

EXHIBIT 5 (as modified by Amendment No. 1)

Additions are underlined; deleted text is [in brackets]

## **RULES OF THE CHICAGO STOCK EXCHANGE, INC.**

### **ARTICLE 1. Definitions and General Information**

#### **Rule 1. Definitions**

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(oo) “Routable Order”: means any incoming limit order, as defined under Article 1, Rule 2(a)(1), of any size, not marked by any order modifiers or related terms listed under Article 1, Rule 2 that prohibit the routing of the order to another Trading Center; provided, however, that during a SNAP Cycle, participating SNAP Eligible Orders are always Routable Orders.

(pp) “Working Price”: means the most aggressive price at which a [resting ]limit order, as defined under Article 1, Rule 2(a)(1), can execute within the Matching System, in compliance with CHX Rules and relevant securities laws and regulations, including Rule 611 of Regulation NMS and Rule 201 of Regulation SHO, and any applicable exemptive relief therefrom.

(qq) “Open Trading State”: means the period of time during the regular trading session when orders are eligible for automatic execution.

(rr) “SNAP Price”: means a single price at which the greatest number of shares may be executed during a SNAP Cycle, as described under Article 18, Rule 1(b), without trading-through any more aggressively priced orders on either side of the market, in compliance with all CHX Rules and relevant securities laws and regulations, including Regulation NMS and Rule 201 of Regulation SHO, and any applicable exemptive relief therefrom; provided the following:

(1) Where two or more price points are identified above, the SNAP Price shall be the price closest to the last reported sale in the security from the same trading day that was not permitted to trade-through the National Best Bid and Offer (“NBBO”) at the time the last sale was executed (“eligible same day last sale”). Where two or more price points are equally close to the eligible same day last sale price, the SNAP Price shall be the eligible same day last sale price.

(2) If an eligible same day last sale cannot be ascertained, pursuant to paragraph (rr)(1) above, the SNAP Price shall be the price closest to the NBBO midpoint. Where two or more price points are equally close to the NBBO midpoint, the SNAP Price shall be the NBBO midpoint.

(ss) “SNAP Eligible Order”: means a limit order, as defined under Article 1, Rule 2(a)(1), not marked by, or handled as, any one of the following modifiers:

- (1) Cancel On SNAP.
- (2) Fill Or Kill.
- (3) Immediate Or Cancel.
- (4) Start SNAP, except where the limit order marked Start SNAP is handled as SNAP AOO – One And Done, pursuant to Article 1, Rule 2(h)(1)(C).

Certain modifiers attached to SNAP Eligible Orders shall be deactivated during a SNAP Cycle, pursuant to Article 18, Rule 1(b)(2)(D).

## **Rule 2. Order Types, Modifiers, and Related Terms**

Unless otherwise specifically defined elsewhere in the CHX Rules, the following terms shall have the respective meanings ascribed to them, for purposes of all CHX Rules. Order modifiers listed under Article 18, Rule 1(b)(2)(D) shall not be active for a security that is subject to a SNAP Cycle, as described under Article 18, Rule 1.

(a) *General Order Types.* The following general order types shall be accepted by the Matching System, subject to the requirements of Article 20, Rule 4.

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(2) "Cross order": an order to buy and sell the same security at a specific price better than the Working Price, as defined under Article 1, Rule 1(pp), of all resting orders on the CHX Book and which would not constitute a trade-through under Reg NMS (including all applicable exceptions and exemptions). A cross order may represent interest of one or more Participants of the Exchange, but may only be executed in an increment permitted by Article 20, Rule 4(a)(7)(b). A cross order may be subject to special handling, pursuant to paragraph (g) below.

All cross orders shall be deemed to have been received "Immediate Or Cancel," as defined under paragraph (d)(4), which cannot be overridden by an order sender; provided the following:

(A) All cross orders received during a SNAP Cycle, as described under Article 18, Rule 1(b), shall be placed in the FIFO Queue, pursuant to Article 18, Rule 1(b)(2)(C), for later processing.

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(h) Order modifiers related to SNAP. One or more order modifiers related to SNAP, as described under Article 18, Rule 1, may be applied to limit orders only, subject to the requirements of Article 20, Rule 4, so long as the modifier is compatible with other applicable order modifiers/terms.

(1) “Start SNAP”: a limit order modifier that -1- initiates a SNAP Cycle in a specified security, as described under Article 18, Rule 1(b), if the limit order marked Start SNAP meets the requirements of subparagraph (A) or, -2- joins a SNAP Cycle in progress, if it does not meet the requirements of subparagraph (A), but meets the requirements of proposed subparagraph (C). A limit order marked Start SNAP is not executable during the Open Trading State, as defined under Article 1, Rule 1(qq). A limit order marked Start SNAP that does not meet the requirements of either subparagraph (A) or (C) shall be cancelled.

(A) Requirements to initiate a SNAP Cycle. A limit order marked Start SNAP shall only initiate a SNAP Cycle if the following conditions are met. If any one of the following conditions are not met, the limit order marked Start SNAP will be cancelled, unless it meets the requirements of subparagraph (C).

