

Part II, Item 5 (Other Products and Services)

(a) Does the Broker-Dealer Operator offer Subscribers any products or services for the purpose of effecting transactions or submitting, disseminating, or displaying orders and trading interest in the NMS Stock ATS (e.g., algorithmic trading products that send orders to the ATS, order management or order execution systems, data feeds regarding orders and trading interest in, or executions occurring on, the ATS)?

YES

If yes, identify the products or services offered, provide a summary of the terms and conditions for use, and list here the applicable Item number in Part III of this form where the use of the product or service is explained. If there is no applicable Item in Part III, explain the use of the product or service with the ATS here.

JPMS, sometimes in conjunction with its affiliates, offers Subscribers

1. Access to JPMS' algorithms/SOR, which in turn is able to access numerous trading centers, including JPB-X (as discussed in Part III, Item 5),
2. Access to JPMS' JISU technology, which is a low-latency platform, accessed via a FIX connection, that can be used to access directly JPMS' algorithmic trading strategies, smart order routing technology, JPB-X, JPM-X (another NMS Stock ATS operated by JPMS), and/or external venues, and
3. Neovest, which is an order and execution management system developed by JPMS' affiliate Neovest, Inc. and can be used to access numerous brokers, including JPMS and, specifically, JPMS' algorithms/SOR.

JPMS may offer Subscribers access to its algorithms/SOR and/or JISU technology pursuant to an electronic trading agreement, the terms of which (regarding, e.g., intellectual property rights, warranties, indemnification obligations, and limitations of liability) are sometimes negotiated and generally do not contain specific terms and conditions for routing orders to JPB-X. JPMS may offer Subscribers Neovest pursuant to sub-licensing schedules to that agreement. Subscribers utilize Neovest pursuant to a click-through user agreement with Neovest, Inc.

(b) If yes to Item 5(a), are the terms and conditions of the services or products required to be identified in Item 5(a) the same for all Subscribers and the Broker-Dealer Operator?

YES

(c) Does any Affiliate of the Broker-Dealer Operator offer Subscribers, the Broker-Dealer Operator, or both, any products or services for the purpose of effecting transactions or submitting, disseminating, or displaying orders or trading interest in the NMS Stock ATS?

YES

If yes, identify the products or services offered, provide a summary of the terms and conditions for use, and list here the applicable Item number in Part III of this form where the use of the product or service is explained. If there is no applicable item in Part III, explain the use of the product or service with the ATS here.

Neovest, Inc., an affiliate of JPMS, offers Subscribers Neovest, an order and execution management system that can be used to access numerous brokers, including JPMS and, specifically, JPMS' algorithms/SOR, which in turn is able to access numerous trading centers, including JPB-X (as discussed in Part III, Item 5). Subscribers utilize Neovest pursuant to a click-through user agreement with Neovest, Inc. Certain Subscribers utilize Neovest pursuant to an agreement with Neovest, Inc., the terms of which are sometimes negotiated, authorizing the Subscriber to access Neovest and to sub-license access to Neovest to the Subscriber's clients.

d. If yes to Item 5(c), are the terms and conditions of the services or products required to be identified in Item 5(c) the same for all Subscribers and the Broker-Dealer Operator?

YES

Part III, Item 5 (Means of Entry)

(a) Does the NMS Stock ATS permit orders and trading interest to be entered directly into the ATS (e.g., via Financial Information eXchange ("FIX") protocol, Binary)?

YES~~NO~~

If yes, explain the protocol that can be used to directly enter orders and trading interest into the ATS.

Subscribers can enter Firm/Conditional Orders directly into JPB-X by routing through JPMS' JISU technology, a low-latency platform accessible through a standard FIX messaging protocol (FIX 4.2 API). JPMS' JISU technology accesses JPB-X through a proprietary FIX messaging protocol and is the only means by which Subscribers can access JPB-X directly.

(b) If yes to Item 5(a), are the protocols required to be identified in Item 5(a) the same for all Subscribers and the Broker-Dealer Operator?

