

Exhibit 3

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Part III: Manner of Operations

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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.

Answer:

General Operation of the ATS

Subscribers access the ATS via a Financial Information Exchange ("FIX") connection. Such access is available to Subscribers through an internet protocol address via communications that are compliant with the FIX API provided by the ATS. The ATS currently supports FIX 4.2.

The ATS does not accept orders via any other forms of communication (e.g., telephone, email, instant message).

Required Fields

Subscribers must communicate the following information to the ATS upon order entry through FIX:

Message Type

Client Order ID (unique identifier for order per session)

Execution Instructions

Subscriber Order Capacity (Agent, Principal, Riskless)

Symbol

Side (Buy, Sell, Sell Short, Sell Short Exempt)

Display

Price Instructions

Time in Force

Time of Order Creation (expressed in UTC)

Order Type

Order Quantity

ClientID (used for identifying the client (MPID))

Handling Instruction (ATS supports automated execution and does not provide broker intervention)

Hosted Pool Tag (if applicable)

Order Parameters

Minimum Quantity - Subscribers may submit orders with a MinQty for execution. Subscribers may set MinQty to permit the aggregation of contra-side interest to meet the minimum quantity requirements.

Maximum Quantity - Subscribers may submit orders with a MaxQty for execution. MaxQty is only available in Hosted Pools and the IVWP book (not in the ~~main~~-Midpoint or ASPEN books). The ATS's FIX Specification is available to Subscribers upon request.

- 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?

☒ Yes ☐ No

If no, identify and explain any differences.

- 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 ☐ No

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.

Answer: IntelligentCross offers a SOR only to persons that are Subscribers to the ATS that allows such Subscribers to send orders FIX-tagged with instructions to access the SOR in routing orders to external trading centers, such as ATSs (including the IntelligentCross ATS), single dealer platforms, exchanges, and other brokers. Access to the SOR is via a FIX connection separate from the FIX connection to the ATS. The SOR will access the ATS through direct market access providers that are also Subscribers to the ATS, or through the IntelligentCross broker-dealer.

The direct market access providers enter orders pursuant to Part III, Item 5.a. Orders that the SOR sends to the ATS via the direct market access provider to be routed to the ATS are directed orders and cannot be routed to any other venue.

The ATS also offers sponsored access arrangements to Sponsored Firms in Hosted Pools. Under these arrangements, Sponsored Firms can send firm orders directly to a designated Hosted Pool via a sponsored access FIX session of a Sponsor. The FIX session is unique to the Sponsored Firm. The sponsored access arrangements will connect with a Sponsored

Firm's OMS/EMS. The ATS does not restrict the use of a sponsored access arrangement other than requiring that a Sponsored Firm using this arrangement must have been approved by a Sponsor, and the Sponsor must set risk limits for the Sponsored Firm.

- 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 ☐ No

If no, identify and explain any differences.

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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.

Answer:

Order Types and Order Type Modifiers

The ATS operates ~~two~~three different matching models: (1) a Midpoint book ("Midpoint") that only accepts non-displayed midpoint orders ~~and~~; (2) ASPEN (or the "Adverse Selection Protection Engine"), a full limit order book with optional displayed capability ~~The; and (3)~~ IVWP, a non-displayed book that matches using volume-weighted average pricing over fixed or floating time intervals. For Midpoint and ASPEN, the ATS uses a matching mechanism which is near-continuous and that matches orders at scheduled times ("Match Events"), as discussed further in Part III, Item 11. For IVWP, the ATS continuously evaluates VWAP Orders for eligible contra-side matches and upon identification of a match, the ATS initiates an invitation and firm-up process.

As discussed further below, Midpoint only accepts Midpoint Peg Orders (which are not accepted in ASPEN) ~~or IVWP~~, and IVWP only accepts VWAP Orders (which are not accepted in Midpoint or ASPEN). Any orders entered into IntelligentCross through any other order type (e.g., Market Order, Limit Order, Primary Peg Order (with or without a limit price), and Marketable Peg Order (with or without a limit price)) will default to the ASPEN Fee/Fee book. Only Limit Orders and Primary Peg Orders (with or without a limit price) are eligible to be displayed on the ASPEN Fee/Fee book.

For Midpoint, only orders that have rested on the order book for a minimum period of time are eligible to match. Such "Minimum Resting Periods" are determined by the ATS and set in a stock-specific fashion, similar to Match Events. However, in no event will the minimum resting period exceed 200 milliseconds. There are no Minimum Resting Periods for orders on ASPEN, IVWP, or Hosted Pools.

Midpoint Peg Orders

Midpoint Peg Orders are orders to buy or sell a stated amount of a security that are to be executed only at the midpoint price of the NBBO in the Midpoint book. The ATS will accept Midpoint Peg Orders with or without a limit price. Midpoint Peg Orders will be non-displayed.

Midpoint Peg Orders with Time-in-Force Instructions

The ATS will accept Midpoint Peg Orders with time-in-force instructions. Midpoint Peg Orders may be so designated, and such orders are orders to buy or sell a stated amount of a security that are to be executed only at the midpoint price of the NBBO in the Midpoint book. The ATS will accept such Peg Orders with or without a limit price, and these orders will be non-displayed. Midpoint Peg Orders with Time-in-Force instructions will be automatically canceled by the ATS within 100 milliseconds of order receipt by the matching engine; 100 milliseconds is the maximum timeframe in which a cancellation will occur. The amount of time until the order will be automatically canceled is calculated from the time of order receipt, and is determined by the ATS and calibrated on a security-by-security basis. The time period until automatic cancellation will be longer than or equal to the "Minimum Resting Period" (as discussed further in Part III, Item 11). The time period until automatic cancellation may be less than the time between Match

Events such that the order may be canceled without participating in a Match Event. For example, if, for a particular security, the time period until automatic cancellation is 20 milliseconds but the time between Match Events is 30 milliseconds, it is possible that an order would be entered by a Subscriber and be automatically canceled before the first Match Event subsequent to order entry. The factors that contribute to determining the amount of time until an order is canceled include time of day, price reaction after trades, volume and volatility in the security, average spread, trade size, and other market factors. The time until cancellation is adjusted after enough data points have been accumulated to warrant an adjustment. A Subscriber may cancel such a Midpoint Peg Order at any time before the order is fully executed or the ATS cancels the order.

Below is an example of the operation of a Midpoint Peg Order with Time-in-Force instructions:

Security XYZ has a Match Event Interval to occur between 7 to 12 milliseconds apart.

The next Match Event is scheduled at 10:01:04:010.

At 10:01:04:000, Subscriber A submits a 1000 share Midpoint Peg buy order with a limit price of \$25.06 to participate in the Midpoint book for Security XYZ. Assume that the time period until the Midpoint Peg Order is automatically canceled for Security XYZ is 30 milliseconds.

At 10:01:04:005, Subscriber B submits a 500 share sell order with no limit price and a TIF of Day to participate in the Midpoint book for Security XYZ.

At the next scheduled Match Event for Security XYZ, (10:01:04:010), the matching engine retrieves the NBBO and determines that the NBBO is \$25.05 by \$25.07. The Midpoint price at the time of the Match Event is \$25.06 and is the Matching Price. Assuming that Subscriber A's and Subscriber B's orders have met the minimum resting period, Subscriber A will match 500 shares with Subscriber B at \$25.06 during the Match Event at 10:01:04:010. Subscriber A's remaining order for 500 shares is eligible to participate in any subsequent Midpoint Match Event occurring prior to the automatic cancellation of the order by the ATS at 10:01:04:030.

Primary Peg Orders

Primary Peg Orders are orders to buy at the NBB, or sell at the NBO, a stated amount of a security that are to be executed only in ASPEN. Orders may be submitted with or without a limit price. Primary Peg Orders may be displayed or non-displayed at the Subscriber's discretion. If a displayed Primary Peg Order would lock or cross contra-side interest displayed inside the ATS or as part of the NBBO, such order will be displayed one minimum price variation less aggressive than the price of displayed contra-side interest inside the ATS or as part of the NBBO and ranked at the price of the contra-side of the NBBO, up to the order's limit price. In the event the displayed contra-side interest inside the ATS or the NBBO updates, such order's displayed price will be updated to the most aggressive price permissible without locking displayed contra-side interest inside the ATS or the NBBO, up to the order's limit price, and such order's ranked price will be updated to the most aggressive price permissible without crossing the NBBO, up to the order's limit price.

Marketable Peg Orders

Marketable Peg Orders are orders to buy at or below the NBO, or sell at or above the NBB, a stated amount of a security that are to be executed only in the ASPEN book. Orders may be submitted with or without a limit price. Marketable Peg Orders will be non-displayed.

Limit Orders

Limit Orders are orders to buy or sell a stated amount of a security at a specified price or better that are to be executed only in the ASPEN book. Limit Orders may be displayed or non-displayed at the Subscriber's discretion. If a displayed Limit Order would lock or cross contra-side interest displayed inside the ATS or as part of the NBBO, such order will be displayed one minimum price variation less aggressive than the price of displayed contra-side interest inside the ATS or as part of the NBBO and ranked at the price of the contra-side of the NBBO, up to the order's limit price. In the event the displayed contra-side interest inside the ATS or the NBBO updates, such order's displayed price will be updated to the most aggressive price permissible without locking displayed contra-side interest inside the ATS or the NBBO, up to the order's limit price, and such order's ranked price will be updated to the most aggressive price permissible without crossing the NBBO, up to the order's limit price.

Market Orders

Market Orders are orders to buy or sell a stated amount of a security that is to be executed at or in between the NBBO only in ASPEN. Market Orders will be non-displayed.

Add Liquidity Only

Subscribers may designate orders as Add Liquidity Only ("ALO"). ALO orders are to be entered only in ASPEN. ALO orders are Limit or Primary Peg orders that rest on the order book instead of the order being able to execute against contra interests that are already on the book at the same price or better price. ALO orders will only interact with other orders if the ALO order would be adding liquidity. Generally, for two given orders the one received first by the matching engine will be deemed to be adding liquidity.

Time-in-Force

The ATS will accept orders with time-in-force instructions of Day, IOC, and Good Till Time. Day will be the default time-in-force instruction. Day orders will be held by the ATS on its books from the time of receipt until the end of Regular Trading Hours. If unfulfilled by the end of Regular Trading Hours, such Day orders will be canceled and the Subscriber who submitted the order will be notified. IOC orders in ASPEN will be held until the completion of the next Match Event, and if unexecuted, will be canceled. IOC in combination with the Midpoint Peg instruction is processed as a Midpoint Peg Order with Time-in-Force Instruction. IOC orders may be submitted with or without a limit price. IOC orders will be non-displayed. Good Till Time orders are eligible for use in the Midpoint book and Hosted Pools and will be held by the ATS on its books

from the time of receipt for an amount of time specified by the Subscriber in milliseconds, and if unexecuted, will be canceled.

Not Held

All orders entered into the ATS by Subscribers are Not Held.

Open Orders

All open orders are canceled at the end of the trading day.

Routing

IntelligentCross does not support the routing of orders to any other venue.

Message Priority

Incoming orders and related messages are processed in the order in which they are received by the ATS.

Match Priority

Please see Item 11 for a description of the ATS's match priority criteria.

Order Amendment

An open order may be amended by Subscribers to the extent the amendment is received by the ATS before a Match Event involving that order occurs. Order amendments are processed in the order in which they are received by the ATS. The match priority of an order will be preserved when amending the quantity of an order to a value less than the existing quantity of the order; however, the match priority of an order will be lost when amending the quantity of an order to a value greater than the existing quantity or when amending any other value in addition to the quantity of the order.

