

Part II: Activities of the Broker-Dealer Operator and its Affiliates

Item 2: Affiliates Trading Activities on the ATS

- a. Are Affiliates of the Broker-Dealer Operator permitted to enter or direct the entry of orders and trading interest into the NMS Stock ATS?

Yes ☒ No ☐

If yes, name and describe each type of Affiliate that enters or directs the entry of orders and trading interest into the ATS (e.g., broker-dealer, NMS Stock ATS, investment company, hedge fund, market maker, principal trading firm), and, for each Affiliate, provide the applicable MPID and list the capacity of its orders and trading interest (e.g., principal, agency, riskless principal).

- Virtu AlterNet Securities LLC (“AlterNet”): AlterNet is a U.S. broker-dealer that can enter or direct the entry of orders to POSIT to facilitate trades for its broker-dealer clients as agent, riskless principal, and/or principal under the MPID ALTX.
- ~~Virtu Financial Capital Markets LLC (“VFCM”) is a U.S. broker dealer that provides algorithms that enter or direct the entry of orders under the MPID EWTT. VFCM’s only client is its Affiliate Virtu Americas LLC (“VAL”) (described below) and all orders VFCM routes to POSIT originate from VAL. Virtu ITG can route orders to VAL that forwards to VFCM’s algorithms when Virtu ITG clients wish to use these algorithms.~~
 - ~~VFCM receives agency orders from VAL that VAL receives from clients for handling by the algorithms.~~
 - ~~VFCM receives principal orders from VAL for handling using the same algorithms that are used for VAL’s clients.~~

VAL is a U.S. broker-dealer that engages in a variety of activities, including providing algorithms to clients, providing institutional sales and trading services in stocks and exchange traded products, and making markets. VAL can enter or direct the entry of orders to POSIT as agent or riskless principal under the MPIDs DTTX, GFLO, and VALR and as principal under the MPIDs VALX, VIRT and NITE.

Virtu ITG’s Canadian, EU and Asia Pacific Affiliates are broker-dealers that offer products and services that are similar to Virtu ITG Electronic Systems and have hi-touch desks, all of which can enter or direct the entry of orders to POSIT through Virtu ITG and VAL ~~indirectly through VFCM~~. Virtu ITG ~~and~~, VAL ~~and VFCM~~ enter or direct orders to the ATS for these Affiliates as agent or riskless principal using the Virtu ITG MPID ITGI in the case of Virtu ITG entering the order ~~or~~, the VAL MPIDs GFLO, VALR or VALX in the case of VAL entering the order, ~~or the VFCM MPID EWTT in the case of VFCM entering the order.~~

Item 3: Order Interaction with Broker-Dealer Operator; Affiliates

- a. Can any Subscriber opt out from interacting with orders and trading interest of the Broker-Dealer Operator in the NMS Stock ATS?

Yes ☐ No ☒

If yes, explain the opt-out process.

- b. Can any Subscriber opt out from interacting with the orders and trading interest of an Affiliate of the Broker-Dealer Operator in the NMS Stock ATS?

Yes ☒ No ☐

If yes, explain the opt-out process.

Virtu ITG offers Subscribers the ability to opt out of interacting with principal orders entered into POSIT by its Affiliate VAL under the MPIDs NITE, VIRT and VALX (“the Principal Opt-Out”). Orders entered into POSIT by its Affiliate AlterNet under the MPID ALTX, ~~by its Affiliate VFCM under the MPID EWTT~~, by its Affiliate VAL under the MPIDs DTTX, GFLO and VALR are not subject to the Principal Opt-Out. See, Part II, Item 2(a) for descriptions of these Affiliates.

Subscribers can request the Principal Opt-Out through their sales persons. Following receipt of a request, the sales person will enter a ticket to make the request. Thereafter, an entry is made in a configuration file which will take effect in most cases on the next business day, but could take effect either the same day or greater than the next business day, depending upon the time of day the request is submitted. When the POSIT matching logic is applied, the configuration file is checked to determine whether orders are eligible for crossing with the Affiliate’s principal orders entered under the above referenced MPIDs. Virtu ITG does not allow POSIT Subscribers to opt out of interacting with any orders submitted to POSIT by its Affiliates when they are submitted under any of the other MPIDs referenced in Part II, Item 2(a). The Principal Opt-Out configuration is applied for all crossing sessions.