NO

If no, identify and explain any differences.

Only institutional investor clients of JPMS can enter Firm/Conditional Orders directly into JPB-X. JPMS trading desks, JPMS' affiliates, and U.S.-registered broker-dealer clients (whether acting as agent or principal) cannot enter Firm/Conditional Orders directly into JPB-X.

(c) Are there any other means for entering orders and trading interest into the NMS Stock ATS (e.g., smart order router, algorithm, order management system, sales desk)?

YES

If yes, identify and explain the other means for entering orders and trading interest, indicate whether the means are provided through the Broker-Dealer Operator, either by itself or through a third-party contracting with the Broker-Dealer Operator, or through an Affiliate of the Broker-Dealer Operator, and list and provide a summary of the terms and conditions for entering orders or trading interest into the ATS through these means.

Subscribers can enter firm orders into JPMS' algorithmic trading strategies, which can direct the SOR to enter child Firm/Conditional Orders into JPB-X based on the algorithmic trading strategies' own routing determinations or, with respect to the initial conditional order only, the routing determinations of Subscribers. Subscribers also can enter firm orders into the SOR, which can enter child Firm/Conditional Orders designated for Close Price Match into JPB-X based on the SOR's own routing determinations or, with respect to the initial conditional order only, the routing determinations of Subscribers. The SOR accesses JPB-X through a proprietary FIX messaging protocol. Subscribers can enter firm orders into JPMS algorithmic trading strategies and the SOR via a client gateway (JPMS' JISU technology or an order management system selected by the Subscriber). Subscribers can opt out of having the algorithms/SOR route Firm/Conditional Orders to JPB-X. Subscribers that access the algorithms/SOR are subject to any applicable contractual agreements with JPMS, such as any Electronic Access and Trading Agreements, the terms of which (regarding, e.g., intellectual property rights, warranties,

indemnification obligations, and limitations of liability) are sometimes negotiated and generally do not contain specific terms and conditions for accessing JPB-X through the algorithms/SOR. There is no means by which to access JPB-X through the algorithms/SOR that is available to JPMS business units or JPMS affiliates but not to Subscribers. Unless otherwise noted, the description above applies to both Firm/Conditional Orders designated for VWAP Price Match and Firm/Conditional Orders designated for Close Price Match (see Part III, Item 7).

(d) If yes to Item 5(c), are the terms and conditions required to be identified in Item 5(c) the same for all Subscribers and the Broker-Dealer Operator?

YES

Part III, Item 6 (Connectivity and Co-location)

(a) Does the NMS Stock ATS offer co-location and related services (e.g., cabinets and equipment, cross-connects)?

YES~~NO~~

If yes, provide a summary of the terms and conditions for co-location and related services, including the speed and connection (e.g., fiber, copper) options offered.

JPMS' JISU technology, a low-latency platform that is accessible through a standard FIX messaging protocol (FIX 4.2 API), can share the same rack space in the Equinix NY4 New York IBX Data Center with the JPMS trading algorithms, SOR, JPB-X, and JPM-X. Subscribers that access JPB-X by routing Firm/Conditional Orders directly to JPB-X route via JISU. In addition, Subscribers that access JPB-X by routing orders to JPMS trading algorithms or by routing Firm/Conditional Orders to the SOR can increase the speed of their communications with JPB-X by routing via JISU. A Subscriber can access JISU via a fiber cross-connect between the hardware of a third-party connectivity provider selected by the Subscriber and JISU. The bit rate of the cross-connect may vary depending on the connectivity provider. A Subscriber that accesses JISU is subject to any applicable contractual agreements with JPMS (such as EATAs, discussed in response to Part III, Item 5(c)) and/or with the third-party connectivity provider selected by the Subscriber and could be liable for charges resulting from such connectivity under the agreements. Subscribers also can contract directly with Equinix to be located in the Equinix NY4 New York IBX Data Center, the same data center in which the JPMS trading algorithms, SOR, JISU, JPB-X, and JPM-X are located. Subscribers, however, cannot share the same rack space with the JPMS trading algorithms, SOR, JISU, JPB-X, and JPM-X. Subscribers, irrespective of their location, can, but are not required to, access JISU.