Order Cancellation

An open order may be canceled by Subscribers to the extent the cancellation order is received by the ATS before a Match Event involving that order occurs. Cancellation orders will cancel all remaining open quantity on an order. Cancellation orders are processed in the order in which they are received by the ATS.

Hosted Pools

The ATS may setup a Hosted Pool, only at the request of a Subscriber, where such Subscriber will designate that trading interest interact with other trading interest entered by that same Subscriber, or with other Subscribers participating in the same Hosted Pool. While the ATS does not restrict Subscribers from requesting to setup a Hosted Pool, the setup of a Hosted Pool is at

the ATS' discretion and must be approved by the ATS. The ATS will determine whether or not to offer a Hosted Pool on a Subscriber-by-Subscriber basis. The determination is made by assessing, primarily, the expected order flow volume in the Hosted Pool of that Subscriber.

Each Hosted Pool is limited to the Subscriber on behalf of whom the Hosted Pool was setup and only those Subscribers that were invited by the Subscriber setting up the pool to participate in such Hosted Pool. The ATS does not determine the Subscribers invited to participate in a Hosted Pool. Subscribers are not subject to any specific quoting or liquidity requirements. The ATS, however, will periodically review the activity of each Subscriber in the Hosted Pool and may request that the Subscriber alter their activity (e.g., provide more order flow). Subscribers that fail to act in a manner that the ATS, in its discretion, deems satisfactory may lose access to the Hosted Pool service.

In addition, both the Subscriber setting up a Hosted Pool, and those Subscribers invited to participate in a Hosted Pool, are subject to the ATS' eligibility and exclusion requirements as described in Part III, Items 2 and 3.

The procedures for trading in a Hosted Pool are the same for all Subscribers. Subscribers may enter trading interest in either a principal or agency capacity. Subscribers have the option to designate a single order, conditional order, IOI, Block IOI, or VWAP Orders to interact in multiple Hosted Pools. The match event process, and processes for interacting in multiple Hosted Pools, are the same as when an order, conditional order, IOI, Block IOI, or VWAP Orders is designated to interact with a single Hosted Pool. If an order submitted to multiple Hosted Pools is executed in one Hosted Pool, the remaining quantity of the order will automatically be reduced by the executed amount across the Hosted Pools with which it is designated to interact.

All Hosted Pool orders configured for the Midpoint book will trade at the same midpoint price as the main Midpoint book or better.

All Hosted Pool orders configured for the ASPEN book will trade at prices determined by the orders present in those Hosted Pools at the time of the match, which may be different than the prices at which orders in the main ASPEN book may trade at (*i.e.*, in one ASPEN match event, there may be two trades in the same security printed at different prices).

For example, for a Hosted Pool order configured for the ASPEN book, assume the NBBO for Security XYZ is \$10.00 x \$10.04. A Hosted Pool contains a buy order at \$10.02 and a sell order at \$10.02. At the next scheduled Match Event, there will be a trade at \$10.02 in the ASPEN Hosted Pool. At the same time, if the main ASPEN book contains a buy order at \$10.01 and a sell order at \$10.01, there will be a trade at \$10.01 during the same Match Event.

Within the Hosted Pools, the ATS offers, at the request of the Subscriber that requested that the Hosted Pool be set up, a price improvement logic that will split any overlap in effective limit prices at a fixed level set for each Hosted Pool. For every trade in such a Hosted Pool, a specified percentage of the overlap will go to the liquidity provider and the remaining percentage will go to the liquidity taker (with the total percentage equaling 100%). The effective limit price for each order in the Hosted Pool is determined as the less aggressive of the peg instruction, limit price, and/or prevailing NBBO. For purposes of the Hosted Pools in this context, a liquidity provider is

defined by time, where for two given orders the one received first will be deemed to be the liquidity provider to the second order by time, which becomes the liquidity taker, unless one of the orders has been sent with an instruction to only act as liquidity provider in a cross.

For example, suppose that the specified percentage is set at 75% of the overlap for liquidity provider and 25% for liquidity taker and suppose that a buyer has a posted order in a Hosted Pool at a limit price of \$10.01. Subsequently, a seller sends an order with a limit price of \$10.00, creating a \$0.01 overlap. The liquidity provider (the buyer) will receive 75% of the overlap and the liquidity taker (the seller) will receive 25% of the overlap, and these two orders will be crossed at a price of \$10.0025.

The ATS notifies each participant in such a Hosted Pool of the price improvement split, as well as any changes to such split, and each participant would agree to the price improvement split in order to participate in the Hosted Pool. The price improvement split for the Hosted Pool is determined entirely by the Subscriber that requested the Hosted Pool to be set up.

If a conditional order or VWAP Order submitted to multiple Hosted Pools results in an Invite, the conditional order or VWAP Order will be cancelled across the Hosted Pools with which it is designated to interact.

If a Block IOI order submitted to multiple Hosted Pools results in a Request for Commitment, the Block IOI will be cancelled across the Hosted Pools with which it is designated to interact.

When a Subscriber receives notice of an execution, Invite, or Request for Commitment, the message will identify the Hosted Pool generating such activity. An order designated to interact within a Hosted Pool(s) can be designated to only interact with that Hosted Pool(s) or can also be designated to interact with the liquidity outside the Hosted Pool(s) after checking for liquidity available in that Hosted Pool(s). The default state is for an order to only interact with that Hosted Pool(s).

~~There is no independent~~ Unless otherwise configured, the Hosted Pool would follow the Match Event for a ~~Interval for Midpoint or ASPEN, as applicable. At the request of the Subscriber who has set up a Hosted Pool, such Hosted Pool may be configured with its own Match Event Interval, independent of the main book Match Event Intervals, as described in Part III, Item 11. The Match Event Interval may range from one (1) microsecond to thirty-five (35) minutes. The Match Event Interval applies uniformly across all securities traded in that Hosted Pool, i.e., only one Match Event occurs per~~ it will not be calibrated on a security across the ATS' books and by security basis. The actual match event time is randomized within the match event band throughout the course of the trading day, unless the minimum and maximum times are the same, acting as a fixed duration. At this time, no Hosted Pools at a time are utilizing their own Match Event Intervals. The ATS will file any required amendments regarding Hosted Pools that will use their own Match Event Intervals and any required updates to such Match Event Intervals.

Where a Hosted Pool is configured with its own Match Event Interval, Match Events for that Hosted Pool occur independently of Match Events in the main books and other Hosted Pools; this is true even where interest is designated to interact with multiple Hosted Pools. During a Match Event ~~for a Hosted Pool,~~ the matching engine will, in sequential order: (1) match orders eligible

to be matched in the Hosted Pools, and then, Pool(s) (regardless of if the orders are designated to interact with a single Hosted Pool or multiple Hosted Pools), and if so designated, by the Subscriber submitting the order; then (2) match orders from the Hosted Pools with orders outside the Hosted Pools. ~~Matching processes, procedures and parameters are the same for Match Events whether they occur in Hosted Pools or outside of Hosted Pools. For example, any orders from Hosted Pools designated to match with (in Midpoint or ASPEN). Any orders outside of Hosted Pools from a Hosted Pool designated to match with orders outside of a single Hosted Pool~~ will be subject to the same match priority criteria as those orders outside of the Hosted Pools and will queue up with those orders for the purposes of the next Match Event in the Hosted Pool or applicable main book. Where a Hosted Pool is not configured with its own Match Event Interval, the Hosted Pool's Match Events will occur at the same time as the Midpoint or ASPEN Match Events for that security. For that Hosted Pool, there is only one Match Event across the applicable books and Hosted Pool at a time. Any Hosted Pools configured with their own Match Event Intervals will have separate Match Events.

The ATS' Hosted Pools also accept "Conditional Orders." Conditional Orders are not accepted outside of the ATS' Hosted Pools. The ATS' Hosted Pools permit the publication of indications of interest ("IOIs"), which allow participants of a Hosted Pool to send IOIs to any other participant of that Hosted Pool. IOIs contain symbol, side and size. See Part III, Item 9 for a discussion of Conditional Orders and IOIs.

Block IOIs

The ATS offers a Block IOI service in its Hosted Pools only to Sponsored Firms. The ATS, through the Block IOI service, informs Sponsored Firms of contra liquidity in a designated Hosted Pool by responding to IOIs sent by the Sponsored Firm. Block IOIs contain the same information as other IOIs in the Hosted Pools, i.e., symbol, side and size. There also is no minimum size requirement applicable to the Block IOI service. Once informed of a possible match through the Block IOI process, the Sponsored Firm can send a firm order directly to the designated Hosted Pool in the ATS. Block IOIs and the associated processes are described further in Part III, Item 9.

VWAP Orders

~~Within~~ The ATS accepts VWAP Orders in the IVWP book, and in Hosted Pools, ~~the ATS offers,~~ at the request of the Subscriber that requested that the Hosted Pool be set up, "VWAP Orders" where the have an execution price ~~is~~ equal to a calculated volume-weighted average price ("VWAP") over a fixed time interval or floating (variable) time interval at the option of the Subscriber. VWAP Orders also offer an "Impute Match" feature, where an order with a fixed time interval can match against orders with a floating time interval.

Any Subscriber may submit VWAP Orders ~~are only offered to the IVWP book. VWAP Orders in Hosted Pools, and are available to~~ any Subscriber participating in a Hosted Pool ~~can utilize that offers~~ VWAP Orders ~~and the Impute Match feature.~~

VWAP Orders follow a similar workflow with regards to the invitation and firm up process as Conditional Orders (as discussed in Part III, Item 9) with certain exceptions. The primary differences include: (i) VWAP Order invitations are only on a one-to-one basis; (ii) VWAP

Orders have a particular time frame in which to firm up; (iii) VWAP Order invitations include matched quantity; (iv) VWAP Order invitations include the fixed time or participation rate at which the order matched against a contra; (v) for Impute Match invitations will include either the matched participation rate or matched time depending on the equivalence determination; and (vi) short sale VWAP Orders are not accepted in short sale restricted securities.

Subscribers must send VWAP Orders with a quantity, as a limit order or market order, and either: (i) a minimum and maximum time for fixed time interval; (ii) a minimum and maximum participation rate for floating time interval; or (iii) for Impute Match, either (a) an instruction to Impute Match, and either a minimum and maximum time, or a minimum and maximum participation rate ("ATS Imputation", as defined below), or (b) parameters for both time and participation rate ("Subscriber Imputation", as defined below).

For fixed time intervals, the minimum order time is twenty (20) seconds ("System Minimum VWAP Time"), and each order's minimum match time must not exceed the maximum match time (which cannot exceed the end of the regular session) of the opposing order.

For floating time intervals, there is no minimum order time, and the minimum participation rate must not exceed the maximum participation rate of the opposing order.

By default, VWAP Orders will utilize broker preferencing, where among competing matches, a Subscriber's order will first match against that Subscriber's own orders by MPID. The ATS determines matches among eligible contras for VWAP orders as follows: (1) for fixed time orders, all orders priced greater than or equal to the far touch (satisfying marketability constraints) will be ranked equally by price, and matched using ~~price~~MPID (i.e., broker preferencing), size, and time priority, in that order; and (2) for floating time orders, all orders priced greater than or equal to the far touch (satisfying marketability constraints) will be ranked equally by price, and matched using ~~price~~MPID, size, participation rate, and time priority in that order. VWAP Orders only match with other VWAP Orders.