Item 6: Activities of Service Providers

- a. Does any employee of the Broker-Dealer Operator or its Affiliate that services both the operations of the NMS Stock ATS and any other business unit or any Affiliate of the Broker-Dealer Operator (“shared employee”) have access to confidential trading information on the NMS Stock ATS?

Yes ☒ No ☐

If yes, identify the business unit, Affiliate, or both that the shared employee services, and provide a summary of the role and responsibilities of the shared employee at the ATS and the business unit, Affiliate, or both that the shared employee services.

Virtu ITG does not have any personnel whose sole responsibility is for POSIT. The Firm considers information relating to Subscriber's live orders, trading interests and recent executions in POSIT that the Firm reasonably believes may suggest a Subscriber continues at that moment in time to have the same or additional live orders and trading interests in POSIT, to be ATS confidential information ("Confidential Information"). As is more fully discussed in Part III, Item 7(a), Virtu ITG does not consider all post trade data to be Confidential Information, particularly when the information is anonymized, aggregated or both.

Below is a summary of the shared personnel that provide services to both POSIT, Virtu ITG, and its Affiliates and have access to Confidential Information.

- **Compliance and Legal:** Compliance and Legal personnel support all of the Firm's business units and those of the Firm's Affiliates and perform a variety of compliance and legal activities related to their roles. They have access to Subscriber historical order and execution information and as necessary they can be provided with access to intra-day information.
- **Finance and Management Reporting Group:** Finance and management reporting personnel support all of the Firm's business units and those of the Firm's Affiliates. These personnel are involved in accounting, billing, analyzing revenues, and providing management reporting information. They have access to Subscribers' historical post-trade execution information and data.
- **Operations:** Operations personnel support the Firm's middle and back office processes for clearance and settlement and related activities and have access to Subscribers' real time intra-day, post-trade, and historical execution information for clearing, settlement, and regulatory reporting purposes.
- **Core Operations:** Core Operations are technical personnel who have access to the Firm's and its Affiliates' trading infrastructure, which includes POSIT, to monitor the functionality, health, and wellness of the Firm's trading infrastructure and take action as necessary to maintain the systems and manage issues. They have access to Subscribers' real-time and historical order and execution information. This group supports all trading infrastructure and applications for the Firm.
- **Software Developers:** Software Developers have access to the Firm's and its Affiliates' trading infrastructure, which includes POSIT, to maintain and enhance the software for the Firm's trading applications. They have access to Subscribers' real-time and historical order and execution information. This group supports all trading infrastructure and applications for the Firm.
- **Product Management:** Product Management are personnel who manage the day-to-day business activities for products such as POSIT, the algorithms the Firm provides to clients, and other trading-related applications Virtu ITG and its Affiliates provide to clients. These personnel monitor the trading applications, enhance their product features, and create new features. Product Management compile and analyze statistics and metrics related to the ATS and other electronic products and services. Product Management works with

Software Developers, and in some instances are also Software Developers themselves. The Product Manager responsible for supervising POSIT is also the Product Manager responsible for supervising VAL's ATS, MatchIt, and also provides support to both Virtu ITG's Affiliates' execution services applications. Product Management have access to Subscribers' real-time and historical order and execution information.

- Relationship Management: Relationship Management personnel are responsible for managing the Firm's relationship with its clients, including clients who are Direct Subscribers of the ATS, and for cross-selling the Firm's other products and services. They have access to historical order and execution information.
- Sales and/or Trading personnel: To the extent Sales or Trading personnel are responsible for handling an order, a portion of which is directed to POSIT as a child order, such personnel would have real time access to such child order and any of its executions in POSIT analogous to the access they would have to information about orders and executions that were directed to external market centers in order to monitor executions and provide order-related services.
- POSIT Alert ("Alert") Sales and Coverage: The Firm offers an application called Alert that is a conditional order application which resides outside of the POSIT Matching engine and which transmit orders to the Alert Crossing Session to consummate trades. See Part III, Item 9 and 11 for further descriptions of Alert and the Alert Crossing Session. Alert Sales and Coverage personnel are responsible for the sales and day-to-day coverage of Alert. Alert Sales and Coverage personnel have access to a front end application called Phoenix, which displays real-time order and execution information of Alert participants. See, Part III, Item 9 for further discussion about Alert. This group can access Alert participants' real-time and historical order and execution information, but do not have access to any real-time or historical order and execution information in POSIT's matching engines for the Continuous Crossing Session or the Agency Close Crossing Session.
- Analytics Personnel: Analytics Personnel provide transaction cost analysis ("TCA") data and consultancy to institutional investors. This group is separate from the business units of the broker dealer operator that enter or direct the entry of orders and trading interest into POSIT, as defined in Part II, Item 1(a). The Firm offers a product called the Analytics Portal ("the Portal") that provides pre-trade, real-time and post-trade analytics to the Firm's clients. In order to enable and support client trade reporting in the Portal, Analytics personnel have access to real-time order and execution information for Alert participants. This group can access Alert participants' real-time and historical order and execution information, but do not have access to any real-time or historical order and execution information in POSIT's matching engines for the Continuous Crossing Session or the Agency Close Crossing Session. See Part III, Item 9 for further discussion about Alert.