(b) If yes to Item (6)(a), are the terms and conditions required to be identified in Item 6(a) the same for all Subscribers and the Broker-Dealer Operator?

NO

If no, identify and explain any differences.

Only institutional investor clients of JPMS can enter Firm/Conditional Orders directly into JPB-X via JISU. JPMS trading desks, JPMS' affiliates, and U.S.-registered broker-dealer clients (whether acting as agent or principal) cannot enter Firm/Conditional Orders directly into JPB-X via JISU.

(c) Does the NMS Stock ATS offer any other means besides co-location and related services required to be explained in this Item 6(a) to increase the speed of communication with the ATS?

NO

(e) Does the NMS Stock ATS offer any means to reduce the speed of communication with the ATS (e.g., speed bumps)?

NO

Part III, Item 7 (Order Types and Attributes)

(a) Identify and explain each order type offered by the NMS Stock ATS. In your explanation, include the following:

i. priority, including the order type's priority upon order entry and any subsequent change to priority (if applicable); whether and when the order type can receive a new time stamp; the order type's priority vis-à-vis other orders on the book due to changes in the NBBO or other reference price; and any instance in which the order type could lose execution priority to a later arriving order at the same price;

ii. conditions, including any price conditions (e.g., how price conditions affect the rank and price at which it can be executed; conditions on the display or non-display of an order; or conditions on executability and routability);

iii. order types designed not to remove liquidity (e.g., post-only orders), including what occurs when such order is marketable against trading interest on the NMS Stock ATS when received;

iv. order types that adjust their price as changes to the order book occur (e.g., price sliding orders or pegged orders) or have a discretionary range, including an order's rank and price upon order entry and whether such prices or rank may change based on the NBBO or other market conditions when using such order type; when the order type is executable and at what price the execution would occur; whether the price at which the order type can be executed ever changes; and if the order type can operate in different ways, the default operation of the order type;

v. whether an order type is eligible for routing to other Trading Centers;

vi. the time-in-force instructions that can be used or not used with each order type;

vii. the circumstances under which order types may be combined with another order type, modified, replaced, canceled, rejected, or removed from the NMS Stock ATS; and

viii. the availability of order types across all forms of connectivity to the NMS Stock ATS and differences, if any, in the availability of an order type across those forms of connectivity.

Conditional and Firm Orders. The algorithms/SOR and Subscribers that access JPB-X directly can route to JPB-X (i) conditional orders and (ii) if any of the conditional orders match with other conditional orders in JPB-X, firm orders routed in response to firm-up invitations received directly from JPB-X (in the case of the SOR with respect to orders designated for Close Price Match and in the case of Subscribers that access JPB-X directly) or from JPB-X via the SOR (in the case of JPMS algorithmic trading strategies).

Matching Types. JPB-X accepts Firm/Conditional Orders designated for the following two matching types:

-- Volume-Weighted Average Price Match ("VWAP Price Match"), which matches orders, using the conditional order process described in Part III, Item 9, and crosses them at a VWAP price determined by JPB-X over the course of a pre-determined match period; and

-- Close Price Match, which matches orders, using the conditional order process described in Part III, Item 9, and crosses them at the security's official closing price as determined by the closing auction at the primary exchange for the security.

Firm/Conditional Orders designated for each matching type are maintained in separate order books within JPB-X and do not interact with each other.

Firm/Conditional Order Types. JPB-X accepts (1) limit and market Firm/Conditional Orders for the VWAP Price Match matching type and (2) market-on-close Firm/Conditional Orders for the Close Price Match matching type. A limit Firm/Conditional Order is a Firm/Conditional Order to buy or sell stock at a specific price or better. A market Firm/Conditional Order is a Firm/Conditional Order to buy or sell stock at the best available price. A market-on-close Firm/Conditional Order is a Firm/Conditional Order to buy or sell stock at its closing price as determined by the primary exchange for the stock. JPB-X does not offer post-only Firm/Conditional Order types, and none of the above Firm/Conditional Order types is eligible for routing to other Trading Centers. The above Firm/Conditional Order types cannot be combined (i.e., a Firm/Conditional Order cannot be more than one Firm/Conditional Order type).