Impute Match uses estimated equivalences between fixed and floating time intervals to determine matches amongst eligible orders. For fixed time intervals, a specified match quantity over fixed time has an implied participation rate relative to market volume in the security for that interval. Similarly, a participation rate and match quantity has an implied time duration for that interval. Because market volume in the security is unknown at the time the match begins, both the implied participation rate for a fixed time match, and the implied time duration for a floating time match determined by participation rate, are estimated with equivalences. For the purposes of identifying potential matches using Impute Match, VWAP Orders can use either (i) an ATS-calculated Volume-Time Prediction ("ATS Imputed"), which is an ATS-calculated equivalence between fixed time and participation rate for each specific security, or (ii) Subscriber-determined equivalences ("Subscriber Imputed"). Both ATS and Subscriber Imputation are indicated on an order-by-order basis.

If Impute Match is enabled by the Subscriber for an order, the matching engine will attempt to find contras for the order within the minimum and maximum time, or the minimum and maximum participation rate, using either ATS or Subscriber equivalences, with Subscriber equivalences always taking precedence over ATS equivalences. Eligible matches among fixed time and floating time contras are determined according to the priority rules for fixed time and

floating time respectively, and the ATS will always match an Impute Match on a fixed time interval if there is an available fixed time interval match.

An order that is not instructed to Impute Match may match against an order that is eligible to Impute Match, if the contra order (fixed or floating time interval) matches the contra order attributes of the non-imputed order.

Once a match is identified, invites are sent automatically by the ATS based on the priority stated above on a one-to-one basis, i.e., only a single invite will be sent, which can generate a single firm up. Match quantity is the smaller of the two quantities of the two orders matched and match time or participation rate is the smaller of the two specified maximum order times or participation rates. Invitations include the match quantity and the applicable fixed time or participation rate for the match.

Both sides have up to 2,000 milliseconds to firm up by submitting a firm up order in response to the invite. The firm up order can be a limit or a market order. Market firm up orders have a single global price collar which acts as a risk control, applied at a set percentage through the far touch NBBO at firm up time. If one party does not firm up, the match is cancelled, and the party that has firmed up will receive a cancellation. If one party responds at or after 2,000 milliseconds, they will receive a rejection, and the VWAP Order and counterparty order is similarly cancelled. Only when both sides firm up, the match can occur, and both parties will receive a restatement message to indicate the start of the match.

Once the restatement has been sent by the ATS, the execution price calculation can begin. The VWAP is calculated by collecting all executed trades reported via the SIP (with the exception of particular condition codes, such as derivatively priced prints or auctions, among others) during a period of time, known as the "VWAP Calculation Interval". Pursuant to Rule 611 of Regulation NMS, for VWAP Orders, executions may occur outside of the prevailing NBBO.

For fixed time intervals, the VWAP Calculation Interval is set explicitly according to the smaller of the Subscriber specified maximum order times as described above, and both parties will receive a single VWAP execution at the end of the VWAP Calculation Interval with a corresponding single price in an execution report.

For floating time intervals, participation rate is a designated percentage of market volume and the total time of a floating time match is equal to the participation rate multiplied by market volume in the security following the start of a match (calculated from SIP trades using the same methodology as the execution price determination described above), and market volume in the security (and thus total match time) is unknown at the initiation of the match.

For floating time intervals, the match may thus receive one (1) or more prints to fill the matched quantity, with each print sent at a randomly determined print interval between 40 and 60 seconds, including the final print, representing a VWAP Calculation Interval. VWAP Calculation Intervals for floating time matches will start after the restatement, or in the case of multiple prints, the prior print time. Floating time interval orders will not print earlier than the randomly determined print interval; randomly determined print intervals will continue until the match quantity is complete unless cancelled; and orders cancelled before the first randomly determined match interval will receive no execution.

For VWAP Orders matched using the Impute Match feature, the prints will occur according to either the fixed time (end of the VWAP Calculation Interval) or at the randomized intervals, depending on whether the Imputed Match resolved to a fixed time or floating time.

A VWAP Order can be cancelled at any time. ~~Cancellation behavior is different depending on whether the interval is fixed or floating.~~

For orders on a fixed or floating time interval, if either firm up order is cancelled before the System Minimum VWAP Time for that VWAP Order, then no VWAP print will be returned and there will be no partial fill, and the remaining firm up order will be cancelled. If the firm up order is cancelled during the VWAP Calculation Interval, and after the System Minimum VWAP Time, then for fixed time interval matches the quantity filled will be proportional to the elapsed VWAP time, and for floating time interval matches, the quantity filled will be proportional to the participation rate and market volume in the security to the time of the cancel. In both cases, the VWAP price will be the VWAP for the elapsed interval.

~~For orders on a floating time interval, if either firm up order is cancelled before the first random print time, no fill will be returned, and orders cancelled after each random print time will receive no pro-rata fill between the prior print time and the cancel time.~~

Any VWAP Calculation Intervals open at the end of the trading day will be terminated at the end of the regular session. ~~Orders open at the end of the trading day~~ For orders with a fixed time interval, a new match will ~~receive shares proportional to the time elapsed, provided not be initiated if the match will end at or beyond the time elapsed from the start~~ end of the regular session (i.e., the fixed time interval to match must complete before the end of the day is greater than the System Minimum VWAP Time-regular session). For orders ~~on~~ with a floating time interval, ~~if the a new match will not be initiated after one (1) minute prior to the end of the regular trading session, allowing one final randomly determined interval extends beyond (between 40 and 60 seconds) before the end of the trading day, the regular session. For orders will receive no shares and orders will be cancelled back at matching a minute or more before the end of the trading day regular session, where a floating time interval might match after the end of the regular session, there will only be one final print in the last minute before the end of the regular session, before canceling the balance back to the Subscriber.~~

The minimum quantity of one (1) share must also be met to allow for a partial fill. In the event a security becomes subject to a trading halt or short sale restriction during the VWAP Calculation Interval, for both fixed time and floating time, the firm up orders will be cancelled and no executions will occur. Once a VWAP calculation has started, the only option is to cancel the VWAP Order, and no modifications can be made.

If the calculated VWAP price breaches the specified limit price for a fixed time VWAP Order, and this occurs prior to the System Minimum VWAP Time for that VWAP Order, then there will be no partial fills. If the breach occurs after the System Minimum VWAP Time for a fixed time VWAP Order, then the quantity filled will be proportional to the elapsed time, and the price will be the VWAP for the elapsed interval. The trade that caused the VWAP price to breach will be excluded from the VWAP calculation. If the calculated VWAP price breaches the specified limit price for a floating time VWAP Order, and this occurs prior to the next randomly determined VWAP interval, then the VWAP Order will be cancelled with no partial fills.

If there are fewer than two (2) trades during the VWAP Calculation Interval, then the midpoint of NBBO at the end of the interval will be used for the VWAP price for both floating time and fixed time matches; however, for floating time matches, if there are no trades in the VWAP Calculation Interval, there will be no execution.

If a trade correction/cancellation occurs for a trade that is part of the VWAP calculation, then the VWAP price for the VWAP Calculation Interval affected by the trade will need to be manually adjusted to reflect this event. If the adjustment would cause the VWAP price to violate a limit price constraint for either of the counterparties, then the VWAP print will be manually cancelled. These adjustments, if needed, will occur after the VWAP Order has already been reported to counterparties and printed to the tape.

IVWP Book

VWAP Orders submitted to IVWP support the full capabilities of VWAP Orders as described above, including fixed and floating time intervals, Impute Match, the invitation and firm-up process, VWAP Calculation Interval, cancellation behavior, and all related procedures.

The following features are available for VWAP Orders in the IVWP book:

(1) Counterparty Selection: Subscribers may allow or prevent matching against a specific contra(s) in the IVWP book on a per order basis, as described further below in Part III, Item 14.

(2) Minimum Quantity: Subscribers may specify a minimum execution quantity for VWAP Orders.

(3) Maximum Quantity: Subscribers may specify a maximum execution quantity (MaxQty) for VWAP Orders.

(4) Self-Match Prevention: Subscribers can configure their VWAP Orders to prevent self-crossing.

(5) Agency/Principal/Riskless Principal Capacity: Subscribers may elect to block matching against riskless principal or principal orders.

(6) Linked Orders: Subscribers may submit orders designated to cross against each other using a Link ID, as described in Part III, Item 14.

VWAP Orders submitted to the IVWP book cannot be designated to also interact with Hosted Pools, Midpoint or ASPEN.

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

☒ Yes ☐ No

If no, identify and explain any differences.

Item 8: Order Sizes

- a. Does the NMS Stock ATS require minimum or maximum sizes for orders or trading interest?

☒ Yes ☐ No

If yes, specify any minimum or maximum order or trading interest size requirements and any related handling procedures.

Answer: The minimum units of trading for NMS Stocks traded on the ATS is one share. Only orders that are \$100,000,000 or less in notional value will be eligible for trading on the ATS. Such size requirements are applicable to all trading interest.

Additionally, the ATS offers minimum and maximum quantity modifiers for execution. A minimum quantity modifier allows Subscribers to request a minimum share amount on an execution, such that if the available liquidity is below the minimum quantity amount, the order will not execute. Subscribers may set the minimum quantity to permit the aggregation of contra-side interest to meet the minimum quantity requirements. The minimum quantity modifier is available to all trading interest in the ATS.

A maximum quantity modifier allows Subscribers to request a maximum share amount on an execution, such that an order would not execute against any orders that have a size greater than the maximum share amount. For example, if a Subscriber set a maximum quantity of 200 shares, the order would not execute against any orders that have an order quantity greater than 200 shares. The maximum quantity modifier is only available in Hosted Pools and the IVWP book (not in the main Midpoint or ASPEN books).

- b. If yes to Item 8(a), are the requirements and procedures required to be identified in Item 8(a) the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

- c. Does the NMS Stock ATS accept or execute odd-lot orders?

☒ Yes ☐ No

If yes, specify any odd-lot order requirements and related handling procedures (e.g., odd lot treated the same as round lot).

Answer: Odd lot orders are handled the same as round lot orders and are treated the same for priority purposes.

- d. If yes to Item 8(c), are the requirements and procedures required to be identified in Item 8(c) the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

- e. Does the NMS Stock ATS accept or execute mixed-lot orders?

☒ Yes ☐ No

If yes, specify any mixed lot order requirements and related handling procedures (*e.g.*, mixed lot treated the same as round lot).

Answer: Mixed lot orders are handled the same as round lot and odd-lot orders and are treated the same for priority purposes.

- f. If yes, to Item 8(e), are the requirements and procedures required to be identified in 8(e) the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

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 ☐ No

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).

Answer:

Conditional Orders

The ATS's Hosted Pools accept "Conditional Orders." The ATS does not accept Conditional Orders outside of the ATS' Hosted Pools and Conditional Orders cannot interact outside of the Hosted Pools.

A Conditional Order is an instruction to the ATS that the Subscriber wants to interact with the Hosted Pool on a conditional basis. A Conditional Order will contain symbol, side, size and a pricing instruction; the pricing instruction can be in the form of a Midpoint Peg Order (for Midpoint) and a Limit Order, a Market Order, or a Peg Order (for ASPEN).