Part III: Manner of Operations

Item 3: Exclusion from ATS Services

- a. Can the NMS Stock ATS exclude, in whole or in part, any Subscriber from the ATS services?

Yes ☐ No ☐

If yes, list and provide a summary of the conditions for excluding, in whole or in part, a Subscriber from the ATS services.

Subscribers may be excluded as a result of regulatory or counterparty risk concerns which would result in the Subscriber being excluded from all services provided by the broker-dealer operator of the ATS. The same criteria listed in Part III, Item 2 which would preclude a prospective client from becoming a client of Virtu ITG and being granted access to the ATS could also result in an existing Subscriber from being excluded from access to the ATS and from other services provided by Virtu ITG. For example, a disciplinary history related to market abuse or a change in financial condition such that the Subscriber fails to satisfy Virtu ITG's counter-party risk criteria could preclude a Subscriber from continued access to the ATS. Additionally, a subscriber can be temporarily blocked intraday for a given symbol in the POSIT Alert Crossing Session, which is described in Part III, Item 14a.

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.

Continuous Crossing Session

POSIT accepts Peg orders and Immediate or Cancel (“IOC”) orders. Peg orders may execute against contra-side Peg orders or against IOC orders. IOC orders may only execute against contra-side Peg orders. These order types may be entered with other instructions, as described below, that will be used by the matching algorithm to determine whether and how they will interact with other orders.

(1) Peg Orders: Peg orders remain open until executed, canceled by the Subscriber or until the end of the daily matching session. Peg orders can be designated with the following execution instruction:

(i) Market: A Market instruction designates that a buy order can be executed up to the national best offer and a sell order can be executed down to the national best bid.

(ii) Mid-Point: A Mid-Point instruction designates that an order can be executed up to the mid-point between the national best bid and national best offer (“NBBO”).

(iii) Primary: A Primary instruction designates that the order can only be executed at the national best bid in the case of a buy order and the national best offer in the case of a sell order.

(iv.) Limit Price: A Limit Price instruction specifies a price above which a buy order and below which a sell order that the order will not be eligible for execution.

(2) IOC Orders: IOC orders will either execute if an eligible contra side order exists against which the order can be executed or if not the order is canceled. Subscribers may enter IOC orders with Market, Mid-Point and Limit Price instructions.

Subscribers can include Minimum Execution Quantity (“MEQ”) instructions on their orders via FIX, which specifies the minimum number of shares that must be available for a contra side order to be eligible for execution.

Subscribers can also request to apply the following instructions on their orders at the session level:

- (i) **Locked Market:** Direct and Indirect Subscribers may request a Locked Market instruction, which specifies that an order is not eligible for execution during locked markets. IOC orders entered with a Locked Market instruction will be rejected if the NBBO is locked. Peg orders will be accepted but ineligible for execution until the NBBO unlocks.
- (ii) **Virtu Principal Opt-Out:** Direct and Indirect Subscribers may request to have their orders not interact with Virtu principal. This instruction will only prevent interaction against orders entered by Affiliate VAL under the MPID's NITE, VIRT and VALX. Principal orders entered by the Affiliates using other MPIDs will not be subject to this opt out. See Part 2, Item 3b for more detail.
- (iii) **MEQ Instruction Non-Aggregation:** Direct and Indirect Subscribers may request that multiple orders are not aggregated to meet a MEQ instruction. By default, POSIT will aggregate orders to meet a Subscriber's MEQ instruction.
- (iv) **Cancel Residual if Below MEQ Instruction:** Direct and Indirect Subscribers may request that a residual quantity be canceled back to the Subscriber if the residual quantity is less than the Subscriber's MEQ instruction. By default, POSIT will not cancel back an order if the residual is less than the MEQ instruction.
- (v) **Default Peg Instructions:** Direct and Indirect Subscribers may request that their IOC and/or Day orders have a Default Peg instruction.