(i) Size. A limit order marked Start SNAP must be for (a) at least 2,500 shares and have a minimum aggregate notional value of \$250,000 or (b) at least 20,000 shares with no minimum aggregate notional value requirement; provided, however, that certain issues specified below have special minimum size requirements:

<u>Special Issues</u>	<u>Minimum Size</u>
<u>Berkshire Hathaway, Inc. (BRK-A)</u>	<u>100</u>

(ii) Price. The limit price of a buy (sell) order marked Start SNAP must be priced at or through the National Best Offer (National Best Bid) at the time the order was received by the Matching System. If the National Best Bid and Offer (“NBBO”) is crossed or a two-sided NBBO does not exist at the time the limit order marked Start SNAP is received by the Matching System, the limit order marked Start SNAP shall not initiate a SNAP Cycle. A limit order marked Start SNAP and Sell Short, as defined under Article 1, Rule 2(b)(3)(E), for a covered security subject to short sale price test restriction, shall not initiate a SNAP Cycle and shall be cancelled.

(iii) Timing. A limit order marked Start SNAP will only initiate a SNAP if it is received during the regular trading session; provided, however, that it will not initiate a SNAP if it is received (a) within five minutes of the first two-sided quote in the subject security having been received by the Exchange from the primary market disseminated after either the beginning of the regular trading session or a trading halt or pause that required the Exchange to suspend trading in the subject security; (b) within five minutes of the end of the regular trading session; (c) during a

SNAP Cycle or (d) within one minute after the completion of the previous SNAP Cycle.

(iv) *Routing unavailable.* A limit order marked Start SNAP will not initiate a SNAP if the CHX Routing Services, as described under Article 19, are not available at the time the order is received by the Matching System.

(B) *Minimum SNAP execution size condition.* An order sender may instruct that the entire SNAP Cycle be cancelled, without any executions, if the sum of -1- the minimum number of shares that could be executed within the Matching System at the SNAP Price, as defined under Article 1, Rule 1(rr), and -2- the number of shares that are to be routed away, pursuant to Article 19, Rule 3(a)(4) and (5), is less than the minimum number of shares required for the limit order marked Start SNAP to initiate a SNAP Cycle.

(C) *SNAP AOO - One And Done handling.* By default, a limit order marked Start SNAP that does not meet the requirements of subparagraph (A) and is received by the Matching System during a SNAP Order Acceptance Period, as described under Article 18, Rule 1(b)(2), shall be handled as SNAP AOO - One And Done, as defined under paragraph (h)(3)(B), and join the SNAP Cycle in progress, if the order meets the requirements of paragraph (h)(3)(B). The order sender may instruct that the limit order marked Start SNAP not be subject to this special handling even if eligible.

(2) “Cancel On SNAP”: a limit order modifier that requires the order to be cancelled upon initiation of a SNAP Cycle or cancelled upon receipt if received during a SNAP Cycle.

(3) “SNAP Auction Only Orders” or “SNAP AOOs”: a limit order marked by, or handled as, one of the modifiers below, that is only executable during a SNAP Cycle, as described under Article 18, Rule 1(b). SNAP AOOs shall only be accepted from the beginning of the early session to five minutes prior to the end of the regular trading session. Upon receipt by the Exchange, all valid SNAP AOOs shall either be queued or immediately ranked on the SNAP CHX book, as described under Article 20, Rule 8(b)(2)(A).

A SNAP AOO must be for (a) at least 250 shares and have a minimum aggregate notional value of \$25,000 based on its corresponding SNAP AOO Reference Price or (b) at least 2,000 shares with no minimum aggregate notional value requirement; provided, however, that certain issues specified below have special minimum size requirements. If there is no special minimum size requirement noted for a security, the SNAP AOO Reference Price for the security shall be the last sale in the subject security that was not permitted to trade-through the National Best Bid and Offer (“NBBO”) at the time the last sale was executed. If a

SNAP AOO Reference Price cannot be determined, the SNAP AOO shall be cancelled.

<u>Special Issues</u>	<u>Minimum Size</u>
<u>Berkshire Hathaway, Inc. (BRK-A)</u>	<u>10</u>

(A) “SNAP AOO - Day”: a limit order modifier that requires the order to only participate in the next SNAP Cycle for which it is eligible and every SNAP Cycle thereafter for the remainder of the trading session until fully-executed or cancelled.

(B) “SNAP AOO - One And Done”: a limit order modifier that requires the order to only participate in the next SNAP Cycle for which it is eligible with any unexecuted remainder to be cancelled; provided, however, that if the SNAP Cycle in which the limit order marked SNAP AOO – One And Done was participating was aborted prior to the stage three Pricing and Satisfaction Period of the SNAP Cycle, the order shall be re-queued, pursuant to Article 20, Rule 8(b)(2)(A), and not cancelled.