A Conditional Order never executes; instead, in the event eligible contra-party interest exists in the Hosted Pool, whether such contra-party interest is a firm or Conditional Order, the ATS will cancel the Conditional Order, will notify the Subscriber submitting the Conditional Order via FIX (the "Invite"), and request that the Subscriber "firm-up" by

submitting a firm order in response to the Invite ("Firm-Up Orders"). For purposes of determining whether to generate an Invite, only contra-side interest that would have permitted an execution at the time of the match (had both the Conditional Orders and contra-side interest been firm orders), including satisfying the Conditional Order's minimum quantity size requirement, are considered "eligible." A single eligible contra-side order may generate multiple Invites. For example, where two Conditional Orders are resting on the ATS and a single eligible contra-side order is submitted, both Conditional Orders will receive Invites.

A Firm-Up Order must contain the same symbol and side as the Conditional Order related to the Invite or it will be rejected by the ATS. A Firm-Up Order must be designated to interact with (1) the Hosted Pool, or (2) the Hosted Pool and then the liquidity outside the Hosted Pool after checking for liquidity in the Hosted Pool. A Firm-Up Order designated to interact with liquidity outside of the Hosted Pool will contain symbol, side, size and a pricing instruction. For Midpoint, the pricing instruction must be a Midpoint Peg Order and for ASPEN, the pricing instruction can be a Limit Order, a Market Order, or a Peg Order.

The Firm-Up Orders will have a time-in-force of one (1) second, after which any unfilled portion will be canceled. The Firm-Up Orders are treated like "standard" firm orders for matching and priority purposes. A Firm-Up Order does not need to be submitted within a specified time period after an Invite is sent.

Indications of Interest

The ATS' Hosted Pools also provides certain services relating to indications of interest ("IOIs").

IOIs

The ATS' Hosted Pools permit the publication of IOIs which allow participants of a Hosted Pool to send IOIs to any other participant of that Hosted Pool. IOIs contain symbol, side and size only.

Block IOI

The ATS provides a separate service from IOIs and Conditional Orders, a "Block IOI" service, only in the Hosted Pools to (1) have the ATS inform non-Subscriber clients ("Sponsored Firms") of contra liquidity in a designated Hosted Pool by responding to IOIs sent by the Sponsored Firm to the ATS and (2) to allow such Sponsored Firms to send firm orders directly to the designated Hosted Pool via a sponsored access FIX session of a Subscriber sponsoring the Sponsored Firm ("Sponsor").

Similar to other IOIs in the ATS, Block IOIs contain symbol, side and size only. IOIs are ranked as they are entered into the ATS in the same manner as other trading interest in the ATS, i.e., according to the ATS' match priority criteria. There also is no minimum or maximum size requirement specifically applicable to the Block IOI service. Block IOIs, which are generated by the Sponsored Firm, are not visible to any participant in Hosted Pools, in contrast to IOIs which participants in Hosted Pools can elect to generate and be made visible to other Hosted Pool participants.

Sponsored Firms may be authorized by multiple Sponsors and, as a result, Sponsored Firms are required to have a designated Sponsor for each firm order submitted. Sponsored Firms are clients of the Sponsor and not the ATS, and the Sponsor is responsible for all firm orders on which it is designated as Sponsor entered into the ATS by its Sponsored Firms.

Incoming IOI messages in the Block IOI service from the Sponsored Firm will be checked, in no particular order, against the following in the designated Hosted Pool for a possible match:

- Resting firm orders
- Conditional orders
- IOIs from other Sponsored Firms (generated from separate FIX sessions)

If there is contra-side interest in the Hosted Pool, a response, or "Request for Commitment" message, is sent back by the ATS to the Sponsored Firm. Partial amounts of the requested IOI size will generate a Request for Commitment. Only one response will be sent for each IOI, unless the IOI is updated (e.g., for a change in size), then, if applicable, another response will be sent.

In the Block IOI service, participants of the Hosted Pool - those who have firm or conditional orders - are not informed if there is a possible match (e.g., if the IOI matches with a conditional order in the Hosted Pool, no invite is sent for that conditional order); only the sender of the IOI is informed of the possible match via the "Request for Commitment" message. If there is a match with an IOI from another Sponsored Firm, both IOIs will receive a Request for Commitment message. If there is no immediate contra liquidity or match, then the IOI remains active. IOIs, however, will be cancelled at the end of the day.

In addition, for the Block IOI service, every new marketable incoming order (firm and conditional) and IOI (from another Sponsored Firm) to the Hosted Pool with the same symbol and opposite side is compared with the IOI for a possible match. Every change to NBBO (which can change the set of marketable orders) also triggers a contra liquidity check for active IOIs (i.e., IOIs that have not yet been responded to).

Also, if there is an update to an IOI, the IOI will receive a new timestamp and it is compared again with all applicable marketable orders in the Hosted Pool. In a situation where a Request for Commitment is sent out and the IOI is updated or canceled before a firm order committing shares is received, then the Request for Commitment will be cancelled, and if a firm order is sent, it will be rejected.

Finally, once informed of a possible match, the Sponsored Firm can send a firm order directly to the designated Hosted Pool, and the firm order must be associated with the particular Sponsor and the particular Request for Commitment. All firm orders sent will be subject to risk limits imposed on a Sponsored Firm by a Sponsor.

Subscribers sending an order(s) to Hosted Pools with the Block IOI service enabled can specify whether the order(s) interacts with IOIs altogether or which Sponsored Firms' IOIs the order can interact with.

The ATS's Hosted Pools also accept "VWAP Orders." The ATS does not accept VWAP Orders outside of the ATS's Hosted Pools and the IVWP book, as described in Part III, Item 7.

VWAP Orders follow a similar workflow as Conditional Orders with regards to the invitation and firm up process with certain exceptions. VWAP conditional orders must be marketable to the far touch NBBO at the time of conditional match in order to generate an invite. Additionally, VWAP conditional market orders have a far touch limit price applied based off of the NBBO. For more information on VWAP Orders, please see Part III, Item 7.

- 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 ☐ No

If no, identify and explain any differences.

* * * * *

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.

Answer:

The ATS operates ~~two~~three different matching models: (1) a Midpoint book ("Midpoint") that only accepts non-displayed midpoint orders and executes orders at the midpoint of the prevailing NBBO at the time of the Match Event~~;~~and; (2) ASPEN (or the "Adverse Selection Protection Engine"), three limit order books with optional displayed capability (*i.e.*, orders in ASPEN may be marked by Subscribers as either displayed or non-displayed) which execute orders at prices that are at or between the prevailing NBBO at the time of the Match Event~~;~~and (3) IVWP, a non-displayed book that only accepts VWAP Orders and executes orders at a volume-weighted average price calculated over a fixed or floating time interval, as described in Part III, Item 7. Subscribers choose which matching model to which they send their orders. While the matching models operate under the same "market participant identifier" (or "MPID") - INCR - each matching model is distinct and does not interact with the other matching ~~model~~models.

The ASPEN matching model has three distinct books distinguished by different fee structures - ASPEN Fee/Fee, ASPEN Maker/Taker and ASPEN Taker/Maker. All three books act independent of each other; orders resting in one book do not rest on or interact with orders resting in another book. All three ASPEN books also operate with different

MIC codes: ASPEN Fee/Fee - ASPN; ASPEN Maker/Taker - ASMT; and ASPEN Taker/Maker - ASPI. The IVWP book operates with MIC code IVWP.

The Midpoint book only accepts Midpoint Peg Orders, which are not accepted in any of the ASPEN books or the IVWP book; orders in the Midpoint book will therefore not be displayed. The IVWP book only accepts VWAP Orders, which are not accepted in Midpoint or any of the ASPEN books; orders in the IVWP book will not be displayed. Any orders entered into IntelligentCross through any other order type (e.g., Market Order, Limit Order, Primary Peg Order (with or without a limit price), and Marketable Peg Order (with or without a limit price)) will default to the ASPEN Fee/Fee book. A ~~subscriber~~Subscriber who wishes to trade in the ASPEN Maker/Taker or Taker/Maker books, or the IVWP book, must affirmatively identify those books when entering their order. Subscribers can route to the different ~~ASPEN~~ books by utilizing FIX tags to specify which ~~ASPEN~~ book to send their order to, and can also request dedicated sessions to specific books.

- 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 ☐ No

If no, identify and explain any differences.

- 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.

Answer:

The ATS accepts orders in all NMS Stocks eligible for trading (e.g., those that are not subject to a trading halt) and uses a matching mechanism which is near-continuous and that matches orders at scheduled times ("Match Events"). IVWP uses a separate matching process. The ATS' ~~two~~three different matching models - Midpoint, ASPEN, and ASPEN/IVWP - contain the following characteristics (any differences between the matching models will be noted accordingly).

Determination of Matching Schedule

Matching schedules are calculated using an optimization process that uses, among other things, historical performance measurements (as discussed below) from prior days' and/or current days' (in the case of Midpoint) matches. Each security has an individualized matching schedule, computed to maximize price stability after trades. The optimization process is data driven and takes into account stock by stock volatility, spreads, daily trading volume, price stability after trades and other market factors characteristic of how the specific stock recently traded in the market and on the IntelligentCross platform.

For ASPEN, matching schedules are calculated using an overnight optimization process that uses historical performance measurements from prior days' matches in the main ASPEN book. The overnight optimization process does not utilize historical performance measurements from matches from a Hosted Pool calibrated to the ASPEN book. Each day starts with a prepared matching schedule for each security that does not change throughout the day.

For Midpoint, the matching schedule for a security may change overnight, or during the trading day if the ATS's machine-learning process determines that such change is appropriate to maximize price stability after trades. For Midpoint, while the matching schedule for a security may change during the trading day, the model governing the optimization process does not change throughout the trading day. The optimization process takes into account publicly available market data such as prior SIP trades and NBBO quotes. The optimization process does not utilize data from matches from a Hosted Pool calibrated to the Midpoint book.

The IVWP book does not use Match Event Intervals. Instead, IVWP uses VWAP Calculation Intervals to determine when executions occur. A VWAP Calculation Interval defines the period over which the ATS calculates the volume-weighted average price used for execution. IVWP supports two VWAP Calculation Interval configurations:

Fixed Time Interval. The VWAP Calculation Interval is a fixed duration specified at order entry. The execution time is determined at the time the order is matched, i.e., once an order is paired with a contra-side order, the VWAP Calculation Interval begins and the execution will occur at the end of that interval at the calculated VWAP price.

Floating Time Interval. The VWAP Calculation Interval is defined by a target percentage of the stock's consolidated volume. The execution time will vary based on the time required for the stock to print the volume specified by the order's percentage-of-volume instruction on the consolidated tape. Once a match is identified, the VWAP Calculation Interval begins and concludes when the target volume has been printed.

The ATS's Impute Match uses estimated equivalences between fixed and floating time intervals to determine matches among eligible orders. The Impute Match for IVWP will operate the same as it does for VWAP Orders in the Hosted Pools. See Part III, Item 7. Additionally, for VWAP Orders with floating time interval instructions, if the match completes its full target volume before the VWAP Calculation Interval elapses, then the execution can occur at or after as the System Minimum VWAP Time and before the VWAP Calculation Interval. However, if a counterparty cancels the match before the System Minimum VWAP Time, then no fill is returned. See Part III, Item 7.

There is no human intervention or discretion involved in any change to the matching schedule during the trading day, and any such change does not alter any conditions (including price) of any orders nor is it aware of or responsive to any customer specific information.