Time-In-Force Instructions. For both VWAP Price Match and Close Price Match matching types, JPB-X only accepts a "day" time-in-force instruction. A day Firm/Conditional Order is a Firm/Conditional Order intended to rest in an order book maintained by JPB-X until the Firm/Conditional Order is executed or cancelled at the end of the trading day or earlier.

Modifications, Replacements, and Cancellations. The algorithms/SOR [and Subscribers that access JPB-X directly](#) can modify, replace, or cancel day Firm/Conditional Orders routed to JPB-X, whether designated for VWAP Price Match or Close Price Match, as described below. The modification or replacement of a day conditional order results in the entry of a replacement conditional order with a new time stamp and lower priority in time than the original conditional order, unless the modification is a reduction in the quantity of the conditional order, in which case the replacement conditional order has a new time stamp but the same priority in time that the original conditional order had prior to its replacement. Note, however, that conditional orders designated for Close Price Match cannot be modified, replaced, or cancelled once the Close Price Match matching time is reached. The algorithms/SOR [and Subscribers that access JPB-X directly](#) can cancel or reduce the quantity of a firm-up order prior to its execution.

Rejections. JPB-X rejects (i) short sale exempt Firm/Conditional Orders, (2) short sale Firm/Conditional Orders designated for Close Price Match, (3) Firm/Conditional Orders priced at or above \$1.00 per share if priced in a sub-penny increment, (4) Firm/Conditional Orders priced below \$1.00 per share if priced in an increment of less than \$.0001, and (5) Firm/Conditional Orders that exceed limits imposed by JPMS pursuant to its obligations under SEC Rule 15c3-5.

Eligibility for Matching and Execution. A Firm/Conditional Order is ineligible for matching in JPB-X unless the price, minimum quantity, and counterparty preference instructions associated with the Firm/Conditional Order, if any, are satisfied. Conditional orders, but not firm orders, can have minimum match size requirements. As described in response to Part III, Item 9, when JPB-X sends a firm-up invitation, JPB-X cancels the corresponding conditional order, irrespective of the conditional order's minimum quantity instruction. As also described in response to Part III, Item 9, a firm-up order is ineligible for execution in JPB-X during the order's applicable firm-up period.

Matching of VWAP Price Match Orders. As described in response to Part III, Item 11, once JPB-X matches firm-up orders designated for VWAP Price Match and the match period has elapsed, the firm-up orders are crossed, based on equal split / time priority (i.e., all orders on the same side are given equal allocations with any remaining quantity allocated equally to earlier-in-time orders), at the VWAP determined by JPB-X. Changes to an associated parent order, price limitations, the triggering of a Rule 201 price test, production issues, or the closing of the stock at its primary exchange may result in termination of the match period, in which case the quantity of a matched order's fill will be proportional to the duration of the match period and the price of the fill will be the VWAP over the duration of the match period (or, if a Rule 201 price test is in effect, at a price that is allowed by the rule). In addition, JPB-X does not execute a cross in any NMS stock that is subject to a regulatory or trading halt (a "Halt"), although, as described in response to Part III, Item 20, JPB-X will continue to accept Firm/Conditional Orders in such an NMS stock and instructions to modify, cancel, or replace Firm/Conditional Orders in that NMS stock using the priority logic described in response to Part III, Item 11(c). Firm-up orders that were matched but for which the match period has not elapsed will be cancelled by JPB-X immediately after the Halt goes into effect. If a Halt in an NMS stock occurs during regular trading hours while a firm-up period for one or more conditional orders in that security is underway, JPB-X rejects any firm-up order received during the firm-up period while the halt is in place.

