” refers to an Order that is submitted to the CFE System through a message type that may include one Order in each message. A single Order may not be submitted through a Bulk Message and does not include a Quote.

~~(a)~~(i) *Market Order.* A “Market Order” is an Order to buy or sell a stated number of Contracts at the best price(s) available on the Exchange and to cancel any remaining portion of the Order that is not executed upon receipt of the Order.

~~(b)~~(ii) *Limit Order.* A “Limit Order” is an Order to buy or sell a stated number of Contracts at a specified limit price, or at a better price.

~~(c)~~(iii) *Spread Order.* A “Spread Order” is an Order to simultaneously purchase, sell or purchase and sell at least two Contracts in a form permitted by the Exchange. A “strip” is a type of Spread Order that is exclusively for the purchase or exclusively for the sale of at least two Contracts in a form permitted by the Exchange. A Spread Order must be a Limit Order and may not be submitted as a Market Order, Stop Limit Order or Fill or Kill Order.

~~(d)~~(iv) *Stop Limit Order.* A “Stop Limit Order” is an Order to buy or sell when a Contract trades at a specified trigger price. A Stop Limit Order to buy becomes a Limit Order to buy a stated number of Contracts at a specified limit price, or at a better price, when the relevant Contract trades at or above the trigger price of the Order. A Stop Limit Order to sell becomes a Limit Order to sell a stated number of Contracts

at a specified limit price, or at a better price, when the relevant Contract trades at or below the trigger price of the Order. If an Order is traded in a sequence of transactions at multiple price points and one of those price points is the trigger price for a Stop Limit Order, the Stop Limit Order is not triggered until the sequence of transactions with that Order is concluded (including if subsequent transactions occur in that sequence after the transaction with that Order at the trigger price). Block Trades and Exchange of Contract for Related Position transactions do not trigger Stop Limit Orders.

A Stop Limit Order is not entered into the Order book or reflected in the disseminated depth of the Order book until the Stop Limit Order is triggered when the relevant Contract trades at the trigger price as described above. When a Stop Limit Order is triggered, its time priority in the Order Book is based on its trigger time and not its entry time. If multiple Stop Limit Orders are triggered at the same time, the time priority in the Order Book as between those Stop Limit Orders is based on their entry times.

~~(e)~~(v) *Cancel Order.* A “Cancel Order” is an Order that cancels, partially or fully, an existing individual buy or sell Order. A Cancel Order shall also be deemed to include a mass cancel, ~~or~~ purge request, Portal cancel request or Kill Switch request submitted through the use of CFE System functionality that enables a Trading Privilege Holder to ~~cancel the cancellation of~~ all or a subset of a Trading Privilege Holder’s pending Orders with a single message.

~~(f)~~(vi) *Cancel Replace/Modify Order.* A “Cancel Replace/Modify Order” is an Order to cancel a buy or sell Order and replace it with a new Order. A Cancel Replace/Modify Order may only be used to modify certain Order information fields designated by the Exchange. The replacement Order retains the other Order information from the existing Order. In order to modify other Order information fields, a Cancel Order must be used to cancel the existing Order and a separate new Order must be submitted.

~~(g)~~(vii) *Time in Force.* An Order entered into the CFE System, other than a Cancel Order, is required to have one of the following time in force conditions:

~~(i)~~(A) *Day Order.* A “Day Order” is an Order for any Contract that, unless executed or canceled, remains as an executable Order in the CFE System until the end of the Business Day on which it is entered. The end of the Business Day for this purpose is when Trading Hours for the applicable ~~Contract~~ Contract end on that Business Day.

~~(ii)~~(B) *Good-’til-Canceled Order.* A “Good-’til-Canceled Order” is an Order that, unless executed, remains in the CFE System until it is canceled or the Contract to which it relates expires, whichever occurs first.

~~(iii)~~(C) *Good-’til-Date Order.* A “Good-’til-Date Order” is an Order that, unless executed, remains in the CFE System until the earlier to occur of the date and time specified in the Order, the Order is canceled or the Contract to which the Order relates expires.