Match Events in each security occur at scheduled times as determined by the ATS' matching algorithm. Match schedules are defined by "minimum/maximum time bands" for each security ("Match Event Intervals"). Midpoint has Match Event Intervals between 150 microseconds and up to 200 milliseconds that are calibrated on a security-by-security basis. ASPEN's Match Event Intervals can have a minimum time of 150 microseconds and a maximum time of 900 microseconds (*i.e.*, the maximum time for scheduling a match event is capped at 900 microseconds), also calibrated on a security-by-security basis. For example, on a particular day, the match event band for XYZ stock may have a minimum time of 450 microseconds and a maximum time of 600 microseconds. The actual match event time is randomized within the match event band throughout the course of the trading day.

Execution of Orders and Match Events

Any order for a security that arrives prior to a Match Event for that security (and that has not been canceled, has become unmarketable, or has been repriced prior to the match event) will be eligible to participate in the next Match Event. Match Events are scheduled continuously while the IntelligentCross book is in a "matchable state" (*i.e.*, there is an order on each side eligible to match); if there are no orders for a stock in the book, no Match Event will be scheduled. An incoming order that will make the book potentially matchable will trigger a scheduling of a Match Event if one has not already been scheduled.

The matching process is completely symmetric, *i.e.*, the match times within IntelligentCross are not chosen to favor a particular side of the trade. No Subscribers (or non-Subscribers accessing IntelligentCross through a Subscriber) are given any type of priority through the matching process, and the matching process is blind to the identity of the Subscriber (or a non-Subscriber accessing IntelligentCross through a Subscriber). Both sides of the trade (buyers and sellers) are on equal footing for the next scheduled match, while maintaining full control of their orders - both sides can cancel or update their orders at any time prior to the match.

Open orders may be amended to the extent the amendment is received before a match event involving that order occurs. Order amendments are processed in the order in which they are received by the ATS. The match priority of an order will be preserved when amending the quantity of an order to a value less than the existing quantity of the order; however, the match priority of an order will be lost when amending the quantity of an order to a value greater than the existing quantity or when amending any other value in addition to the quantity of the order.

An open order also may be canceled to the extent the cancellation order is received before a match event involving that order occurs. The ATS will automatically update its quotations, and all quotation updates, including those due to new or canceled orders, are immediate.

Midpoint Match Event Intervals

At each Match Event for each security in Midpoint, the matching engine for the Midpoint book will retrieve the current NBBO and check its book for orders that can be matched. Orders eligible for matching will be matched in time priority at the NBBO midpoint price at the Match Event. The purpose of the scheduled matches is to achieve two objectives: (1) provide for as many matches as possible to maximize liquidity; and (2) match at times where the NBBO is projected to be as stable as possible for a period of time after executions occur on the ATS. During the time between Match Events, Subscribers have full order control and can cancel or reprice orders until the next Match Event.

The ATS then analyzes the possible executions that can occur on the ATS and adjusts the Match Event Interval to achieve the two objectives described above. The optimization process takes into account publicly available market data such as prior SIP trades and NBBO quotes. The optimization process is data driven and takes into account stock by stock volatility, spreads, daily trading volume, price stability after trades and other market factors characteristic of how the specific stock recently traded in the market and on the IntelligentCross platform.

The ATS makes a determination as to whether the Match Event Intervals for each security should be increased, decreased, or stay the same. The Match Event Intervals per security are adjusted after enough data points have been accumulated to warrant an adjustment. The Match Event Intervals for Midpoint may be recalibrated throughout the day. Registered Persons of the ATS review and approve such changes.

ASPEN Match Event Intervals

ASPEN will have Match Event Intervals between 150 and 900 microseconds that are calibrated on a security-by-security basis. The process for determining the Match Event Intervals for ASPEN is similar to that for Midpoint but Match Event Intervals are calibrated separately such that, for any given security, the Match Event Intervals for ASPEN will be different from the Match Event Intervals for Midpoint. The Match Event Intervals for the three ASPEN books will be the same for a given security.

The ATS makes a daily determination as to whether the Match Event Intervals for each security should be increased, decreased, or stay the same.

Midpoint Minimum Resting Period

For Midpoint, only orders that have rested on the order book for a minimum period of time are eligible to match. "Minimum Resting Periods" are determined by the ATS and set in a stock-specific fashion, similar to Match Events. The purpose of these periods is to further reduce adverse selection. However, in no event will the minimum resting period exceed 200 milliseconds. There are no Minimum Resting Periods for orders on ASPEN.

Anti-Internalization

The ATS provides an "anti-internalization" setting to its Subscribers. This setting can be enabled upon client request and will prevent the self-matching of two orders from the same Subscriber on the ATS's order books. This setting will not be enabled by default, but can be enabled upon Subscriber request and will be enforced by the Client ID setting. Subscribers can either contact IntelligentCross Trading Operations to enable this functionality on an MPID basis or they can configure the trading systems to prevent self-crossing at a client or trading desk level.

Locked or Crossed Market

The ATS will not match if the NBBO as determined by the SIP and/or SRO proprietary data feeds for the stock is crossed (where the NBB price exceeds the NBO price) or if the NBBO as determined by the SIP and/or other SRO proprietary data feeds is locked (where the NBB price equals the NBO price). In ASPEN, if a displayed Limit Order or Primary Peg Order would lock or cross displayed contra-side interest inside the ATS or the NBBO, such order will be displayed one minimum price variation less aggressive than the price of the displayed contra-side interest inside the ATS or as part of the NBBO and ranked at the price of the contra-side of the NBBO, up to the order's limit price. In the event the displayed contra-side interest inside the ATS or the NBBO updates, such order's displayed price will be updated to the most aggressive price permissible without locking displayed contra-side interest inside the ATS or as part of the NBBO, up to the order's limit price, and such order's ranked price will be updated to the most aggressive price permissible without crossing the NBBO, up to the order's limit price.

Sub-Dollar Pricing

For orders in Midpoint, in the event that the NBB is less than \$1.00, the ATS will execute orders at the midpoint price, regardless of the number of decimal places.

For orders in ASPEN, in the event that the NBB is less than \$1.00, the ATS will execute orders at valid prices within the NBBO.

For orders in IVWP, in the event that the NBB is less than \$1.00, the ATS will calculate the VWAP price from eligible trades on the consolidated tape in the same manner as for stocks with an NBB at or above \$1.00. The resulting execution price may include more than four decimal places.

Orders Eligible for Matching

With respect to the Midpoint book, the following orders will be eligible for matching during a Match Event:

1. Midpoint Peg Orders that are buy orders with limit prices equal to or higher than NBBO midpoint.
2. Midpoint Peg Orders that are sell orders with limit prices equal to or lower than NBBO midpoint.
3. Midpoint Peg Orders without limit prices.

Midpoint Peg Orders also may be designated with Time-in-Force instructions.

With respect to the ASPEN books, the following orders will be eligible for matching during a Match Event:

1. Primary Peg Orders with no limit price or those with limit prices that are within the prevailing NBBO at the time of a Match Event.
2. Market Peg Orders with no limit price or those with limit prices that can execute within the prevailing NBBO at the time of a Match Event.
3. Limit Orders with limit prices that are within the prevailing NBBO at the time of a Match Event.
4. Market Orders.

Match Priority Criteria

Midpoint Match Priority Criteria

In Midpoint, orders eligible for matching will be matched in time priority at the NBBO midpoint price at the Match Event. Only orders that have rested on the Midpoint book for a minimum period of time (i.e., the Midpoint Minimum Resting Period) are eligible to match. An order on the Midpoint book for less than its Midpoint Minimum Resting Period would not be eligible to participate in any Match Events but would be eligible for all subsequent Match Events after satisfying its Midpoint Minimum Resting Period.

Following are some examples of how the IntelligentCross match priority criteria works for the Midpoint book.

Example 1: The assumptions include:

- The NBBO for Security XYZ is \$10.10 x \$10.12
- Subscriber A has a resting Midpoint Peg Order to sell 100 shares of Security XYZ with a limit of \$10.11.
- Subscriber B has submitted a Midpoint Peg Order to buy 100 shares of Security XYZ with a limit of \$10.11.
- The Midpoint book enters into a "matchable state" (i.e., there is an order on each side eligible to match) and a Match Event is scheduled.
- Security XYZ has a Match Event Interval between 1000 to 1300 microseconds, and in this example the Match Event is scheduled to occur in 1100 microseconds.
- During the 1100 microseconds, Subscriber C has submitted a Midpoint Peg Order to buy 100 shares of Security XYZ with a limit of \$10.11.

- At the next scheduled Match Event for Security XYZ, the matching engine retrieves the NBBO and determines that the NBBO is still \$10.10 by \$10.12. As a result, the following executions occur during the Match Event (assuming all orders have met the Midpoint Minimum Resting Period):
- Subscriber A will match 100 shares with Subscriber B at \$10.11.
- Subscriber C's order will not match with Subscriber A as orders will be matched in time priority at the NBBO midpoint price at the Match Event. Subscriber C's order will be eligible for the next Match Event.

Example 2: Assume in the above Example 1 that Subscriber C has submitted a Midpoint Peg Order to buy 100 shares of Security XYZ with limit of \$10.12. At Match Event time:

- Subscriber A will match 100 shares with Subscriber B at \$10.11.

While Subscriber C has submitted a more aggressively priced order, Subscriber C's order will not match with Subscriber A as orders in Midpoint will be matched in time priority at the NBBO midpoint price at the Match Event. Subscriber C's order will be eligible for the next Match Event.

ASPEN Match Priority Criteria

In ASPEN, orders eligible for matching will be matched based on price, display type (i.e., with respect to ASPEN, at each price level, displayed orders will have priority over non-displayed orders), and the time at which such orders are received relative to other orders. Such match priority now applies throughout the matching process, i.e., before and after the ASPEN book enters into a matchable state.

Any order for a security that arrives prior to a Match Event for that security (and that has not been canceled, has become unmarketable, or has been repriced prior to the match event) will be eligible to participate in that Match Event. In addition, in Match Events, at the time of execution, price improvement (if there is any) will be provided to the order with the later effective timestamp between two orders receiving an execution, i.e., the taker.

Examples

Following are some examples of how the IntelligentCross match priority criteria works for the ASPEN book.

Example 1: The assumptions include:

- Subscriber A has submitted a displayed 100 share sell limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.

- Subscriber B has submitted a displayed 100 share buy limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.
- Subscriber B's order will be displayed at \$9.99 as, in ASPEN, if a displayed limit order would lock contra-side interest inside the ATS, such order will be displayed one minimum price variation less aggressive than the price of the displayed contra-side interest inside the ATS.
- The ASPEN book enters into a "matchable state" (i.e., there is an order on each side eligible to match) and a Match Event is scheduled.
- Security XYZ has a Match Event Interval between 175 to 250 microseconds, and in this example the Match Event is scheduled to occur in 180 microseconds.
- During the 180 microseconds (i.e., after the ASPEN book enters into a matchable state) and before the Match Event occurs, Subscriber C submits a non-displayed 100 share sell limit order with a limit price of \$9.99 and TIF of Day for Security XYZ.

At the next scheduled Match Event for Security XYZ, the matching engine retrieves the NBBO and determines that the NBBO is \$9.99 by 10.00. As a result, the following executions occur during the Match Event:

- Subscriber B will match 100 shares with Subscriber C at \$10.00, as Subscriber C has the more aggressively priced order, and Subscriber C (i.e., the taker) will be price improved and will receive an execution. Subscriber A's order will be eligible for the next Match Event.