(C) “SNAP AOO - Pegged”: a limit order modifier only available for orders marked SNAP AOO – Day or SNAP AOO - One And Done, that requires the order to be priced at the less aggressive of an optional limit price or mandatory offset price from the NBBO ascertained from the market snapshot taken pursuant to Article 18, Rule 1(b)(2)(E). An order sender that submits a limit order marked SNAP AOO - Pegged must specify one of the following pricing options:

(i) Midpoint. Priced at the midpoint of the NBBO or the locking price if the NBBO is locked. If the NBBO is crossed, the order shall not participate in the instant SNAP Cycle, even if there is an optional limit price indicated.

(ii) Market. A buy (sell) order shall be priced at, or a specified offset below or above, the NBO (NBB).

(iii) Primary. A buy (sell) order shall be priced at, or a specified offset below or above, the NBB (NBO).

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## **ARTICLE 4. Exchange Systems and Services**

### **Rule 1. Book Feed**

(a) The CHX Book Feed allows a subscriber to view all individual CHX participant orders displayed in the Matching System, including the size and price associated with such order and the trade data for executions that occur within the Matching System,

subject to Article 18, Rule 1(b). The Exchange will provide the CHX Book Feed only to a recipient which has entered into a Book Feed Subscriber agreement with the Exchange and in a form acceptable to the Exchange.

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## ARTICLE 16. Market Makers

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### Rule 8. Responsibilities

Each market maker must engage in a course of dealings for its own account to assist in the maintenance, to the extent reasonably practicable, of fair and orderly markets on the Exchange in accordance with this rule. The responsibilities and duties of a market maker specifically include, but are not limited to, the following:

#### (a) *Quotation Requirements and Obligations*

(1) Two-Sided Quote Obligation. For each security in which a Participant[member] is registered as a Market Maker, the Participant[member] shall be willing to buy and sell such security for its own account on a continuous basis during the Open Trading State, as defined under Article 1, Rule 1(qq),[regular market hours ]and shall enter and maintain a two-sided trading interest (“Two-Sided Obligation”) that is identified to the Exchange as the interest meeting the obligation and is displayed in the Exchange’s quotation montage during the Open Trading State[ at all times]. Interest eligible to be considered as part of a Market Maker’s Two-Sided Obligation shall have a displayed quotation size of at least one normal unit of trading (or a larger multiple thereof); provided, however, that a Market Maker may augment its Two-Sided Obligation size to display limit orders priced at the same price as the Two-Sided Obligation. Unless otherwise designated, a "normal unit of trading" shall be 100 shares. After an execution against its Two-Sided Obligation or upon the conclusion of a SNAP Cycle, as described under Article 18, Rule 1, a Market Maker must ensure that additional trading interest exists in the Exchange to satisfy its Two-Sided Obligation either by immediately entering new interest to comply with this obligation to maintain continuous two-sided quotations or by identifying existing interest on the [Exchange]CHX book that will satisfy this obligation.

(2) Pricing Obligations. For NMS stocks (as defined in Rule 600 under Regulation NMS) a Market Maker shall adhere to the pricing obligations established by this Rule during the Open Trading State[ trading day]; provided, however, that such pricing obligations (i) shall not commence during any trading day until after the first regular way transaction on the primary listing market in the security, as reported by the responsible single plan processor, and (ii) shall be suspended during a trading halt, suspension, or pause, and shall not re-commence until after the first regular way transaction on the primary listing market in the security following such halt, suspension, or pause, as reported by the responsible single plan processor.

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**ARTICLE 18. [Reserved for Future Use.]Auctions**

[Reserved for Future Use.]

**Rule 1. Sub-second Non-displayed Auction Process (“SNAP”)**

(a) Generally. SNAP is a fully-hidden on-demand auction that may be initiated in a security within the Matching System, pursuant to the provisions of this Rule. A SNAP Cycle may only occur during the regular trading session, but may occur more than once during a regular trading session and may occur in different securities concurrently. During a SNAP Cycle, automated trading in the subject security shall be suspended. The Exchange reserves the right to enable or disable SNAP, per security, pursuant to notice to Participants.

(b) SNAP Cycle. A SNAP Cycle is comprised of the following five stages.

(1) Stage One: Initiating the SNAP Cycle. Upon acceptance of a limit order marked Start SNAP, as defined under Article 1, Rule 2(h)(1), the Matching System shall immediately suspend automated matching of orders in the subject security and shall take the following actions:

(A) Notice of SNAP to market. The Exchange shall remove its Protected Quotation(s) in the subject security, if any, and notify the market that a SNAP Cycle is taking place in the subject security.

(B) CHX Book Feed. The Exchange shall submit messages through the CHX Book Feed to reflect that precedent orders previously disseminated through the CHX Book Feed are no longer automatically executable. The Exchange will suspend dissemination of any other order information concerning the subject security.