~~(iv)~~(D) *Immediate or Cancel Order*. An “Immediate or Cancel Order” is an Order with respect to which any remaining portion of the Order that is not executed upon receipt is canceled. An Immediate or Cancel Order may include a specified minimum quantity. If a minimum quantity is included, an Immediate or Cancel Order will be canceled in its entirety if the specified minimum quantity is not executed upon receipt of the Order. A Stop Limit Order may not be submitted as an Immediate or Cancel Order.

~~(v)~~(E) *Fill or Kill Order*. A “Fill or Kill Order” is an Order which is canceled unless executed in its entirety upon receipt of the Order. A Spread Order and Stop Limit Order may not be submitted as a Fill or Kill Order.

(b) *Bulk Messages and Quotes*. Any Trading Privilege Holder may submit Bulk Messages and Quotes to the CFE System in a form and manner prescribed and provided by the Exchange.

(i) *Bulk Message*. A “Bulk Message” is a message type that may be utilized to submit multiple Quotes to the CFE System in a single message. Bulk Messages are subject to the following parameters:

(A) The Exchange may designate a maximum number of Quotes that may be submitted in a Bulk Message.

(B) Subject to the exceptions below, a Bulk Message may be utilized to submit Quotes in multiple Contracts with the same trading symbol root and may not be utilized to submit Quotes for different trading symbol roots in the same Exchange product or in different Exchange products.

For example, a single Bulk Message may not be utilized to submit Quotes in non-TAS Cboe Volatility Index futures expirations (which have a VX trading symbol root) and in TAS Cboe Volatility Index futures expirations (which have a VXT trading symbol root) since these Quotes would be for different trading symbol roots.

The ability to utilize a Bulk Message to submit Quotes in multiple Contracts with the same trading symbol root is subject to the following exceptions:

(1) A Bulk Message may be utilized to enter, modify or cancel only one bid and/or one offer in a Contract. A Bulk Message may not be utilized to enter, modify or cancel bids in a Contract at multiple price levels and/or offers in a Contract at multiple price levels. In order to simultaneously maintain bids at multiple price levels and/or offers at multiple price levels in a Contract through the use of Bulk Messages, the Bulk Messages to enter, modify or cancel the bids and/or offers at the multiple price levels must be submitted with a different EFID or through a different quoting match capacity allocation for each price level.

(2) Any Bulk Message submitted during a queuing period may not be utilized to enter, modify or cancel a bid and/or offer in more than one TAS single leg expiration. In order to utilize Bulk Messages to enter, modify or cancel bids and/or offers in more than

one TAS single leg expiration during a queuing period, multiple Bulk Messages must be used.

(C) The Exchange may allow for the use of different types of Bulk Messages. For example, the Exchange may allow for Bulk Message types with respect to which:

(1) the information for certain information fields designated by the Exchange is provided as a default at the match capacity allocation level instead of being provided in each Bulk Message;

(2) the Bulk Message does not include certain non-required information fields; and/or

(3) the Bulk Message uses a smaller format for certain information fields.

(ii) Quote. A Quote is the entry, modification or cancellation of a bid or offer for a Contract through a Bulk Message. Quotes are subject to the following parameters:

(A) A Quote is treated the same as an Order, and the term “Order” shall encompass a Quote, unless the Rules of the Exchange specify otherwise.

(B) A bid or offer submitted through a Quote is treated the same as a Limit Order. A Quote may not be utilized to submit a Market Order or a Stop Limit Order.

(C) A bid or offer submitted through a Quote is treated the same as a Day Order. A Quote may not have any Time in Force condition other than Day.

(D) A Quote may only be submitted for a single Contract leg. A Quote may not be utilized to submit a Spread Order.

(E) For purposes of time priority in the Order book, each Quote submitted in a Bulk Message receives as its time stamp the time stamp for the time at which the Bulk Message was received by the CFE System matching engine. Accordingly, each Quote submitted in a Bulk Message receives the same time stamp for its receipt by the matching engine. Each Quote is then processed by the matching engine as a separate Order.