Example 2: Assume in the above Example 1 that Subscriber B had 200 shares to buy. At Match Event time:

- First, Subscriber C will match 100 shares with Subscriber B at \$10.00 as Subscriber C has the more aggressively priced order, and Subscriber C (i.e., the taker) will be price improved and will receive an execution.
- Second, Subscriber A will match 100 shares with Subscriber B at \$10.00.

Example 3: Assume in the above Example 1 that during the 180 microseconds (i.e., after the ASPEN book enters into a matchable state) and before the Match Event occurs, Subscriber C cancels its order. At Match Event time:

- Subscriber A will match 100 shares with Subscriber B at \$10.00 (i.e., there is no change to this example due to the change in match priority criteria).

Example 4: Assume in the above Example 1 that:

- Subscriber A has submitted a non-displayed 100 share sell limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.
- Subscriber C has submitted a displayed 100 share sell limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.

At Match Event time:

- Subscriber C will match 100 shares with Subscriber B at \$10.00.
- Subscriber A will not match as, with respect to ASPEN, at each price level, displayed orders (Subscriber C) will have priority over non-displayed orders (Subscriber A).

Example 5: Assume in the above Example 1 that:

- Subscriber A has submitted a non-displayed 100 share sell limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.
- Subscriber B has submitted a displayed 100 share sell limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.
- Subscriber C submits a non-displayed 100 share buy limit order with a limit price of \$10.00 and TIF of Day for Security XYZ.

At Match Event time:

- Subscriber C will match 100 shares with Subscriber B at \$10.00
- Subscriber A will not match as, with respect to ASPEN, at each price level, displayed orders (Subscriber B) will have priority over non-displayed orders (Subscriber A).

IVWP Match Priority Criteria

The IVWP book accepts only VWAP Orders. The ATS continuously evaluates resting VWAP Orders in the IVWP book for eligible contra-side matches. For fixed time orders, all orders priced greater than or equal to the far touch (satisfying marketability constraints) will be matched using MPID, size, and time priority. For floating time orders, all orders priced greater than or equal to the far touch (satisfying marketability constraints) will be matched using MPID, size, participation rate, and time priority. VWAP Orders in the IVWP book only match with other VWAP Orders in the IVWP book and do not interact with orders in Midpoint or ASPEN.

When an eligible contra match is identified, the ATS initiates the invitation and firm-up process as described in Part III, Item 7. Once both counterparties have firmed up, the VWAP Calculation Interval begins. The mechanics of the VWAP Calculation Interval,

including execution price determination, cancellation behavior, partial fills, limit price breaches, and end-of-day procedures, are as described in Part III, Item 7. IVWP matching operates independently of the Match Events used by Midpoint and ASPEN.

For the avoidance of doubt, orders submitted to the IVWP book will match in an all-to-all context with broker preferencing, where among competing matches, a Subscriber's orders will first match against that Subscriber's own orders, then against other orders in the IVWP book. Subscribers who agree to identify the sources of their order flow sent to IVWP (e.g., Algo, SOR, DMA) and receive a unique identifier for those sources will be provided with a list of other Subscribers that have similarly agreed to such identification, and their respective flow types (the "IVWP Subscriber Roster"). The IVWP Subscriber Roster is prepared by the ATS, distributed to authorized Subscribers in a secure manner, and includes the ATS-generated unique identifier for counterparty selection, the Subscriber's MPID, and the Subscriber's self-identified source of order flow. Such identifications are for the purpose of defining counterparty selection preferences.

The IVWP Subscriber Roster is provided solely for the purpose of enabling Subscribers to define counterparty selection preferences in the IVWP book, specifically to allow Subscriber to specify orders to only interact with certain types of order flow (e.g., Algo, SOR, DMA) from specific Subscribers. The IVWP Subscriber Roster is not distributed to Subscribers not participating in IVWP, Subscribers participating in IVWP who have not agreed to identify the sources of their order flow, non-Subscribers, or other third parties. Subscribers may opt-in to counterparty selection preferences at any time. The use of this functionality is optional, and is not required to participate in the IVWP book.

General Match Priority Criteria Information

The match priority criteria in a Hosted Pool are ~~generally~~ the same as in the ATS main books as applicable. For the purpose of, unless the Hosted Pool is configured with a specific match priority criteria excluding VWAP orders in Hosted Pools only, Midpoint Peg Orders are not subject to the Midpoint. There is no Minimum Resting Period. for any order type in a Hosted Pool.

Each Hosted Pool may be configured with one of the following match priority criteria, at the request of the Subscriber that requested that the Hosted Pool be set up, which determines how orders are prioritized during a Match Event, and applies to all Match Events in that Hosted Pool. At this time, no Hosted Pools are utilizing such specific match priority criteria. The ATS will file any required amendments regarding Hosted Pools that will use specific match priority criteria and any required updates to such criteria. The match priority criteria are:

- Price/Time (default). Orders are matched in price/time priority, meaning that orders eligible for matching will be matched based on price and then the time at which such orders are received relative to other orders.
- Pro-Rata by Size. Orders eligible for matching at the same price are allocated a proportion of the contra quantity based on their relative size.

- Price-Size. Orders eligible for matching at the same price are ranked by their size, where larger orders have higher priority, and filled according to their ranked size ordering.
- Random. Orders eligible for matching at the same price are re-ranked in random priority at the time of the Match Event, and filled sequentially according to the randomized ordering.
- Random Weighted. Orders eligible for matching at the same price are re-ranked according to a random weighting by participant, and filled sequentially according to the weighted random ordering. Weights are determined at the request of the Subscriber that requested that the Hosted Pool be set up (for example, weights could be based on Subscriber preference, or on historical participant activity in that specific Hosted Pool as determined by internal ATS data, which is not shared with the Subscriber that requested that the Hosted Pool be set up) and can be updated periodically by the request of the Subscriber that requested that the Hosted Pool be set up.

Within the Hosted Pools, the ATS offers, at the request of a Subscriber, where orders are designated to interact within multiple Hosted Pools, the ability to set a configured preference for the sequence of the Hosted Pools in which the Subscriber's orders will interact within those multiple Hosted Pools, as additionally described in Part III, Item 7. For example, if the Subscriber wants to configure the sequencing to first go to Hosted Pool B, then Hosted Pool A, then the order will first match with the match priority criteria designated (for example, price/time priority) in Hosted Pool B, and, if the order has not been fully executed, then it will proceed to Hosted Pool A and match according to the match priority criteria in such Hosted Pool.

Such sequencing, as described above, may supersede the match priority criteria for, and therefore the prices received by, a particular order in the Hosted Pools. ~~Orders~~For example, orders in Hosted Pools ~~also~~ can be made eligible to access both continuous and ~~near~~non-continuous Hosted Pools. In such cases, an order tagged for both a continuous and a ~~near~~non-continuous Hosted Pool will first interact with the continuous Hosted Pool and, if the order is not fully executed in such Hosted Pool, it will then interact with the ~~near~~non-continuous Hosted Pool, *i.e.*, continuous Hosted Pools will have preference for matching over ~~near~~non-continuous Hosted Pools.

Matching instructions are specified in accordance with the FIX protocols described above in Part III, Item 5 and defined by industry standard FIX tags defined for these matching instructions.

Orders received by the ATS during the Pre-Market Order Acceptance Period will be queued until the beginning of Regular Trading Hours. Orders received outside these periods will not be accepted. For all eligible securities, the ATS will only execute if Limit-Up-Limit-Down ("LULD") bands are present and the effective price of a potential match is not constrained by a LULD band.

For purposes of the operation of the ATS, all orders will be timestamped upon receipt by the ATS in nanoseconds; however, the ATS has the ability to provide order records in microseconds or milliseconds via FIX.

An amendment of an outstanding order will affect its match priority and Minimum Resting Period as follows:

1. If an order's size is decreased, its timestamp will remain the same, its priority will not change and it will not wait through a new Minimum Resting Period (in the case of Midpoint).
2. If an order's size is increased, the timestamp will be renewed, its priority will change and, if part of Midpoint, it will wait through a new Minimum Resting Period.
3. If an order's price is changed, the timestamp will be renewed, its priority will change and, if part of Midpoint, it will wait through a new Minimum Resting Period.

IntelligentCross conducts trading strictly in an agency capacity on the ATS. IntelligentCross does not conduct trading in a proprietary capacity.

Non-Match Events

Situations may occur where an incoming order may not execute against a resting order at match event time, such as when:

- (1) an existing resting order cancels prior to the next match event
- (2) an incoming order is canceled prior to the next match event
- (3) the NBBO moves between the time an order is received and the next match event takes place, making either the incoming order or the resting order non-marketable
- (4) the NBBO changed before the next match event and pegged orders were repriced to the new NBBO, making the incoming order or the resting pegged order non-marketable

Execution Errors

The ATS has written supervisory policies and procedures in place to handle trade execution errors and "clearly erroneous trades." Each potential error situation will be evaluated by the ATS's personnel on a case by-case basis.

If a trade is transacted in error and it is determined that the error was due to a system failure or other issue with the ATS's platform that resulted in a poor execution (*i.e.*, outside the NBBO), the ATS will contact each of the Subscribers associated with the error cross trade and inform them that the ATS is canceling the trade. The ATS will then initiate the cancel on the ATS and communicate either electronically (ACT Web for NASDAQ TRF) or over the telephone (NYSE TRF) the trade report cancellation for each side of the cross trade. In the instances in which the trade was good (*i.e.*, inside the NBBO), and as a result of a systems issue, the ATS failed to acknowledge the execution to one of the two Subscribers associated with the error cross trade transacted on the ATS, the ATS will contact the affected Subscriber and ask whether or not they want to maintain (keep) the trade. If the Subscriber does not want to maintain the trade, the ATS will take the affected Subscriber's

position and book it to IntelligentCross' error account. IntelligentCross will then instruct IntelligentCross' clearing broker to trade out of the error position. An IntelligentCross employee will book the error position and subsequently close-out the transaction through IntelligentCross' error account for settlement purposes and document within IntelligentCross' systems all details regarding the error transaction(s). The error transaction detail will include all details surrounding the error trade(s) and subsequent close-out trades (if any). The detail will also include an identification of all associated parties, the cause/reason for the error, or details surrounding Subscriber contact(s). The error trade detail will then be reviewed and electronically signed off as "compliance review" by the CCO or his designee and subsequently reviewed and signed off on as "Supervisory Review" by IntelligentCross' CEO or his/her supervisory principal designee.

The ATS will also ensure accurate CAT reporting.

With respect to a market wide event that may contain clearly erroneous transaction, the ATS monitors all email notification regarding clearly erroneous transactions. Upon receipt of a clearly erroneous e-mail notification, the ATS will immediately review the ATS's trading activity during the relevant timeframe to determine whether or not the ATS traded the securities referenced in the notification. The ATS will then take immediate action (if any executions have been identified through the review) to reverse the trades upon the ATS and NASDAQ's WebLink ACT. A file in IntelligentCross' systems will be created that documents any ACT reversals that have been performed as a result of a clearly erroneous notification.

Order Entry Restrictions

The ATS will not accept orders that reference a symbol not authorized for trading (e.g., if there is a trading halt). The minimum price variation ("MPV") for orders received by the ATS shall be \$0.01 for orders priced \$1.00 or greater, and \$0.0001 for orders priced below \$1.00. Orders received with increments below the MPV will be rejected.

Sell orders must be designated as long, short or short exempt in the event there is a short sale restriction in place. Subscribers are responsible for the compliance of their trades with all short sale locate and delivery rules and regulations.