(2) Stage Two: SNAP Order Acceptance Period. The SNAP Order Acceptance Period shall begin upon initiation of a SNAP Cycle and last approximately 475 to 525 milliseconds, the actual length of which will be randomized by the Matching System and take the following actions:

(A) Precedent orders. Orders received by the Exchange prior to the initiation of a SNAP Cycle in the subject security shall be handled as follows:

(i) SNAP Eligible Orders, as defined under Article 1, Rule 1(ss), in the subject security, not marked SNAP AOO - Pegged, as defined under Article 1, Rule 2(h)(3)(C), resting on the CHX book or SNAP AOO Queue, as described under Article 20, Rule 8(b)(2)(A), prior to the initiation of the current SNAP Cycle, shall

be ranked on the SNAP CHX book, pursuant to Article 20, Rule 8(b)(3)(A) – (C) and (E), as applicable. Precedent SNAP AOs marked SNAP AOO - Pegged shall remain on the SNAP AOO Queue until ranked on the SNAP CHX book, pursuant to paragraph (b)(3)(A) below.

(ii) *Initiating order.* The limit order marked Start SNAP that initiated the SNAP Cycle shall be ranked on the SNAP CHX book, pursuant to Article 20, Rule 8(b)(3)(D).

(iii) *Non-SNAP Eligible Orders* in the subject security resting on the CHX book prior to the initiation of the current SNAP Cycle shall be cancelled.

(B) *Incoming orders.* Incoming orders received during the SNAP Cycle shall be handled as follows:

(i) *Incoming SNAP Eligible Orders.* Incoming SNAP Eligible Orders received during the SNAP Order Acceptance Period shall be immediately ranked on the SNAP CHX book, pursuant to Article 20, Rule 8(b)(3)(E); provided, however, that SNAP AOs marked SNAP AOO - Pegged shall be placed in the SNAP AOO Queue upon receipt and shall only be ranked on the SNAP CHX book, pursuant to paragraph (b)(3)(A) below. Incoming SNAP Eligible Orders received after the SNAP Order Acceptance Period, but during a SNAP Cycle, shall not be eligible to participate in the current SNAP Cycle and shall be queued, pursuant to subparagraph (C) below.

(ii) *Incoming non-SNAP Eligible Orders.* Incoming non-SNAP Eligible Orders received during the SNAP Cycle, shall be cancelled upon receipt, except that cross orders shall be queued, pursuant to subparagraph (C) below.

(C) *First In/First Out (“FIFO”) Queue.* During a SNAP Cycle, the Exchange shall queue the following incoming messages for later processing, pursuant to paragraph (b)(5)(B) below:

(i) *Cancel and cancel/replace messages for resting or queued orders.*

(ii) *Cancel messages from away markets for routed orders received after the SNAP Order Acceptance Period.*

(iii) *SNAP Eligible Orders received after the SNAP Order Acceptance Period.*

(iv) *Cross orders.*



(D) Deactivate certain modifiers. Prior to being ranked on the SNAP CHX book, the following order modifiers shall be deactivated for the subject security only:

- (i) CHX Only.
- (ii) Post Only.
- (iii) Do Not Route.
- (iv) Match Trade Prevention.
- (v) Always Quote.
- (vi) Reserve Size.

(E) Market snapshot and routing availability. Upon the conclusion of the SNAP Order Acceptance Period, the Matching System shall take a snapshot of the Protected Quotation(s) of external market(s) in the subject security and determine whether or not the CHX Routing Services are available. If the snapshot of the Protected Quotation(s) of external market(s) in the subject security shows that a two-sided NBBO exists and the CHX Routing Services are available, the SNAP Cycle shall continue to the stage three Pricing and Satisfaction Period.

(F) Abort SNAP Cycle. If the market snapshot taken pursuant to paragraph (b)(2)(E) above shows that a two-sided NBBO does not exist or the CHX Routing Services are unavailable, the SNAP Cycle shall be aborted without any executions and the Matching System shall take another snapshot of the Protected Quotation(s) of external market(s) in the subject security and immediately begin the stage five Transition to the Open Trading State.

(3) Stage Three: Pricing and Satisfaction Period. If permitted, pursuant to paragraph (b)(2)(E) above, the Matching System shall utilize the market snapshot taken pursuant to paragraph (b)(2)(E) to initiate the Pricing and Satisfaction Period by taking the following actions:

(A) Pricing and Ranking of SNAP AOOs Marked SNAP AOO - Pegged. The Matching System shall price all SNAP AOOs marked SNAP AOO - Pegged remaining on the SNAP AOO Queue, then rank such orders on the SNAP CHX book, pursuant to Article 20, Rule 8(b)(3)(E).

(B) Establishing the SNAP Price. Once the process described under subparagraph (A) has been completed, the Matching System shall determine the SNAP Price, as defined under Article 1, Rule 1(rr).

If the SNAP Price cannot be determined, the Matching System shall take a snapshot of the Protected Quotation(s) of external market(s) in the subject security and the SNAP Cycle shall continue to the stage five Transition to the Open Trading State.