(F) A Quote is unique per quoting match capacity allocation, EFID, and side. A Quote with a bid for a Contract replaces any existing bid for that Contract established by a previous Quote submitted with the same EFID through the same quoting match capacity allocation, and a Quote with an offer for a Contract replaces any existing offer for that Contract established by a previous Quote submitted with the same EFID through the same quoting match capacity allocation.

Accordingly, a bid or offer submitted through a Quote may be modified or canceled by submitting a subsequent Quote that replaces the existing bid or offer. For example, a bid or offer submitted through a Quote may be cancelled by submitting a subsequent Quote that changes the existing bid or offer size to zero or the existing bid or offer price to zero.

Unless otherwise specified, any reference in the Rules of the Exchange to a Cancel Order shall also be deemed to include reference to a Quote with a bid size or price of zero or with an offer size or price of zero. Any reference in the Rules of the Exchange to a Cancel Replace/Modify Order shall not be deemed to include reference to a Quote.

(G) A mass cancel, purge request, Portal cancel request or Kill Switch request submitted through the use of CFE System functionality that enables the cancellation of all or a subset of a Trading Privilege Holder's pending Orders with a single message may be utilized to cancel existing bids and offers submitted through Quotes.

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406. Execution of Orders by CFE System

(a) - (c) No changes.

(d) *Cancel Replace/Modify Orders and ~~Cancel Orders~~ Quotes.*

(i) If the quantity of an existing Order is decreased by means of a Cancel Replace/Modify Order, the replacement Order retains the priority position of the existing Order with the decreased quantity. If the quantity of an existing Order is increased or the price of an existing Order is changed by means of a Cancel Replace/Modify Order, the replacement Order is placed in priority position behind all Orders in the Order book at the same price with respect to time priority.

(ii) If the expected size of an existing Order designated within a Cancel Replace/Modify Order to cancel and replace that existing Order does not match the actual size of the existing Order, the CFE System decreases the size of the replacement Order by the difference between the designated expected size of the existing Order and the actual size of the existing Order. If the decreased size of the replacement Order would be zero or less than zero, the existing Order is canceled by the CFE System and the replacement Order is rejected or canceled back to the sender by the CFE System.

(iii) If the quantity of an existing bid or offer established by a Quote is decreased by means of a subsequent Quote and the subsequent Quote does not change the price or any other information field of the existing bid or offer other than quantity, the bid or offer established by the subsequent Quote retains the priority position of the existing bid or offer with the decreased quantity. If the quantity of an existing bid or offer established by a Quote is increased or the price or any other information field of the existing bid or offer other than quantity is changed by means of a subsequent Quote, the bid or offer established by the subsequent Quote is placed in priority position behind all Orders in the Order book at the same price with respect to time priority.

(e) - (h) No changes.

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406B. Match Trade Prevention

(a) *Match Trade Prevention Modifiers.* The Exchange shall make available to Trading Privilege Holders the ability to utilize Match Trade Prevention (“MTP”) functionality in a form and manner prescribed and provided by the Exchange.

Single Orders may be marked with an MTP modifier at the Order level. Quotes may be marked with an MTP modifier at the quoting match capacity allocation level such that the MTP modifier applies to all Quotes submitted through the quoting match capacity allocation while that particular setting is in place. An incoming Quote or resting bid or offer established by a Quote is treated the same as an Order for MTP purposes.

Any incoming Order designated with a ~~an Match Trade Prevention~~ (“MTP”) modifier is prevented from executing against a resting opposite side Order also designated with an MTP modifier and originating from the same EFID, Trading Privilege Holder identifier, or trading group identifier (any such identifier, a “Unique Identifier”). The MTP modifier on the incoming Order controls the interaction between two Orders marked with MTP modifiers.