Anonymity

All orders and executions are anonymous as to and between Subscribers. Subscribers are only made aware of IntelligentCross as a party or contra-party on orders and executions.

The ATS does not provide any means of communication between Subscribers. There is no negotiation, chat, instant message, indication of interest, "Flash Order," or similar functionality provided.

Hosted Pools

The ATS may setup a Hosted Pool, at the request of a Subscriber, where such Subscriber will designate that an order interact with other orders entered by that same Subscriber, or other Subscribers participating in the same Hosted Pool. Hosted Pools are described in more detail in Part III, Items 7 and 9. An order designated to interact within a Hosted Pool can be designated to only interact with that Hosted Pool or can also be designated to interact with liquidity outside the Hosted Pool after checking for liquidity available in that Hosted Pool, as described further in Part III, Item 7. An order designated to interact with liquidity outside the Hosted Pool in the ASPEN book cannot be displayed.

Unless otherwise stated, the ATS' matching and trading rules applies to the Hosted Pools in the same manner as the ATS. An order designated to interact within a Hosted Pool that also is designated to interact with liquidity outside the Hosted Pool does not receive a new timestamp when determining eligibility to match against orders in the main book. Orders and order modifications are timestamped on arrival and those timestamps do not change. An order that is eligible to match in the main book after checking for liquidity available in a Hosted Pool complies with the priority rules in the main book based on its timestamp.

The match priority criteria in a Hosted Pool are generally the same as in the ATS main books, excluding those Hosted Pools configured with specific match priority criteria as described in this Item. In ASPEN Hosted Pools, orders eligible for matching will be matched based on price and the time at which such orders are received relative to other orders (as orders designated to interact with other orders in a Hosted Pool are not eligible to be displayed orders). In the ASPEN main book, orders eligible for matching will be matched based on price, display type (i.e., with respect to ASPEN, at each price level, displayed orders will have priority over non-displayed orders), and the time at which such orders are received relative to other orders. Within the Hosted Pools, the ATS offers, at the request of a Subscriber that requested that the Hosted Pool be set up, the ability to configure a Hosted Pool such that all participants of the Hosted Pool must preference their own firm orders in a multi-broker Hosted Pool prior to being eligible to match against other broker orders. Such a configuration is set on the entire Hosted Pool and not on an order-by-order basis.

Within the Hosted Pools, the ATS offers, at the request of a Subscriber that requested that the Hosted Pool be set up, to specify that matching should be continuous in an individual Hosted Pool. If the Hosted Pool is marked as continuous, orders are matched immediately after each new order, replace or NBBO update is received, if the new event makes corresponding continuous pool orders matchable. This continuous matching functionality is only available in Hosted Pools and is different than, and without regard to, the near-continuous matching mechanism in the main ATS books. Orders in Hosted Pools also can be made eligible to access both continuous and near-continuous Hosted Pools. In such cases, an order tagged for both a continuous and a near-continuous Hosted Pool will first interact with the continuous Hosted Pool and, if the order is not fully executed in such Hosted Pool, it will then interact with the near-continuous Hosted Pool, i.e., continuous Hosted Pools will have preference for matching over near-continuous Hosted Pools.

Subscribers participating in a Hosted Pool may request that orders designated for the Midpoint book and the ASPEN book have the ability to interact with each other inside the Hosted Pool. When such an option is selected, any eligible orders will interact at each Match

Event, regardless if the next Match Event is for Midpoint book-eligible orders or ASPEN book-eligible orders. The Block IOI service offered in the Hosted Pool is available for the Midpoint book only.

Within the Hosted Pools, the ATS offers, at the request of a Subscriber, where orders are designated to interact within multiple Hosted Pools, the ability to set a configured preference for the sequence of the Hosted Pools in which the Subscriber's orders will interact within those multiple Hosted Pools. Such sequencing may supersede the match priority criteria for, and therefore the prices received by, a particular order in the Hosted Pools.

Within the Hosted Pools, the ATS offers the ability to allow or prevent the matching of orders ~~for the same MPID of the Subscriber~~ according to custom keys specified by a Subscriber via FIX tags. See Part III, Item 14 for more information. This functionality allows a Subscriber to control which orders can match with other orders in a Hosted Pool. For example, a buy order sent with a "prevent" instruction and a key equal to "1 2 3", will not be able to match against an order that includes a key of either "1", "2" or "3." Conversely, a buy order with an "allow" key of "4 5" can only match with orders containing a key of either "4" or "5".

Within the Hosted Pools, the ATS offers, at the request of a Subscriber that requested that the Hosted Pool be set up, a price improvement logic that will split any overlap in effective limit prices at a fixed level set for each Hosted Pool. For every trade in such a Hosted Pool, a specified percentage of the overlap will go to the liquidity provider and the remaining percentage will go to the liquidity taker (with the total percentage equaling 100%). The effective limit price for each order in the Hosted Pool is determined as the less aggressive of the peg instruction, limit price, and/or prevailing NBBO.

For example, suppose that the specified percentage is set at 75% of the overlap for liquidity provider and 25% for liquidity taker and suppose that a buyer has a posted order in a Hosted Pool at a limit price of \$10.01. Subsequently, a seller sends an order with a limit price of \$10.00, creating a \$0.01 overlap. The liquidity provider (the buyer) will receive 75% of the overlap and the liquidity taker (the seller) will receive 25% of the overlap, and these two orders will be crossed at a price of \$10.0025.

- 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 ☐ No

If no, identify and explain any differences.

* * * * *

Item 14: Counter-Party Selection

- a. Can orders or trading interest be designated to interact or not interact with certain orders or trading interest in the NMS Stock ATS (e.g., designated to execute against a specific Subscriber's orders or trading interest or prevent a Subscriber's order from executing against itself)?

☒ Yes ☐ No

If yes, explain the counter-party selection procedures, including how counter-parties can be selected, and whether the designations affect the interaction and priority of trading interest in the ATS.

Answer:

Anti-Internalization

The ATS provides an "anti-internalization" setting to its Subscribers. This setting can be enabled upon client request and will prevent the self-matching of two orders from the same Subscriber on the ATS's order books. This setting will not be enabled by default, but can be enabled upon Subscriber request and will be enforced by the Client ID setting. Subscribers can either contact IntelligentCross Trading Operations to enable this functionality on an MPID basis or they can configure the trading systems to prevent self-crossing at a client or trading desk level.

Hosted Pool

The ATS may setup a Hosted Pool, at the request of a Subscriber, where such Subscriber will designate that an order interact with other orders entered by that same Subscriber, or other Subscribers participating in the same Hosted Pool. The setup of a Hosted Pool is at the ATS's discretion, and the ATS will determine whether or not to offer Hosted Pool functionality on a Subscriber-by-Subscriber basis, with the ATS making its determination based on current and expected order flow volume.

Each individual Hosted Pool participation is limited to the Subscriber on behalf of whom the Hosted Pool was set up and those Subscribers that were invited by the Subscriber setting up the pool to participate in such Hosted Pool.

Unless otherwise indicated, the matching and trading rules in a Hosted Pool are the same as in the applicable ATS book. Subscribers participating in a Hosted Pool may request that orders designated for the Midpoint book and orders designated for the ASPEN book have the ability to interact with each other in the Hosted Pool. When such an option is selected, any eligible orders will interact at each Match Event, regardless if the next Match Event is for Midpoint book-eligible orders or ASPEN-eligible orders.

Within the Hosted Pools, the ATS offers, at the request of a Subscriber, the ability to configure a Hosted Pool such that their own firm orders are preferenced in a multi-broker Hosted Pool prior to being eligible to match against other broker orders; such configuration is set on the entire Hosted Pool and not on an order-by-order basis.

Within the Hosted Pools, the ATS offers the ability to allow or prevent the matching of orders ~~for the same MPID of the Subscriber~~ according to custom keys specified by a Subscriber via FIX tags. This functionality allows a Subscriber to control which orders can match with other orders in a Hosted Pool. For example, a buy order sent with a "prevent" instruction and a key equal to "1 2 3", will not be able to match against an order

that includes a key of either "1", "2" or "3." Conversely, a buy order with an "allow" key of "4 5" can only match with orders containing a key of either "4" or "5". Such functionality can be used across different Hosted Pools in which the Subscriber participates.

Within the Hosted Pools, the ATS offers a feature whereby Subscribers participating in a Hosted Pool have the ability to allow or prevent the matching of their orders against a specific contra MPID or group of MPIDs using a predefined list.

Within the Hosted Pools, the ATS offers a "Linked Orders" feature that allows a Subscriber to designate orders as pre-arranged matches. Orders designated as Linked Orders carry a Subscriber-specified linked identification ("Link ID") and may only interact and execute against opposing orders that carry the same Link ID. The Linked Orders feature is available only for orders within the same MPID. Where the anti-internalization setting described above is also configured for an order, the anti-internalization setting will supersede the Linked Orders designation for purposes of self-cross prevention.

The ATS offers sponsored access arrangements to allow Sponsored Firms to send firm orders directly to a designated Hosted Pool via a sponsored access FIX session of a Sponsor. Such arrangements are only available to those Sponsored Firms of a Sponsor; Sponsors will be required to create lists of approved Sponsored Firms. Sponsors can determine which Sponsored Firms on its list can participate in sponsored access arrangements on a symbol-by-symbol basis and may offer different terms to different Sponsored Firms, even within the same symbol.

IVWP Book

For the avoidance of doubt, orders submitted to the IVWP book will match in an all-to-all context with broker preferencing, where among competing matches, a Subscriber's orders will first match against that Subscriber's own orders, then against other orders in the IVWP book. Anti-internalization is also available in the IVWP book. Additionally, within the IVWP book, Subscribers may allow or prevent the matching of their orders against specific counterparties. Subscribers who agree to identify the sources of their order flow sent to IVWP (e.g., Algo, SOR, DMA) and receive a unique identifier for those sources will be provided with a list of other Subscribers that have similarly agreed to such identification, and their respective flow types (the "IVWP Subscriber Roster"). The IVWP Subscriber Roster is prepared by the ATS, distributed to authorized Subscribers in a secure manner, and includes the ATS-generated unique identifier for counterparty selection, the Subscriber's MPID, and the Subscriber's self-identified source of order flow. Such identifications are for the purpose of defining counterparty selection preferences.

The IVWP Subscriber Roster is provided solely for the purpose of enabling Subscribers to define counterparty selection preferences in the IVWP book, specifically to allow Subscriber to specify orders to only interact with certain types of order flow (e.g., Algo, SOR, DMA) from specific Subscribers. The IVWP Subscriber Roster is not distributed to Subscribers not participating in IVWP, Subscribers participating in IVWP who have not agreed to identify the sources of their order flow, non-Subscribers, or other third parties.

Subscribers may opt-in to counterparty selection preferences at any time. The use of this functionality is optional, and is not required to participate in the IVWP book.

The ATS offers the Linked Orders feature in the IVWP Book, as described above.

- b. If yes to Item 14(a), are the procedures for counter-party selection required to be identified in Item 14(a) the same for all Subscribers and the Broker-Dealer Operator?

☐ Yes ☒ No

If no, identify and explain any differences.

Answer: With respect to Hosted Pools, the ATS will determine whether or not to offer Hosted Pool functionality on a Subscriber-by-Subscriber basis, with the ATS making its determination based on current and expected order flow volume. Notwithstanding the foregoing, the procedures for trading in a Hosted Pool are the same for all Subscribers.

With respect to the IVWP book, all IVWP features, including the IVWP Subscriber Roster and counterparty selection capabilities, are available on the same terms to all Subscribers.