An order that contains a value in a utilized FIX field other than a value recognized by Virtu ITG (as described in its FIX specifications) will be rejected. An order containing a value in a non-utilized FIX field will be accepted, but that instruction will not be processed.

Subscribers can route orders to the Agency Close Crossing Session, which are subject to specific time-in-force and order type attributes, as described in Part III, Item 17.

For resting Peg orders, priority in POSIT is based on the price instruction, i.e. market, mid, or primary. Resting Peg orders that can be executed at the same price receive a pro rata share allocation. However, POSIT will always attempt to execute at the midpoint of the NBBO, prior to executing at the NBB or NBO. Resting Peg orders with market instructions on the same side of the market will execute at the midpoint in a pro rata share allocation along with resting Peg orders with midpoint instructions also on the same side of the market. Peg orders with primary instructions, cannot execute at the midpoint, and would not participate and receive shares in a pro rata allocation when there are resting Peg orders with market and or midpoint price instructions on the same side.

For IOC orders and Peg orders that remove liquidity, these orders are processed one at a time in time sequence. The following examples illustrate the matching process, assuming there are no instructions that would prevent an execution such as MEQ or a Limit Price that would be an order ineligible based upon the current NBBO.

Example 1:

Market bid/offer: \$10.00 x \$10.10

In POSIT, Order 1 is a Midpoint Peg order to buy 1,000 shares and Order 2 is a Market Peg order to buy 1,000 shares. An in-bound Peg order or IOC order with market or midpoint instructions to sell 1,000 shares is entered into POSIT. An execution of 1000 shares will occur at midpoint, with Order 1 receiving 500 shares, and Order 2 receiving 500 shares.

Example 2:

Market bid/offer: \$10.00 x \$10.10

In POSIT, Order 1 is a Midpoint Peg order to buy 1,000 shares and Order 2 is a Primary Peg order to buy 1,000 shares. An in-bound Peg order or IOC order with market or midpoint instructions to sell 1,000 shares is entered into POSIT. An execution of 1000 shares will occur at midpoint of the NBBO, with Order 1 receiving 1000 shares and Order 2 receiving no shares.

Alert Crossing Session

The Alert Crossing Session supports all of the order types and instructions described in the Continuous Crossing Session section in Part III, Item 7(a), with the exception that the Alert Crossing Session does not accept IOC orders. Additionally, the below order type instructions are only available in the Alert Crossing Session.

- (i) **Conditional Indicator:** Peg orders entered into the Alert Crossing Session are by default designated as Conditional Orders. Conditional Orders are not firm and must respond affirmatively to an Invitation to Firm-Up from the Alert Crossing Session by transmitting a Firm-Up Response Order to be eligible to be executed against contra-side orders.
- (ii) **Firm-Up Response Order:** These orders are entered in response to invitations from the Alert Crossing Session.
- (iii) **Auto-Ex:** Human Participants, as described in Part III, Item 9(a), can designate a Conditional Order as Auto-Ex. If the Auto-Ex instruction is enabled for a Conditional Order, the Human Participant will not receive a pop up window requesting to Firm-Up, as described in Part III, Item 9(a), but instead the Conditional Order from the Human Participant will automatically Firm-Up against a contra side order.

See Part III, Item 9a for more detail on the Alert Crossing Session.

Agency Close Crossing Session

For the Agency Close Crossing session, Subscribers can only submit Peg orders with a Market Peg instruction and a time in force of close. See Part III, Item 11(c) for more detail on the Agency Close Crossing Session.

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).

Virtu ITG offers a conditional messaging system known as Alert. Alert is an anonymous Conditional Order matching application that exists outside of the POSIT matching engine. Alert has two types of participants: Human Participants and Electronic Participants. Alert has three message types: A Conditional Order; an Invitation to Firm-Up; and a Firm-Up Response Order.