Matching of Close Price Match Orders. As described in response to Part III, Item 11, once JPB-X matches firm-up orders designated for Close Price Match in a NMS stock, they are crossed, based on time priority, at the closing price as determined by the closing auction and published by the primary exchange for the NMS stock after the exchange closes. As described in response to Part III, Item 20, when a Halt is in effect for an NMS stock, JPB-X will continue to accept and match conditional orders designated for Close Price Match and to accept instructions to modify, cancel, or replace conditional orders in that NMS stock using the priority logic described in response to Part III, Item 11(c) but will not execute orders if the primary exchange does not publish a close price as determined by the closing auction for the stock, in which case JPB-X will cancel the unexecuted orders immediately after JPMS determines that the primary exchange has not published a close price as determined by the closing auction for the stock and has been delayed in doing so as a result of the Halt. Firm-up orders that were matched but have not yet been executed will be cancelled by JPB-X immediately after the Halt goes into effect.

Changes in NBBO. Although a change in the NBBO would not affect the relative priority of matched firm-up orders that remain eligible for execution after the change, the change could affect whether a firm-up order designated for VWAP Price Match with a price instruction associated with it is eligible for execution and the execution price at which orders that remain eligible for execution are crossed.

(b) Are the terms and conditions for each order type and attribute the same for all Subscribers and the Broker-Dealer Operator?

YES

Part III, Item 9 (Conditional Orders and Indications of Interest)

(a) Does the NMS Stock ATS send or receive any messages indicating trading interest (e.g., IOIs, actionable IOIs, or conditional orders)?

YES

If yes, identify and explain the use of the messages, including information contained in messages (e.g., price or size minimums), how the message is transmitted (e.g., order management system, smart order router, FIX), when the message is transmitted (e.g., automatically by the ATS, or upon the sender's request), the type of Persons that receive the message (e.g., Subscribers, Trading Centers), responses to conditional orders or IOIs (e.g., submission to firm-up conditional orders), and the conditions under which the message might result in an execution in the ATS (e.g., response time parameters, interaction, and matching).

JPB-X receives conditional orders routed to it by the SOR ~~or~~ by JPMS trading algorithms via the SOR, or by Subscribers that access JPB-X directly. A conditional order describes the price, size, side, symbol, and minimum match size of the trading interest. Conditional orders can take the form of the Firm/Conditional Order types described in response to Part III, Item 7. JPB-X matches conditional orders designated for the VWAP Price Match and Close Price Match as described in response to Part III, Item 11. If two or more conditional orders match, JPB-X sends a firm-up invitation to (i) the SOR, if it had routed one of the matched conditional orders without instruction to do so from a JPMS algorithmic trading strategy, ~~and/or~~ (ii) any JPMS algorithmic trading strategy that instructed the SOR to route one of the matched conditional orders, and/or (iii) any Subscriber that routed one of the matched conditional orders directly to JPB-X (with multiple firm-up invitations being sent to (i) any JPMS algorithmic trading strategy that routed more than one of the matched conditional orders or (ii) the SOR if it had routed more than one of the matched conditional orders without instruction to do so from a JPMS algorithmic trading strategy). The firm-up invitation includes the symbol, quantity, and price of the associated same-side conditional order that prompted the firm-up invitation and the matched size of contra-side trading interest.

When JPB-X sends a firm-up invitation, JPB-X cancels the corresponding conditional order, and the recipient of the firm-up invitation (i.e., the SOR ~~or~~ a JPMS algorithmic trading strategy, or a Subscriber) has the duration of the firm-up period to determine whether to send a firm-up order in response to the firm-up invitation. The price and size attributes reflected in a Subscriber's firm-up order may differ from the corresponding attributes reflected in the Subscriber's earlier conditional order. The firm-up period is the shorter of (i) the time it takes for JPB-X to receive firm-up orders corresponding to all of the matched conditional orders and (ii) the default firm-up period, which is currently two seconds. JPB-X does not match any firm-up orders until the firm-up period elapses. When the firm-up period elapses, JPB-X matches the firm-up orders designated for the VWAP Price Match and Close Price Match as described in response to Part III, Item 11.