Item 15: Display

- a. Does the NMS Stock ATS operate as an Electronic Communication Network as defined in Rule 600(a)(23) of Regulation NMS?

☐ Yes ☒ No

- b. Are Subscriber orders and trading interest bound for or resting in the NMS Stock ATS displayed or made known to any Person (not including those employees of the NMS Stock ATS who are operating the system)?

☒ Yes ☐ No

If yes, explain the display procedures, including how and when Subscriber orders and trading interest are displayed, how long orders and trading interest are displayed, what information about orders and trading interest is displayed, and the functionality of the Broker-Dealer Operator and types of market participants that receive the displayed information.

Answer:

For ASPEN, the ATS offers the IQX Data Feed, which displays orders eligible to be displayed in real-time to IQX Data Feed Recipients. Subscribers, in their discretion, may submit Limit Orders and Primary Peg Orders as displayed orders. Displayed orders from all three ASPEN books are available in the IQX Data Feed. Each of the ASPEN books have individualized data feeds; as such, subscribers to the IQX Data Feed can choose to consume data from whichever books they choose through separate feed identifiers.

The ATS will not display Limit Orders and Primary Peg Orders that lock or cross contra-side interest that is displayed (1) inside the ATS or (2) as part of the NBBO as determined by the

SIP and/or SRO proprietary data feeds. Instead, if a displayed Limit Order or Primary Peg Order would lock or cross displayed contra-side interest inside the ATS or as part of the NBBO, such order will be displayed one minimum price variation less aggressive than the price of displayed contra-side interest inside the ATS or as part of the NBBO and ranked at the price of the contra-side of the NBBO. In the event the displayed contra-side interest inside the ATS or the NBBO updates, such order's displayed price will be updated to the most aggressive price permissible without locking displayed contra-side interest inside the ATS or the NBBO, up to the order's limit price, and such order's ranked price will be updated to the most aggressive price permissible without crossing the NBBO.

For all displayed orders, the ATS disseminates all eligible bids and offers along with the size available (full depth of book) in the IQX Data Feed as part of ASPEN. The IQX Data Feed also disseminates all executions that occur in ASPEN - displayed and non-displayed - in real-time. The execution information includes the price and number of shares executed.

Orders designated by a Subscriber to interact with other orders in a Hosted Pool are not eligible to be displayed orders. Executions occurring in a Hosted Pool are not disseminated in the IQX Data Feed. An order designated to interact within a Hosted Pool can also be designated to interact with liquidity outside the Hosted Pool after checking for liquidity in a Hosted Pool. When an ASPEN order that is designated to interact in both a Hosted Pool and the ATS main book is filled in the ATS main book, such an order is disseminated in the IQX Data Feed and will be reported to the consolidated tape via the TRF.

The ATS' Hosted Pools accept "Conditional Orders." Conditional Orders are not accepted outside of the ATS' Hosted Pools. Conditional Orders are not visible to Hosted Pool participants. A Conditional Order never executes. In the event eligible contra-party interest exists in the Hosted Pool, whether such contra-party interest is a firm or Conditional Order, the ATS will cancel the Conditional Order, will notify the Subscriber submitting the Conditional Order via FIX (the "Invite"), and request that the Subscriber "firm-up" by submitting a firm order in response to the Invite ("Firm-Up Orders").

The ATS' Hosted Pools also permit the publication of indications of interest ("IOIs"), which allow participants of a Hosted Pool to send IOIs to any other participant of that Hosted Pool. IOIs contain symbol, side and size. Participants in Hosted Pools can elect to generate IOIs and IOIs would be made visible to other Hosted Pool participants.

The ATS ~~also~~ accepts VWAP Orders ~~only~~ in the IVWP book and in Hosted Pools. VWAP Order invites include match quantity, match time or match rate.

Orders in the IVWP book are not eligible to be displayed and are not disseminated in the IQX Data Feed. Executions occurring in the IVWP book are not disseminated in the IQX Data Feed.

The ATS also offers a Block IOI service in its Hosted Pools, the purpose of which is to inform Sponsored Firms of contra liquidity in a designated Hosted Pool and to allow Sponsored Firms to send firm orders directly to a designated Hosted Pool via a sponsored access FIX session of a Sponsor. Participants with firm or conditional orders in the Hosted Pool are not informed if

there is a possible match (e.g., if the IOI matches with a conditional order in the Hosted Pool, no invite is sent for that conditional order); only the sender of the IOI is informed. In addition, Block IOIs, which are generated by the Sponsored Firm, are not visible to any participant in Hosted Pools, in contrast to IOIs which participants in Hosted Pools can elect to generate and be made visible to other Hosted Pool participants.

Orders may be sent to the ATS through the SOR, and thus, the SOR is aware of a Subscriber's order information being sent to the ATS (symbol, size, side, price). The SOR accesses the IQX Data Feed on the same terms as any other recipient of the IQX Data Feed. The DMA provider has knowledge of the Subscriber's order information (symbol, size, side, price) being sent by the SOR through the DMA provider to access the ATS. The DMA is prohibited from sharing such information outside of its organization.

- c. If yes to Item 15(b), are the display procedures required to be identified in 15(b) the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

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Item 19: Fees

- a. Identify and describe any fees or charges for use of the NMS Stock ATS services, including the type of fees (e.g., subscription, connectivity), the structure of the fees (e.g., fixed, volume-based, transaction-based), variables that impact the fees (e.g., types of securities traded, block orders, form of connectivity to the ATS), differentiation among types of Subscribers (e.g., broker-dealers, institutional investors, retail) and range of fees (e.g., high and low).

Answer: For the Midpoint book and the ASPEN Fee/Fee book, the Base Rate charged by IntelligentCross is .0008 per share for each side of a transaction.

The Base Rate for ASPEN Maker/Taker is (.0028) rebate per share for Subscribers that provide liquidity and .0030 per share fee for Subscribers that remove liquidity.

The Base Rate for ASPEN Taker/Maker is (.0016) rebate per share for Subscribers that remove liquidity and .0020 per share fee for Subscribers that provide liquidity.

The ATS does not have a standard fee schedule associated with the Hosted Pool. Orders executed in a Hosted Pool are charged fees in a range from (.0030) rebate per share to .0030 fee per share. The fees associated with the Hosted Pool are negotiated fees, and may be re-evaluated from time to time. Factors considered when negotiating fees may include but are not limited to historical trading volume and patterns, anticipated trading volume and patterns, and the characteristics of the orders (for example, whether the orders are retail or institutional in nature, or whether the Hosted Pool participants are liquidity takers or liquidity providers).

The Base Rate for the IVWP book differs based on whether a transaction is internalized or executed against another Subscriber. For internalized trades--i.e., transactions in which the buyer and seller are the same Subscriber--IntelligentCross charges \$0.0001 per share for each side of the transaction. For cross-broker trades--i.e., transactions in which the buyer and seller are different Subscribers--IntelligentCross charges \$0.0005 per share for each side of the transaction at the base rate, with volume-tiered rates per side based on the Subscriber's cross-broker average daily volume (ADV) in the IVWP book:

<u>Subscriber's monthly cross-broker ADV in IVWP book</u>	<u>Rate per share, per side</u>
<u>Base rate</u>	<u>\$0.0005</u>
<u>Greater than or equal to 1,000,000 shares</u>	<u>\$0.0004</u>
<u>Greater than or equal to 5,000,000 shares</u>	<u>\$0.0003</u>
<u>Greater than or equal to 10,000,000 shares</u>	<u>\$0.0002</u>

Volume-tiered rates apply retroactively to all cross-broker shares traded by the Subscriber in the IVWP book for that calendar month. Internalized trades are charged at the \$0.0001 per side rate regardless of volume and are not counted toward the cross-broker volume tier thresholds. The IVWP volume tiers are independent of the Subscriber Fee Discount described in Part III, Item 19(c) and are calculated solely on cross-broker volume in the IVWP book.

The fees for the Block IOI service and other sponsored access arrangements will be the same as the standard ATS fees which otherwise apply to Subscriber activity. Fees are charged to Subscribers only and fees are not directly billed to Sponsored Firms.

The other fees incurred by Subscribers of the ATS are SRO fees and fees charged by our clearing provider, Instinet.

The ATS passes through certain regulatory fees (including FINRA's Section 3 fee and Trading Activity Fee ("TAF") for Subscribers who are not FINRA members), and fees billed to the ATS for Subscribers through third-party providers for accessing market data. The ATS is the CAT Executing Broker for both the buyer and the seller on all trades it executes and is charged CAT fees accordingly, which it then passes through to Subscribers.

- b. Identify and describe any fees or charges for use of the NMS Stock ATS services that are bundled with the Subscriber's use of non-ATS services or products offered by the Broker-Dealer Operator or its Affiliates, including a summary of the bundled services and products, the structure of the fee, variables that impact the fee, differentiation among types of Subscribers, and range of fees.

Answer: N/A

- c. Identify and describe any rebate or discount of fees or charges required to be identified in Items 19(a) and 19(b), including the type of rebate or discount, structure of the rebate or discount, variables that impact the rebate or discount, differentiation among types of Subscribers, and range of rebate or discount.

Answer: With respect to trading in the Midpoint book and the ASPEN Fee/Fee book, there are two ways existing ATS Subscribers can pay lower fees, ("Subscriber Fee Discount"), as described below:

1. Total Composite Volume (TCV) Incentive*--if average daily participation of TCV is:

<u>TCV %</u>	<u>Commission rate per share traded</u>
=> 12 bps of TCV	2 mils per share
=> 10 bps of TCV	3 mils per share
=> 8 bps of TCV	4 mils per share
=> 4 bps of TCV	6 mils per share
=> Base Rate	8 mils per share

***Criteria**

- The Base Rate is the same for all Subscribers.
- Any Subscriber Fee Discount Rate will be calculated retroactively on all shares traded for that calendar month.
- TCV is the total market volume in all NMS Stocks reported to the Consolidated Tape.

2. Active Order Incentive**

Live in 200 to 500 unique symbols at a time (on average) 6 mils per share

Live in 501 to 1000 unique symbols at a time (on average) 4 mils per share

Live in 1001 to 2000 unique symbols at a time (on average) 3 mils per share

Live in over 2001 unique symbols at a time (on average) 2 mils per share

****Criteria**

- Orders must be marketable: (1) priced at or more aggressive than the NBBO midpoint for the Midpoint book and (2) priced at or more aggressive than the NBBO for the ASPEN Fee/Fee book.
- IntelligentCross will monitor open orders every few minutes to calculate the average unique symbols in the book on a daily basis.

- If minimum quantity ("MinQty") present, must be less than or equal to 100 shares.
- Not be an IOC Order.
- Rate will be calculated retroactively on all shares traded for that calendar month.
- If a Subscriber is live for a symbol in both Midpoint and ASPEN Fee/Fee, it will count twice for purposes of qualifying for the Active Order Incentive.

Trading in ASPEN Maker/Taker, ASPEN Taker/Maker ~~and~~, Hosted Pools, and the IVWP book will not be taken into account for purposes of qualifying for the Subscriber Fee Discount. If a Subscriber qualifies for a Subscriber Fee Discount, the pricing will apply to their trading activity in both the Midpoint book and ASPEN Fee/Fee book. The ATS can offer the Subscriber Fee Discount to allow new Subscribers to receive the Subscriber Fee Discount and pay the lowest fee charged to any existing Subscriber based on the above criteria.

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