Human Participants install Alert software, which can be installed on a variety of OMS or EMS systems, on their systems. The Alert software takes in information about Human Participants orders resident in the OMS or EMS and transmits that information to the Alert matching application in the form of a Conditional Order. Alert Human Participants configure the frequency at which the Alert software takes in information about orders resident in their OMS or EMS. The Alert software also provides Alert participants with a graphical user interface ("the Alert Front End") that allows users to see pending Conditional Orders and respond to Invitations to Firm-Up. Human Participants can manually respond to Firm-Up Requests or configure the Alert software to automatically respond. For Human Participants, Alert will send the Invitation to Firm-Up to the Alert Front End via a pop up window, requesting the Human Participant to Firm-Up. The pop up window indicates that a contra order exists in a given symbol, but does not provide any size or price information of the contra order. For an execution to occur, the Human Participant must respond to the pop-up window by submitting a Firm-Up Response. The one exception to this workflow is for Human Participants who have enabled Auto-Ex on their order, which is described in Part III, Item 7a. The Auto-Ex order instruction can only be set by the Human Participant in the Alert software. The Auto-Ex instruction will remain in effect until one of the following occurs: 1. The Human Participant turns off Auto-Ex on the order, 2. The Human Participant is fully filled on the Auto-Ex order, 3. The trading day ends. The Alert software will

the send a Firm-Up Response Order from the Human Participant's EMS to Virtu ITG for submission to the POSIT ATS Alert Crossing Session that references the invitation and matches the attributes of the invitation in terms of symbol, side and quantity. Human Participants can change order quantities up or down prior to submitting a Firm-Up Response. Virtu ITG's agency desks, AlterNet and clients of its Affiliates cannot use the Alert Front End to view and interact with conditional interests. They are Electronic Participants and can only send orders to algorithms that can send Conditional Orders through Alert.

Electronic Participants do not install Alert software. Rather, Electronic Participants transmit Conditional Orders directly to the Alert matching application through the Electronic Participant's algorithm or electronic system. Alert will send an Invitation to Firm-Up to the algorithm or system that entered a Conditional Order when a potential matching opportunity exists. Hereinafter, Electronic Participant and algorithm or system shall have the same meaning. For an execution to occur, the Electronic Participant must respond to the invitation by transmitting a Firm-Up Response Order. Alert will transmit an Invitation to Firm-Up to the Electronic Participant containing the same number of shares included in the Electronic Participant's original Conditional Order. The Electronic Participant may then respond by sending a Firm-Up Response Order to Virtu ITG for submission to the POSIT ATS Alert Crossing Session that references the invitation and matches the attributes of the invitation in terms of symbol, side and quantity. The Electronic Participant may transmit a Firm-Up Response Order with a quantity that is less or more than the invited quantity. An execution will occur to the extent that Firm-Up Response Orders are received by POSIT within the designated response time, subject to other instructions placed on the orders by the participant, as described in Part III item 7. All business units and affiliates of the broker dealer operator that enter or direct the entry of orders into POSIT ALERT are considered Electronic Participants, and are not treated any differently than Electronic Participants external to the broker dealer operator.

When multiple Conditional Orders are present on the same side and same symbol, the Alert matching application will give invitation priority ~~to Human Participants over Electronic Participants. The one exception to this invitation priority occurs when a Human Participant has a Conditional Order on the same side and symbol as a Virtu ITG algorithm, and the contra Conditional Order is from an Electronic Participant. In this scenario, the Alert matching application will transmit invite messages only to the Virtu ITG algorithm and the contra~~ the following order: Human Participant with Auto-Ex enabled, Human Participant without Auto-Ex enabled, Electronic Participant. When two participants are on the same side and fall within the same participant type (i.e., two Human Participants with Auto-Ex enabled, two Human Participants without Auto-Ex enabled, or two Electronic Participants), the Alert matching application ~~with transmit multiple invitations will use order size as the second order of invitation priority.~~ For example, if two Human Participants are present on the same side and same symbol, and a single contra order is submitted, ~~both Human Participants will receive an invitation message~~ the Human Participant with the largest order size will receive an invitation message. Lastly, if two participants are on the same side, fall within the same participant type, and have the same order size, order submission time will be used as the third order of priority to determine which participant would receive the invitation.

The response time to the Invitation to Firm-Up is a function of the type of participants invited. Electronic Participants must respond within 2 seconds, while Human Participants without Auto-Ex enabled have 30 seconds to respond. Participants who do not respond within these time frames will not be eligible to participate in the match.