(b) *MTP Cancel Newest.* An incoming Order marked with the MTP Cancel Newest (“MCN”) modifier does not execute against an opposite side resting Order marked with any MTP modifier originating from the same Unique Identifier. The incoming Order with the MCN modifier (or the remaining portion of that Order if it has already been partially executed against one or more other Orders) is rejected or canceled back to the sender by the CFE System at the point it would have executed against the resting Order with the MTP modifier. The resting ~~order~~ marked with the MTP modifier remains in the Order book.

(c) *MTP Cancel Oldest.* An incoming Order marked with the MTP Cancel Oldest (“MCO”) modifier does not execute against an opposite side resting Order marked with any MTP modifier originating from the same Unique Identifier. The resting Order with the MTP modifier (or the remaining portion of that Order if it has already been partially executed against one or more other Orders) is canceled back to the sender by the CFE System at the point it would have executed against the incoming Order with the MCO modifier. The incoming order with the MCO modifier may trade with other Orders, rest in the Order book, or be handled in accordance with its instructions (such as in the case of an Immediate or Cancel Order with respect to which any remaining quantity is canceled).

(d) *MTP Cancel Both.* An incoming Order marked with the MTP Cancel Both (“MCB”) modifier will not execute against an opposite side resting Order marked with any MTP modifier originating from the same Unique Identifier. Both Orders (or the remaining portions of those Orders if they have already been partially executed against one or more other Orders) are rejected or canceled back to the sender(s) by the CFE System.

(e) *Spread Orders.* MTP functionality applies to Spread Orders in the following manner:

(i) With respect to the execution of a Spread Order against another Spread Order, MTP functionality applies as described in paragraphs (a), (b) and (c) above.

(ii) With respect to the execution of a Spread Order against a simple Order, a Spread Order marked with an MTP modifier will not execute against a simple Order marked with any MTP modifier originating from the same Unique Identifier. The Spread Order (or the remaining portion of the Spread Order if it has already been partially executed against one or more other Orders) is rejected or canceled back to the sender by the CFE System at the point it would have executed against the simple Order with the MTP modifier. This is the case regardless of which MTP modifier(s) are marked on the Spread Order and the simple Order. The simple Order with the MTP modifier is not rejected or canceled back to the sender by the CFE System by the MTP functionality regardless of which MTP modifier(s) are marked on the Spread Order and the simple Order.

(f) *Use of MTP Functionality.* Although the use of Exchange MTP functionality is not mandatory other than as described in paragraph (g) below, the failure of a Trading Privilege Holder to utilize Exchange MTP functionality will be deemed an aggravating factor if the Trading Privilege Holder is found to have engaged in wash trading that otherwise would have been prevented by using Exchange MTP functionality.

(g) *DPMs and LMMs.* Each Trading Privilege Holder approved by the Exchange as a designated primary market maker or lead market maker is required to utilize Exchange MTP functionality with respect to trading in the product(s) for which that organization is approved as a designated primary market maker or lead market maker.

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513A. Risk Controls

(a) - (g) No changes.

(h) *Order Rate Limits.*

(i) The Exchange ~~shall~~ may designate Order rate limits for order match capacity allocations and/or quoting match capacity allocations ~~and~~. The Exchange shall disseminate these limits to Trading Privilege Holders in a form and manner determined by the Exchange any Order rate limits designated by the Exchange. The Exchange may permit Trading Privilege Holders to designate Order rate limits for order match capacity allocations and/or quoting match capacity allocations that are lower than any Order rate limit designated by the Exchange for that type of match capacity allocation.

(ii) An Order rate limit is a maximum number of Orders that may be received by the CFE System per time interval.

(iii) If the applicable Order rate limit is exceeded, the CFE System will reject or cancel back to the sender those Orders received by the CFE System during the applicable time interval after the Order rate limit is reached during that time interval.

(iv) A Spread Order will be counted as one Order for purposes of computing the number of Orders received during a time interval.