If the SNAP Price can be determined and one or more orders must be routed away, pursuant to Article 19, Rule 3(a)(4) and/or (5), the SNAP Cycle shall continue to the Satisfaction Period, pursuant to subparagraph (C). If no order routing is necessary, the SNAP Cycle shall continue to the stage four Order Matching Period.

(C) *Satisfaction Period.* If the SNAP Price requires the routing of one or more orders, pursuant to Article 19, Rule 3(a)(4) and/or (5), the Exchange's routing systems shall route away the necessary SNAP Eligible Orders, or portions thereof, based on their execution priority, pursuant to paragraph (b)(4)(A). The Matching System shall then delay proceeding to the stage four Order Matching Period for 200 milliseconds or until all confirmations for routed orders have been received from away market(s), whichever occurs first.

The unexecuted remainders of orders routed away pursuant to Article 19, Rule 3(a)(4) and/or (5) returned to the Matching System prior to the expiration of the Satisfaction Period during which the orders were routed away shall maintain their respective original execution priority within the SNAP CHX book, whereas such unexecuted remainders returned to the Matching System after the expiration of the Satisfaction Period during which the orders were routed away shall be handled pursuant to Article 20, Rule 8(b)(7).

(4) *Stage Four: Order Matching Period.* Upon conclusion of the stage three Pricing and Satisfaction Period, orders remaining on the SNAP CHX book if any, shall be matched at the SNAP Price as follows:

(A) *Execution priority.* SNAP Eligible Orders with a Working Price at or more aggressive than the SNAP Price shall be executed in Working Price priority and if more than one such order shares the same Working Price, then as described under Article 20, Rule 8(b)(3), for that price point.

(B) *Market snapshot.* Upon conclusion of the matching of orders at the SNAP Price, the Matching System shall then take a snapshot of the Protected Quotation(s) of external market(s) in the subject security.

(5) *Stage Five: Transition to the Open Trading State.* Upon conclusion of the of stages two, three or four of the SNAP Cycle, the Matching System shall utilize the relevant market snapshot taken pursuant to paragraph (b)(2)(E) or (F), (b)(3)(B) or (b)(4)(B), as applicable, to transition trading in the subject security to the Open Trading State by taking the following actions:

(A) *Resting Orders.* Orders resting on the SNAP CHX book shall be transitioned to the CHX book and shall be ranked, pursuant to Article 20, Rule 8(b)(1); routed away, pursuant to Article 19, Rule 3(a); placed in the SNAP AOO Queue, pursuant to Article 20, Rule 8(b)(2)(A), if the order is a SNAP AOO that may participate in a subsequent SNAP Cycle; or otherwise cancelled. All order modifiers attached to the SNAP Eligible Orders being transitioned to the CHX book that were deactivated shall be reactivated prior to transition to the CHX book.

(B) *Processing the FIFO Queue.* Once the process under subparagraph (A) above has been completed, all messages queued on the FIFO Queue, as described under paragraph (b)(2)(C), shall be processed as incoming messages in the order in which they were received.

(C) *Notice of end of SNAP to market.* Once the processes under subparagraphs (A) and (B) have been completed, the Exchange will notify the market that the SNAP Cycle has concluded; publish Protected Quotation(s) in the subject security, if any; and begin the dissemination of relevant order information concerning orders resting on the CHX book, pursuant to Article 4, Rule 1.

(c) *Halt or pause during the SNAP Cycle.* If a halt or pause is in effect for a subject security that requires the Exchange to suspend trading in that security (“material halt or pause”) at the time a limit order marked Start SNAP is received, a SNAP Cycle shall not be initiated. In the event a material halt or pause has been declared for the subject security during a SNAP Cycle, the Exchange shall take the following actions, as applicable:

(1) *SNAP CHX book.* During either -1- a Limit Up-Limit Down (“LULD”) Trading Pause, as described under Article 20, Rule 2A(c), or -2- a material halt or pause other than a LULD Trading Pause, as described under paragraph .02 of Article 20, Rule 1, the Exchange shall take the following steps, as applicable:

(A) *During stages one or two.* If the market snapshot taken pursuant to paragraph (b)(2)(E) or (F) indicates that a material halt or pause is in effect, the SNAP Cycle shall be aborted and not proceed to stage three or stage five, as applicable. The Exchange shall then either:

(i) cancel all orders resting on the SNAP CHX book, subject to paragraph (c)(2) below, for a LULD Trading Pause; or

(ii) cancel all resting orders received during the SNAP Order Acceptance Period that have been ranked on the SNAP CHX book, but otherwise maintain all other resting orders not marked Cancel On Halt, as defined under Article 1, Rule 2(b)(1)(B), subject to paragraph (c)(2) below and Article 20, Rule 12(a), for a material halt or pause other than an LULD Trading Pause.