Alert invites all participants in the potential match simultaneously, except as described below. When an Electronic Participant has a potential match against a Human Participant, the Human Participant will receive the Invitation to Firm-Up first. Once the Human Participant firms up, an Invitation to Firm-Up is then sent to the Electronic Participant. If the Human Participant does not firm up, the Electronic Participant will not receive an Invitation to Firm-Up. The one exception to this invite sequence is in regards to Virtu ITG algorithms. Virtu ITG algorithms receive an invite message at the same time a Human Participant receives an invite message.

In addition to the messaging described above to Alert participants, Alert will transmit information to POSIT on the potential Alert match. At the time Invitations to Firm-Up are sent to participants, Alert sends the following information to POSIT on the potential Alert match: 1) Number of buyers, 2) Number of sellers, 3) Number of Human Participants, 4) Symbol, 5) Response timer. POSIT will run the match at the earlier of when all participants submit firm up orders to POSIT or the expiration of the response timer. ~~At the time of the match, POSIT will also include any resting POSIT order that is 5,000 shares or greater.~~

After the completion of the match, or the expiration of the response timer, POSIT will transmit information on the outcome of the match back to Alert. This information is stored to log files that are consumed by a front end application called Phoenix. Phoenix is used by Alert Sales and Coverage personnel to monitor client orders in Alert, as described in Part II, Item 6a.

Upon request, POSIT will apply a maximum notional value constraint, set by the Alert participant, to an Alert participant's order. In addition, upon request, POSIT will aggregate an Alert participant's orders for execution. Where such Alert orders have a common MEQ instruction, POSIT will apply the MEQ instruction on the aggregated Alert order.

Item 11: Trading Services, Facilities and Rules

- 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.

POSIT operates three crossing sessions: (i) the Continuous Crossing Session, (iii) the Alert Crossing Session (ii) the Agency Close Crossing Session, and. POSIT offers the ability to participate in the three crossing sessions to all Subscribers. Note, the rules and procedures applicable to the Continuous Crossing Session apply to the other crossing sessions unless otherwise stated. Subscribers can specify which session to route an order to via a specific FIX tag.

POSIT's methodology for crossing is that priority is based on price and then eligible orders receive allocations based on a *pro rata* split, as described in Part III, Item 7a. If shares cannot be evenly split on a pro rata basis, then POSIT will randomly choose an order to receive a smaller allocation.

POSIT reserves the right to review any transaction based upon the request of a Subscriber or on its own motion and declare any transaction executed by POSIT null and void in the event that the transaction occurred at a price that was within the numerical guidelines for erroneous transactions of any exchange or was the result of a significant systems disruption. In reviewing transactions resulting from significant systems disruptions, in addition to the price of the transactions, POSIT may also take into account the volume of transactions as compared to the normal volume of transactions for the relevant security as executed by POSIT. POSIT reserves the right to use its discretion to provide price accommodations in circumstances that are not clearly errors or erroneous transactions but where the circumstances are appropriate, such as minor systems latency, to make a price adjustment as an accommodation to an affected client(s). In these scenarios, the Firm performs an analysis to determine the appropriate price and any profit or loss as a result of the adjustment is incurred by Virtu ITG.

Below are descriptions of the Continuous Crossing Session, the Agency Close Crossing Session, and the Alert Crossing Session.

Continuous Crossing Session

During the Continuous Crossing Session, Subscribers may only enter orders that are Peg or IOC order types. Peg orders can be submitted to POSIT beginning at 8:00 a.m. and through the trading day until the market closes at 4:00 p.m. and are held in POSIT's order book until they are executed, cancelled or until they expire. When a Peg order is submitted to POSIT, the system scans for available liquidity to determine whether there is a contra-side Peg order residing in the system. If there is no contra-side Peg order in POSIT, the Peg order will continue to rest in POSIT until executed or cancelled and returned. Peg orders in POSIT will execute immediately with contra-side IOC orders, unless one of the orders' instructions make it ineligible for execution. Peg orders can be executed against contra-side Peg orders and/or IOC orders; however, IOC orders can only be executed against Peg orders. POSIT cancels unexecuted Peg orders in accordance with the instructions of the submitting Subscriber, or by default at the close of regular trading in the market. If a Peg order expires without being fully or partially filled, the Subscriber submitting that order receives a "nothing done" report. IOC orders are immediately executed or immediately canceled upon receipt. For Subscribers' orders that partially executed during the Continuous Crossing Session, the residual shares will be cancelled back to the Subscriber after the close of trading.