(v) A Cancel Order is counted for purposes of computing the number of Orders received during a time interval, except that a mass cancel or purge request is not counted for these purposes. If a Cancel Order (including a mass cancel or purge request) is received by the CFE System during a time interval in which the applicable Order rate limit has been exceeded, the CFE System will process (and not reject or cancel back) the Cancel Order (subject to the following sentence). Mass cancel and purge requests may be subject to separate Order rate limits pursuant to which the CFE System will reject or cancel back to the sender mass cancel and purge requests in excess of the applicable limit that are received by the CFE System during the applicable time interval for that limit.

(vi) A Cancel Replace/Modify Order is counted for purposes of counting the number of Orders received during a time interval. If a Cancel Replace/Modify Order is received by the CFE System during a time interval in which the applicable Order rate limit has been exceeded, the CFE System will:

(A) reject or cancel back to the sender the replacement Order portion of the Cancel Replace/Modify Order; and

(B) process (and not reject or cancel back) the Cancel Order portion of the Cancel Replace/Modify Order.

(viii) Block Trades and Exchange of Contract for Related Position transactions shall not be subject to order rate limits.

(i) No changes.

(j) *Kill Switch.*

(i) The Exchange and Clearing Members shall have the ability to activate a kill switch by EFID. Trading Privilege Holders shall have the ability to activate a kill switch by match capacity allocation.

(ii) If a kill switch is activated, the CFE System will cancel all Orders residing in the CFE System for the applicable EFID or submitted through the applicable match capacity allocation.

(iii) At the option of the Exchange or a Trading Privilege Holder activating a kill switch, that party may choose to have the activation of the kill switch also cause the CFE System to reject or cancel back to the sender any new Orders for the applicable EFID or from the applicable match capacity allocation. If a Clearing Member activates a kill switch for an EFID, the kill switch will always cause the CFE System to reject or cancel back to the sender any new Orders for the applicable EFID. These blocks on the submission of Orders shall remain in place until the party that activated the kill switch resets the kill switch within the CFE System.

(iv) Block Trades and Exchange of Contract for Related Position transactions for an EFID will not be accepted by the CFE System if a kill switch has been activated and remains in effect for that EFID which blocks the submission of Orders for that EFID.

(v) A Trading Privilege Holder shall also have the ability to utilize:

(A) a mass cancel request to cancel all or a subset of pending Orders submitted through a match capacity allocation, and at the option of the Trading Privilege Holder submitting the mass cancel request, to cause the CFE System to reject or cancel back to the sender all or a subset of new Orders submitted through that match capacity allocation until a reset request is received by the CFE System; ~~and~~

(B) a purge request to cancel all or a subset of pending Orders submitted through multiple match capacity allocations, and at the option of the Trading Privilege Holder submitting the purge request, to cause the CFE System to reject or cancel back to the sender all or a subset of new Orders until a reset request is received by the CFE System; and

(C) the Portal to cancel all or a subset of pending Orders.

(k) *Disconnection Risk Controls.*

(i) *General.*

(A) Trading Privilege Holders shall have the ability to enable disconnection risk controls by match capacity allocation.

(B) Block Trades and Exchange of Contract for Related Position transactions shall not be subject to disconnection risk controls.

(ii) *Cancel on Match Capacity Allocation Disconnect.*

(A) A Trading Privilege Holder ~~that enables~~ may enable cancel on disconnect functionality for ~~a~~ an order match capacity allocation and may choose to have that functionality apply to:

(1) Day Orders; or

(2) all Orders.

(B) Cancel on disconnect functionality is enabled for each quoting match capacity allocation. A Trading Privilege Holder may choose to have that functionality apply to:

(1) Day Orders; or

(2) all Orders.

~~(B)(C)~~ For purposes of cancel on disconnect functionality, a disconnection from a match capacity allocation includes a disconnection that occurs for any reason (including as the result of the submission of a logout message) or if at any time the CFE System does not receive any inbound message traffic or a heartbeat message through the match capacity allocation for a specified time interval as prescribed by the Exchange.

