

Part III: Manner of Operations

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).

VAL 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 then send a Firm-Up Response Order from the Human Participant's EMS to VAL 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. VAL's agency desks 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 VAL 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 in 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 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, 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 2-1 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.

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.

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.

- 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 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 VAL 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. This blocking 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 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 are also applied on an automated basis between an

Electronic Participant and a Human Participant, as well as between two Electronic Participants. If within a two-minute span, for a given symbol, three consecutive invitations to Firm Up between the two participants result in no trades, a one minute block will be applied between the two participants in the given symbol. After the ~~two~~one-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.

- 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.