(B) During stages three or four. If the market snapshot taken pursuant to paragraph (b)(3)(B) or (b)(4)(B) indicates that a material halt or pause is in effect for the subject security, the SNAP Cycle shall be aborted and not proceed to stage five. The Exchange shall then either:

(i) cancel the unexecuted remainders of all orders resting on the SNAP CHX book, subject to paragraph (c)(2) below, for a LULD Trading Pause; or

(ii) maintain all unexecuted resting orders not marked Cancel On Halt, subject to paragraph (c)(2) below and Article 20, Rule 12(a), for a material halt or pause other than an LULD Trading Pause; provided, however, that if the SNAP Price could not be determined, pursuant to paragraph (b)(3)(B) above, resting orders will be handled pursuant to subparagraph (A)(ii) above.

(C) Any subsequent material halt or pause shall be handled pursuant to the relevant CHX Rules.

(2) SNAP AOOs. Upon initiation of a material halt or pause, all SNAP AOOs not marked Cancel On Halt or otherwise cancelled by the order sender that are -1- on the SNAP AOO Queue, as defined under Article 20, Rule 8(b)(2)(A), or -2- resting on the SNAP CHX book and may be re-queued on the SNAP AOO Queue, shall remain or be re-queued on the SNAP AOO Queue, as applicable, and not cancelled.

(3) FIFO Queue. Upon initiation of a material halt or pause, the FIFO Queue shall be processed until exhausted. FIFO Queue messages shall be processed pursuant to paragraphs (c)(4) and (5) below.

(4) Incoming orders. Upon initiation of a material halt or pause and for the remainder of the material halt or pause, all incoming orders shall be rejected; provided, however, that incoming SNAP AOOs shall be placed on the SNAP AOO Queue, if the material halt or pause is not the result of a systems issue at the Exchange.

(5) Incoming cancel messages. All incoming cancel messages and the cancel component of cancel/replace messages shall be immediately processed during a material halt or pause.

## **ARTICLE 19. Operation of the CHX Routing Services**

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### **Rule 3. Routing Events**

(a) A Routable Order, or a portion thereof, shall be routed pursuant to the CHX Routing Services in compliance with CHX rules and all federal securities laws, rules and regulations, including Regulation NMS and Regulation SHO, to the extent necessary:

\* \* \*

(2) To prevent the execution of an incoming Routable Order for an Odd Lot if it would trade-through a Protected Quotation of an external market; [or]

\* \* \*

(4) To permit orders to be executed within the Matching System at the SNAP Price, as defined under Article 1, Rule 1(rr), in compliance with Regulation NMS. Orders routed away pursuant to this paragraph (a)(4) shall be priced -1- at the SNAP Price or, -2- if the SNAP Price is priced at an increment smaller than the relevant minimum price increment, at the minimum price increment less aggressive than the SNAP Price; or

(5) To execute SNAP Eligible Orders at the SNAP Price against Protected Quotations of external markets priced at the SNAP Price that could not be matched within the Matching System, during a SNAP Cycle, as described under Article 18, Rule 1(b).

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**ARTICLE 20. Operation of the CHX Matching System**

**Rule 1. Trading Sessions**

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• • • *Interpretations and Policies:*

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**.02** If trading in one or more issues is suspended or halted, which requires the Exchange to suspend trading in the issue, other than a LULD Trading Pause, all orders in those issues shall remain in the Matching System unless they are cancelled by the Participant that submitted the order. The Matching System shall not accept any orders, or any changes to orders (other than cancellations), in those issues during a trading suspension or halt, subject to Article 18, Rule 1(c). Immediately after the trading halt or suspension has ended, the Matching System shall begin accepting orders and shall match them as provided in Rule 8(d), below.

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**Rule 2A. Limit Up-Limit Down Plan and Trading Pauses in Individual Securities Due to Extraordinary Market Volatility**

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(c) *Trading Pauses.* Securities shall remain subject to the requirements of paragraphs (c)(1) and (c)(2) below until such securities become subject to the Plan. Once an NMS Stock is subject to the Plan, the security shall only be subject to a Trading Pause under the Plan consistent with paragraphs (c)(3) and (c)(4) below.

\* \* \*

(3) *Trading Pause Pursuant to the Plan.* A Trading Pause shall be commenced by the Exchange pursuant to the Plan.

(A) *Upon commencement of a Trading Pause,* the Exchange shall cancel all orders in the NMS Stock subject to the Trading Pause resting in the CHX book, subject to Article 18, Rule 1(c).

(B) *During a Trading Pause,* no trades in the NMS Stock subject to the Trading Pause shall be executed on the Exchange or any other trading center and the Matching System shall reject all incoming orders in the NMS Stock subject to the Trading Pause, subject to Article 18, Rule 1(c).