By default, the algorithms/SOR can route conditional orders to JPB-X. Subscribers can opt out of the routing of conditional orders on their behalf. Subscribers can opt out in whole or in part (with respect to a subset of conditional orders or all conditional orders) by contacting their JPMS sales representatives. JPMS implements such restrictions as soon as reasonably practicable. In addition, JPMS reserves the right to limit or prohibit the use of conditional orders for Subscribers at JPMS' discretion if, as described in response to Part III, Item 3, ECS Liquidity Product Specialists responsible for the operation of JPB-X detect systematic behavior resulting in a materially negative impact to the operation of JPB-X or to other Subscribers as evidenced by, e.g., a high cancellation rate or, with respect to orders designated for VWAP Price Match, high VWAP slippage of the Subscriber's algorithmic orders.

(b) If yes to Item 9(a), are the terms and conditions governing conditional orders and indications of interest the same for all Subscribers and the Broker-Dealer Operator?

YES

Part III, Item 11 (Trading Services, Facilities, and Rules)

(a) Provide a summary of the structure of the NMS Stock ATS marketplace (e.g., crossing system, auction market, limit order matching book) and explain the means and facilities for bringing together the orders of multiple buyers and sellers on the NMS Stock ATS.

JPB-X is an NMS Stock ATS that operates within JPMS as part of the Equities Division of the Corporate and Investment Bank in JPMC, of which JPMS is a subsidiary, and offers matching services in NMS stocks. JPB-X is a crossing system that matches non-displayed conditional orders, and crosses non-displayed firm-up orders, designated to receive either a volume-weighted average price or the closing price of the NMS stock being traded.

(b) Are the means and facilities required to be identified in Item 11(a) the same for all Subscribers and the Broker-Dealer Operator?

YES

(c) Explain the established, non-discretionary rules and procedures of the NMS Stock ATS, including order interaction rules for the priority, pricing methodologies, allocation, matching, and execution of orders and trading interest, and other procedures governing trading, such as price improvement functionality, price protection mechanisms, short sales, locked-crossed markets, the handling of execution errors, and the time-stamping of orders and executions.

JPB-X rejects (1) short sale exempt Firm/Conditional Orders, (2) short sale Firm/Conditional Orders designated for Close Price Match, (3) Firm/Conditional Orders priced at or above \$1.00 per share if priced in a sub-penny increment, (4) Firm/Conditional Orders priced below \$1.00 per share if priced in an increment of less than \$.0001, and (5) Firm/Conditional Orders that exceed limits imposed by JPMS pursuant to its obligations under SEC Rule 15c3-5.

A Firm/Conditional Order is ineligible for matching in JPB-X unless the price, minimum quantity, and counterparty preference instructions (see Part III, Items 13-14) associated with the Firm/Conditional Order, if any, are satisfied. Conditional orders, but not firm orders, can have minimum match size requirements. As described in response to Part III, Item 9, a firm-up order is ineligible for execution in JPB-X during the order's applicable firm-up period.

VWAP Price Match Rules and Procedures:

When two or more conditional orders designated for VWAP Price Match on opposite sides are eligible for matching in JPB-X, JPB-X matches them and sends firm-up invitations to the algorithms/SOR or Subscribers (as described in response to Part III, Item 9). Short sale conditional orders are not eligible for matching when a price test under Rule 201 of Regulation SHO is in effect.

Once the firm-up period described in Part III, Item 9 has elapsed, JPB-X matches the firm-up orders it received during the firm-up period (subject to the eligibility criteria for the firm-up orders discussed above and the firm-up orders' participation instructions) based on equal split / time priority (i.e., all orders on the same side are given equal allocations with any remaining quantity allocated equally to earlier-in-time orders). A pre-determined default match period commences upon the earlier of (i) JPB-X's receipt of firm-up orders corresponding to all firm-up invitations sent by JPB-X or (ii) the expiration of the firm-up period. The default match period is currently five minutes for all firm-up orders.