POSIT only executes orders at the midpoint of the NBBO, the NBO or the NBB. In the first instance, POSIT will attempt to cross eligible orders at the midpoint of the NBBO. If midpoint pricing is unavailable, POSIT will then look to other matching opportunities at the NBB or NBO, as applicable.

Subscribers accessing POSIT directly can request that POSIT apply certain default instructions or attributes to the Subscriber's orders submitted to POSIT, as described in Part III, Item 7(a), and Part III, Item 14a.

POSIT will execute crosses at prices within the permissible price bands established under the Limit Up – Limit Down Plan. POSIT is programmed to prevent executions outside of the Limit Up – Limit Down price bands.

Subscribers can include MEQ instructions on their orders. In that event, POSIT will not execute the order in an amount less than such minimum quantity. However, when the remaining quantity on the order is less than the MEQ instruction, POSIT will not automatically cancel back the remaining quantity of the order, but will attempt to execute that unfilled portion in a single execution. Subscribers can also instruct that their orders only execute against a single contra that meets the MEQ instruction for their order, as described in Part III, Item 7(a). If Subscribers do not request this, POSIT's default behavior is to consolidate contra interest to meet a Subscriber's MEQ Instruction. Subscribers can request that POSIT always cancel remaining shares after an execution where the remaining quantity on the order is less than the MEQ, as described in Part III, Item 7a.

Where multiple resting orders have a MEQ instruction specified by the Subscriber, POSIT can alter the pro-rata formula to allow an execution when one might otherwise not occur:

- In that circumstance pro-rata reallocation ratio is 80/20. This means that if an order is getting 1000 shares as per initial pro-rata calculation, 80% (800 shares) will be allocated, and 20% (200 shares) can be used to satisfy the minimum shares of other, larger orders with a minimum quantity size. In certain instances, the reallocation will result on one resting order being filled with all of the eligible shares and the other order(s) receiving no allocation.
- There is a threshold above which the 80/20 rule applies. Orders with pro-rata allocations equal to or less than 200 shares are not guaranteed any allocation. ~~A higher minimum threshold of 50,000 shares exists for application of the 80/20 rule in the Alert Crossing Session described further below.~~

If multiple orders do not meet their MEQ instructions in the initial allocation, order size priority is used as a tie-breaker to allocate additional shares to satisfy MEQ instructions.

Please see Attachment 11(c) for illustrative examples.

Alert Crossing Session conform

Virtu ITG offers a conditional messaging system known as Alert. Alert is an anonymous Conditional Order matching application that exists outside of the POSIT matching engine. Please see Part III, Item 9a for a description of Alert.

Agency Close Crossing Session

Subscribers can instruct the Firm to enter an order into the Agency Close Crossing Session via a FIX tag. The Agency Close Crossing Session only accepts Market orders. POSIT will reject Limit orders. Only buy and sell orders are accepted; short sell orders will be rejected. POSIT will only accept orders for the Agency Close Crossing Session between 3:50:01pm – 4:00pm EST. Orders sent outside of this time frame will be rejected. The closing price for each security will be the closing price disseminated to POSIT from the primary exchange data feed. Subscribers will receive indicative fills ahead of the close as soon as there is a match. Portions of the Agency Close

Crossing orders that have not yet been indicatively matched may be cancelled at any time up to 4:00PM EST. POSIT will reject orders submitted to the Agency Close Crossing Session if the security is halted or paused at the time of submission. If a cross cannot be consummated because a security is halted or paused or the primary closing price for the security is not published by the primary exchange for any reason, POSIT will cancel any indicative fills and return the unfilled portion of the affected orders.

All sessions

Locked and Crossed Markets: POSIT does not execute in a crossed market, but will execute in a locked market. Subscribers have the option of not executing in a locked market at the session level.

Price Protection: There are no Price Protection mechanisms.

Short Sales: Subscribers are required to mark short sale orders as “sell short” or “sell short exempt”. POSIT does not execute short sell orders at the bid price in securities subject to a Reg SHO Rule 201 price restriction.

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.