~~(C)~~(D) When cancel on disconnect functionality is enabled for a match capacity allocation:

- (1) If there is a disconnection from that match capacity allocation,
- (2) the CFE System cancels all applicable Orders that are residing in the CFE System
- (3) which were submitted through that match capacity allocation
- (4) for any product is not in a suspended state.

(iii) *Cancel on Matching Engine Disconnect.*

(A) A Trading Privilege Holder ~~that enables~~ may enable cancel on matching engine disconnect functionality for ~~a~~ an order match capacity allocation and may choose to have that functionality apply to:

- (1) Day Orders; or
- (2) all Orders.

(B) Cancel on matching engine disconnect functionality is enabled for each quoting match capacity allocation. A Trading Privilege Holder may choose to have that functionality apply to:

- (1) Day Orders; or
- (2) all Orders.

~~(B)~~(C) When cancel on matching engine disconnect is enabled by a Trading Privilege Holder for a match capacity allocation:

- (1) If there is loss of connectivity between that match capacity allocation and the CFE System matching engine,
- (2) the CFE System cancels all applicable Orders residing in the CFE System
- (3) that were submitted through that match capacity allocation
- (4) for any product that is not in a suspended state.

~~(C)~~(D) When cancel on matching engine disconnect is not enabled by a Trading Privilege Holder for a match capacity allocation:

- (1) If there is loss of connectivity between that match capacity allocation and the CFE System matching engine

(2) for a specified time interval as prescribed by the Exchange,

(3) the CFE System cancels all Orders residing in the CFE System

(4) that were submitted through that match capacity allocation

(5) for any product that is not in a suspended state.

(iv) *Cancel on Drop Disconnect.*

(A) Trading Privilege Holders shall have the ability to utilize execution drop ports and to enable cancel on drop disconnect functionality with respect to order match capacity allocations and quoting match capacity allocations that are associated with those drop ports.

(B) An execution drop port is a logical port used to receive drop copies of execution report messages relating to the execution of Orders.

(C) If cancel on drop disconnect is enabled by a Trading Privilege Holder for match capacity allocation, cancel on drop disconnect functionality will be triggered if all of the drop ports associated with that match capacity allocation become disconnected from the CFE System.

(D) A drop port will be treated as having become disconnected from the CFE System if the CFE System does not receive a heartbeat message through the drop port for a specified time interval configurable by the Trading Privilege Holder.

(E) If cancel on drop disconnect functionality is triggered for a match capacity allocation, the CFE System will reject or cancel back to the sender any new Orders submitted through the match capacity allocation. This block on the submission of Orders shall remain in place until the CFE System receives heartbeat messages through a drop port associated with the match capacity allocation in accordance with the time interval configured by the Trading Privilege Holder.

(F) At the option of a Trading Privilege Holder activating cancel on drop disconnect functionality:

(1) If cancel on drop disconnect functionality is triggered for a match capacity allocation,

(2) the CFE System will also cancel

(3) all Day Orders or all Orders, as designated by the Trading Privilege Holder

(4) residing in the CFE System

(5) that were submitted through that match capacity allocation

(6) for any product that is not in a suspended state.

(G) Cancel on drop disconnect functionality is not applicable with respect to order drop ports used to receive drop copies of Order messages.

(l) *Cancel on Reject Functionality.*

(i) Trading Privilege Holders shall have the ability to enable cancel on reject functionality by order match capacity allocation and by quoting match capacity allocation with respect to single Orders.

(ii) Cancel on reject functionality is enabled for each quoting match capacity allocation with respect to Quotes.

(ii) If cancel on reject functionality is enabled ~~by a Trading Privilege Holder~~ for a match capacity allocation:

(A) the CFE System will cancel a resting Order

(B) if the CFE System rejects or cancels back to the sender

(C) a Cancel Order, ~~or~~ Cancel Replace/Modify Order or Quote submitted through that match capacity allocation

(D) ~~relating~~ to cancel and/or modify the resting Order.

(m) No changes.