During the match period, JPB-X monitors market data reported via the SIP (see Part III, Item 23) and any changes to parent order attributes. Once the match period elapses, JPB-X crosses the matched firm-up orders at the VWAP (if one exists and it is within the matched orders' price limits, if any), determined by JPB-X based on executed trades reported via the SIP during the match period. Changes to an associated parent order, changes in published quotations that render a firm-up order unmarketable, the triggering of a Rule 201 price test, production issues, or the closing of the stock at its primary exchange may result in early termination of the match period, in which case the quantity of a matched order's fill will be proportional to the duration of the match period and the price of the fill will be the VWAP over the duration of the match period (or, if a Rule 201 price test is in effect, at a price that is allowed by the rule).

JPB-X does not execute a cross in any NMS stock that is subject to a Halt (although, as described in response to Part III, Item 20, JPB-X will continue to accept Firm/Conditional Orders in such an NMS stock and instructions to modify, cancel, or replace Firm/Conditional Orders in that NMS stock using the priority logic described in this response). Firm-up orders that were matched but for which the match period has not elapsed are cancelled by JPB-X immediately after the Halt goes into effect. If a Halt in an NMS stock occurs during regular trading hours while a firm-up period for one or more conditional orders in that security is underway, JPB-X rejects any firm-up order received during the firm-up period while the halt is in place.

Close Price Match Rules and Procedures:

Following the Close Price Match matching time (see response to Part III, Item 4), JPB-X (i) matches conditional orders designated for Close Price Match on opposite sides that are eligible for matching in JPB-X based on time priority and (ii) sends firm-up invitations to the algorithms/SOR or Subscribers (as described in response to Part III, Item 9).

Once the firm-up period described in Part III, Item 9 has elapsed, JPB-X matches the firm-up orders designated for Close Price match received during the firm-up period (subject to the eligibility criteria for the firm-up orders discussed above and the firm-up orders' participation instructions) based on the time priority previously afforded the corresponding same-side conditional orders that preceded the firm-up orders, respectively. Unmatched firm-up orders are cancelled back to the SOR or, for any unmatched firm-up orders routed directly by a Subscriber, the Subscriber. Once the official closing price as determined by the closing auction is published by the primary exchange for the NMS stock, JPB-X crosses the matched firm-up orders

at that closing price as reported by the SIP (see Part III, Item 23). As described in response to Part III, Item 20, when a Halt is in effect for an NMS stock, JPB-X will continue to accept and match conditional orders designated for Close Price Match and to accept instructions to modify, cancel, or replace conditional orders in that NMS stock using the priority logic described in this response but will not execute orders if the primary exchange does not publish a close price as determined by the closing auction for the stock, in which case JPB-X will cancel the unexecuted orders immediately after JPMS determines that the primary exchange has not published a close price as determined by the closing auction for the stock and has been delayed in doing so as a result of the Halt. Firm-up orders that were matched but have not yet been executed will be cancelled by JPB-X immediately after the Halt goes into effect.

Additional Rules and Procedures for JPB-X Generally:

JPMS, at the request of a Subscriber or on JPMS' own initiative, may determine to review any transaction in JPB-X to assess whether it was adversely affected by a technical issue or "clearly erroneous" as defined by relevant regulators (e.g., under FINRA Rule 11891, "the terms of a transaction are 'clearly erroneous' when there is an obvious error in any term, such as price, number of shares, or other unit of trading, or identification of the security"). If JPMS determines that a transaction was adversely affected by a technical issue or clearly erroneous, whether or not as a result of JPMS or Subscriber error, JPMS, depending on the facts and circumstances, may work with the affected Subscriber(s) to resolve the error and may cancel (bust) the transaction or assume responsibility for one side of the transaction and work to cover the resulting position as soon as is practicable. JPB-X also may suspend matching in the event of volatile market conditions (e.g., wide bid/offer spreads).