POSIT:

Contra Participant Specific Blocking: Subscribers can request to block interaction with specific Subscribers within POSIT. Upon request, execution performance reports can be provided to Subscribers on their order flow, grouped by contra Subscriber, time in force, and peg instruction. Metrics included in the execution performance reports can include, but is not limited to, shares executed, average trade size, and stock price movement after the time of fill (mark outs). Contra Subscribers are anonymized in the execution performance reports. Upon receiving this information, a Subscriber can request which anonymized contra Subscribers to block interaction against, either in totality, or can specify specific contra Subscriber blocking by time in force and/or peg instructions. Once a Subscriber specifies a contra Subscriber block, that block will remain in effect until the Subscriber requests for that block to be removed. Subscribers can request Contra Participant Specific Blocking through their salesperson, who enter a ticket to make the request. Thereafter, an entry is made in a configuration file which takes effect in most cases on the next

business day, but could take effect either the same day or greater than the next business day, depending upon the time of day the request is submitted.

Liquidity Guard: Liquidity Guard is an automated means where Virtu ITG prevents certain IOC and Peg orders from interacting with resting Peg orders. Stocks that are subject to the interaction restrictions of Liquidity Guard are those that have a historical bid offer spread that is greater than or equal to \$0.03 per share or a trailing 21-day average daily volume that is less than or equal to 3 million shares. Liquidity Guard uses inputs including a stock's trailing intraday bid offer spread, historical bid offer spread, and volatility, to compute price bands where executions can take place on a security basis. If a potential match of an incoming IOC or Peg order against a resting Peg order would occur at a price outside of the computed price bands for a particular stock, then the IOC or Peg order would be blocked from interacting against the resting Peg order. All Subscribers are subject to Liquidity Guard, but a Subscriber may elect to opt out of having their Peg orders subject to Liquidity Guard. Subscribers can request to opt out of Liquidity Guard through their sales person, who enter a ticket to make the request. Thereafter, an entry is made in a configuration file which takes effect in most cases on the next business day, but could take effect either the same day or greater than the next business day, depending upon the time of day the request is submitted. Subscribers are not provided with any information on when Liquidity Guard effected the interaction of their orders. Liquidity Guard is not employed in Alert.

Self-Match Prevention: Subscribers may provide instructions that will prevent orders from crossing if the resulting cross may result in a transaction with no change in beneficial ownership. Subscribers can request Self-Match Prevention through their salesperson, who enter a ticket to make the request. Thereafter, an entry is made in a configuration file which takes effect in most cases on the next business day, but could take effect either the same day or greater than the next business day, depending upon the time of day the request is submitted.

Further, Subscribers are able to block interaction against certain Virtu MPIDs. See the response to Part II, Item 3b for further detail.

Alert:

Participant Type Blocking: Electronic Participants can request to block interaction against Human Participants- via a FIX tag, on an individual order basis. Human Participants can request to block interaction against Electronic Participants. Both of these~~This~~ blocking ~~instructions are~~instruction is supported at the session level.

Participant and Symbol Specific Blocking: Alert Sales and Coverage personnel can block certain participants in whole or at a symbol level. Alert Sales and Coverage personnel apply participant blocks in whole, or at a symbol level, on an intraday basis if a participant is having a technical issue. For example, if an Alert participant was duping messages repeatedly then the Alert Sales and Coverage personnel could introduce a temporary block ~~could be introduced~~ until the issue was resolved. Alert Sales and Coverage personnel can lift this block once the participant verifies the technical issue has been resolved. Symbol level blocks ~~can~~are also ~~be~~ applied on ~~Human Participants intraday if there appears to be a pattern of the Human~~ an automated basis between an Electronic Participant ignoring firm up response messages in and a Human Participant if within a three-minute span, for a given symbol. ~~Alert Sales and Coverage personnel, at their discretion,~~

~~can lift symbol level blocks intraday, or leave the~~, five consecutive invitations to Firm Up between the two participants result in no trades, a two minute block will be applied between the two participants in place for the entire day given symbol. After the two-minute blocking period, the block between the two participants will automatically be lifted in the given symbol. The three-minute time span begins at the time of when the first invitation is sent. Symbol level blocks do not carry over into the next trading day. Please see Part III, Item 9(a) for more detail on the POSIT Alert Conditional Order process.

Self-Match Prevention: Subscribers may provide instructions that will prevent orders from crossing if the resulting cross may result in a transaction with no change in beneficial ownership.