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**Rule 8. Operation of the Matching System**

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(b) *Ranking and display of orders.* [All o]Orders [accepted by the Matching System that will post to the CHX book ]shall be ranked and displayed[at each price point up or down to its limit price by display status then sequence number. Resting limit orders shall be ranked ]as follows:

(1) CHX book ranking. Otherwise than during a SNAP Cycle, as described under Article 18, Rule 1(b), orders that may post to the CHX book shall be executable in Working Price/display status/sequence number priority and shall be ranked on the CHX book as follows:

(A) *Fully-displayable orders and displayed portions of Reserve Size orders.* At each price point up or down to their limit prices, fully-displayable limit orders of any size and the displayed portion of Reserve Size orders, as defined under Article 1, Rule 2(c)(3), shall be ranked based on their sequence numbers by the Exchange's Matching System and shall be ranked ahead of undisplayed portions of Reserve Size orders and orders marked Do Not Display. Orders sent to an Institutional Broker for handling shall not have any priority within the Matching System unless and until they are received by the Matching System.

[(2)] (B) Undisplayed portion of Reserve Size orders. At each price point up or down to their limit prices, the undisplayed portions of Reserve Size orders shall be ranked based on their sequence numbers by the Exchange's Matching System, but shall be ranked after any orders as described in subparagraph [(b)(1)](A) above.

[(3)] (C) Orders marked Do Not Display. At each price point up or down to their limit prices, limit orders marked Do Not Display, as defined under Article 1, Rule 2(c)(2), shall be ranked based on their sequence numbers by the Exchange's Matching System, but shall be ranked after all orders as described under subparagraphs [(b)(1) and (2)](A) and (B) above.

(2) Orders not ranked upon receipt. The following orders shall not be ranked on the CHX book upon receipt, but shall be queued until ranked as follows:

(A) SNAP AOO Queue. Valid SNAP AOOs, as defined under Article 1, Rule 2(h)(3), shall be queued in the order in which they were originally received; provided, however, that SNAP AOOs not marked SNAP AOO-Pegged received during a SNAP Order Acceptance Period shall be immediately ranked on the SNAP CHX book upon receipt and not queued. All SNAP AOOs shall be ranked on the SNAP CHX book, pursuant to paragraph (b)(3)(E) below. SNAP AOOs that are to be re-queued shall be re-queued based on time of original receipt.

(3) SNAP CHX book ranking. During a SNAP Cycle, as described under Article 18, Rule 1(b), orders shall receive execution priority as described under Article 18, Rule 1(b)(4)(A) and be ranked on the SNAP CHX book as follows:

(A) Precedent fully-displayable orders and displayed portions of Reserve Size orders. At each price point up or down to their limit prices, SNAP Eligible Orders ranked pursuant to paragraph (b)(1)(A) above that were resting on the CHX book at the time a SNAP Cycle was initiated in the subject security shall maintain their rank on the SNAP CHX book ahead of orders as described under subparagraphs (B) - (E) below.

(B) Precedent undisplayed portion of Reserve Size orders. At each price point up or down to their limit prices, SNAP Eligible Orders ranked pursuant to paragraph (b)(1)(B) above that were resting on the CHX book at the time an SNAP Cycle was initiated in the subject security shall maintain their rank on the SNAP CHX book after any orders as described under subparagraph (A) above.

(C) Precedent orders marked Do Not Display. At each price point up or down to their limit prices, SNAP Eligible Orders ranked pursuant to paragraph (b)(1)(C) above that were resting on the CHX book at the time a SNAP Cycle was initiated in the subject security shall maintain their rank

on the CHX book after any orders as described under subparagraphs (A) and (B) above.

(D) Limit order marked Start SNAP. At each price point up or down to its limit price, the limit order marked Start SNAP, as defined under Article 1, Rule 2(h)(1), that initiated the SNAP Cycle, shall be ranked after any orders as described under subparagraphs (A) – (C).

(E) SNAP AOOs and SNAP Eligible Orders received during the SNAP Order Acceptance Period. At each price point up or down to their limit prices, SNAP AOOs, as defined under Article 1, Rule 2(h)(3), and SNAP Eligible Orders received during the SNAP Order Acceptance Period, as described under Article 18, Rule 1(b)(2), shall be ranked based on their sequence numbers, but shall be ranked after all orders as described under subparagraphs (A) – (D).

\* \* \*

(6) *Displayed CHX Best Bid and Offer.* Except as provided in Rule 5 above or Article 18, Rule 1(b), all orders or portions of orders described under paragraph (b)(1)(A) above that constitute the best bid(s) or offer(s) in the Matching System in each security, the display of which would not violate Rule 610 under Regulation NMS (“displayable CHX BBO”), shall be immediately and publicly displayed through the processes set out in the appropriate reporting plan for each security, provided that the displayable CHX BBO is for at least a Round Lot. The displayable CHX BBO for a security shall only be displayed in multiples of a Round Lot. If the displayable CHX BBO for a security is for an Odd Lot, it shall not be displayed, but the bids or offers that constitute the undisplayed yet displayable CHX BBO shall maintain their execution priority pursuant to paragraph (b)(1)(A) above. If the displayable CHX BBO for a security is for a Mixed Lot, it shall be rounded down to the nearest integer multiple of a Round Lot for display purposes only and the displayable yet undisplayed Odd Lot remainder(s) shall maintain their execution priority pursuant to paragraph (b)(1)(A) above.