JPB-X time stamps orders upon receipt and executions at the time they occur and reports them in milliseconds in accordance with applicable FINRA Order Audit Trail System and trade reporting rules. JPB-X determines queue positions based on new order receipt times with microsecond precision, except in the case of a reduction in the quantity of an order, in which case, the replacement order assumes the queue position of the original order.

(d) Are the established, non-discretionary rules and procedures required to be identified in Item 11(c) the same for all Subscribers and the Broker-Dealer Operator?

YES

Part III, Item 13 (Segmentation; Notice)

(a) Are orders and trading interest in the NMS Stock ATS segmented into categories, classifications, tiers, or levels (e.g., segmented by type of participant, order size, duration, source, or nature of trading activity)?

YES

If yes, explain the segmentation procedures, including (i) a description for how orders and trading interest are segmented; (ii) identify and describe any categories, classification, tiers, or levels and the types of orders and trading interest that are included in each; (iii) provide a summary of the parameters for each segmented category and length of time each segmented category is in effect; (iv) any procedures for overriding a determination of segmented category; and (v) how segmentation can affect order interaction.

Subscriber Firm/Conditional Order flow is assigned to an order flow type, each of which corresponds to a tier. JPMS assigns a Subscriber's Firm/Conditional Order flow to an order flow type based upon an initial review of information received from the Subscriber at onboarding. The order flow types and corresponding tiers are provided below. For the avoidance of doubt, "institutional investor client flow" does not include "U.S.-registered broker-dealer client flow" (and vice versa), and neither of them includes JPMS flow or JPMS affiliates' flow. (Unlike JPM-X, another NMS Stock ATS operated by JPMS, JPB-X does not have a ~~Tier 2 or~~ Tier 5.)

Tier 1 (Order Flow Type I-1) -- Institutional investor client flow and JPMS affiliates' flow accessing JPB-X via the algorithms/SOR;

Tier 2 (Order Flow Type I-2) -- Institutional investor client flow with direct access to JPB-X;

Tier 3 (Order Flow Type I-3) -- U.S.-registered broker-dealer client flow (both agency and principal) accessing JPB-X via the algorithms/SOR; and

Tier 4 (Order Flow Type P-1) -- Internal (JPMS) principal trading desk flow accessing JPB-X via the algorithms/SOR.

There is no specific length of time that an order flow type or tier assignment for a Subscriber will remain in effect; however, JPMS conducts a quarterly review of the trading activity in JPB-X of a sample set of Subscribers to confirm the accuracy of the Subscribers' order flow type and tier assignments, and JPMS reserves the right to review and add, remove, or revise an order flow type or tier assignment for a Subscriber at any time. JPMS would notify the Subscriber in the event of a change in the order flow type or tier assignment for the Subscriber. JPMS may change an order flow type or tier assignment for a Subscriber as described in response to Part III, Items 13-14 but does not otherwise override such an assignment once made.

The segmentation of order flow described above affects order interaction insofar as, in looking for matching opportunities for a Subscriber's Firm/Conditional Orders, JPB-X complies with the Subscriber's counterparty preferences regarding the order flow types or tiers with which the Subscriber would like to interact, as described in response to Part III, Item 14.

(b) If yes to Item 13(a), is the segmentation of orders and trading interest the same for all Subscribers and the Broker-Dealer Operator?

YES

(c) Does the NMS Stock ATS identify orders or trading interest entered by a customer of a broker-dealer on the NMS Stock ATS as a customer order?

YES

(d) If yes to Item 13(a), does the NMS Stock ATS disclose to any Person the designated segmented category, classification, tier, or level of orders and trading interest?

YES

If yes, provide a summary of the content of the disclosure, when and how the disclosure is communicated, who receives it, and whether and how such designation can be contested.

JPMS informs Subscribers of their assigned order flow type and tier classification at onboarding and upon request. A request by a Subscriber to contest such an assignment can be communicated through a JPMS sales representative and will be reviewed by ECS Liquidity Product Specialists.

(e) If yes to Item 13(d), are the disclosures required to be identified in 13(d) the same for all Subscribers and the Broker-Dealer Operator?

YES