(7) *Priority of unexecuted remainders of routed orders returned to the Matching System.* An unexecuted remainder of a routed order returned to the Matching System in one or more parts shall be added to the existing balance of the related Rutable Order already posted to the CHX book, the SNAP CHX book or the SNAP AOO Queue, as applicable. If no balance exists at the time a part of an unexecuted remainder of a routed order is returned to the Matching System, it shall be treated as a new incoming order, subject to Article 18, Rule 1(b)(3)(C).

\* \* \*

(d) *Automated matching of orders.* Orders shall automatically match against each other, as follows:



\* \* \*

(4) *Rule 201 of Regulation SHO.*

(A) Open Trading State. During the Open Trading State, as defined under Article 1, Rule 1(qq), and the stage five Transition to the Open Trading State, as described under Article 18, Rule 1(b)(5), orders marked Sell Short in a covered security subject to the short sale price test restriction shall be handled as follows:

(i) For any execution or display of a limit order marked Sell Short, as defined under Article 1, Rule 2(b)(3)(D), in a covered security to occur on the Exchange when a short sale price test restriction is in effect, the price must be above the current NBB, unless the sell order was initially displayed by the Matching System at a price above the then-current NBB, pursuant to Rule 201(b)(1)(iii)(A) of Regulation SHO, or is marked Short Exempt, as defined under Article 1, Rule 2(b)(3)(E), pursuant to Rule 201(b)(1)(iii)(B) of Regulation SHO.

(ii) The Rule 201(b)(1)(iii)(A) exception shall also apply to resting limit orders marked Sell Short and Reserve Size, as defined under Article 1, Rule 2(c)(3), and, pursuant to the exception, such orders shall be permitted to execute at its initially displayed price, up to its full size, including the undisplayed portion, during one order-matching event. Reserve Size orders may not be modified or refreshed during an order-matching event. If a Reserve Size order is refreshed after an order matching event, but the refreshed quote cannot be permissibly displayed at the initially displayed price in compliance with Regulation SHO, the entire Reserve Size order shall be cancelled or price slid, if the order is marked CHX Only, as defined under Article 1, Rule 2(b)(1)(C).

(iii) If the NBBO for a covered security subject to the short sale price test restriction become crossed, a Sell Short order in the covered security may be displayed or executed at a price that is less than or equal to the current NBB while the market is crossed.

(iv) A Sell Short order, other than a CHX Only order, will be cancelled back to the order sender if, based on Rule 201 of Regulation SHO, such order is not executable, cannot be routed to another Trading Center pursuant to Article 19, Rule 3 or cannot be posted to the Matching System.

(B) SNAP Cycle. During the stage four Order Matching Period of a SNAP Cycle, as described under Article 18, Rule 1(b)(4), in a covered security subject to the short sale price test restriction, participating SNAP Eligible Orders, as defined under Article 1, Rule 1(ss), marked Sell Short

shall not be permitted to execute at prices at or below the NBB ascertained from the market snapshot taken pursuant to Article 18, Rule 1(b)(2)(E) and shall be handled as follows:

(i) A SNAP Eligible Order marked Sell Short in a covered security subject to the short sale price test restriction, with a limit price at or below the NBB ascertained from the market snapshot taken pursuant to Article 18, Rule 1(b)(2)(E), shall be repriced to one minimum price increment above that NBB for ranking purposes on the SNAP CHX book. A SNAP Eligible Order marked Sell Short in a covered security subject to the short sale price test restriction, with a limit price at one minimum price increment above the NBB ascertained from the market snapshot taken pursuant to Article 18, Rule 1(b)(2)(E) or higher, shall be ranked on the SNAP CHX book at its limit price, without repricing. A SNAP Eligible Order marked Short Exempt, as defined under Article 1, Rule 2(b)(3)(E), in a covered security subject to the short sale price test restriction, shall be handled like a SNAP Eligible Order not marked Sell Short, as described under Article 18, Rule 1(b). SNAP Eligible Orders marked Sell Short in a covered security subject to the short sale price test restriction will never be permitted to execute at prices at or below the NBB ascertained from the market snapshot taken pursuant to Article 18, Rule 1(b)(2)(E).

(ii) The Rule 201(b)(1)(iii)(A) of Regulation SHO exception shall not apply to a SNAP Eligible Order marked Sell Short that is being transitioned to the SNAP CHX book and such an order shall be repriced, if necessary, pursuant to subparagraph (B)(i) above.

(iii) A limit order marked Start SNAP, as defined under Article 1, Rule 2(h)(1), and Sell Short for a covered security subject to short sale price test restriction shall not initiate a SNAP Cycle and shall be cancelled.

(e) *Execution of certain orders, [and] order types and auctions.* The following orders shall be executed within the Matching System as set out below:

\* \* \*

(2) [Reserved]SNAP Cycle. During a SNAP Cycle, participating SNAP Eligible Orders shall be executed within the Matching System at the SNAP Price, pursuant to Article 18, Rule 1(b)(4)(A).

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