

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

Item 1: Broker-Dealer Operator Trading Activities on the ATS

- a. Are business units of the Broker-Dealer Operator permitted to enter or direct the entry of orders and trading interest (e.g., quotes, conditional orders, or indications of interest) into the NMS Stock ATS?

☒ ☐ Yes

☐ ☐ No

If yes, name and describe each type of business unit of the Broker-Dealer Operator that enters or directs the entry of orders and trading interest into the ATS (e.g., NMS Stock ATS, type of trading desks, market maker, sales or client desk) and, for each business unit, provide the applicable MPID and list the capacity of its orders and trading interest (e.g., principal, agency, riskless principal).

Virtu Americas LLC ("VAL" or the "Firm") operates ~~two~~ MatchIt ATS ("MatchIt" or the "ATS") ~~crossing sessions, which consists of~~ a Main Session (the "Main Session"), ~~and~~ a Conditional Session (the "Conditional Session"), and one or more Hosted Sessions (see Part III, Item 14 for more detail on Hosted Sessions). VAL also operates ~~as well as~~ several other business units, which are described below. Any of the Firm's other business units may enter or direct orders to ~~either any~~ session. The Firm's business units each use one or more technology platforms that have MPIDs associated with the platform. A single business unit can enter or direct orders to the ATS through more than one technology platform and consequently under more than one MPID.

Virtu Electronic Trading ("VET"). VET provides algorithms that are used by clients and the Firm's business units. VET algorithms enter or direct the entry of orders to MatchIt as agent when those orders are entered by clients into the algorithms or as principal or riskless principal when one of the other business units enters orders into the algorithms using the MPIDs: VALR, and VALX.

Virtu Client Market Making ("VCMM"). VCMM handles held and not held orders transmitted by other broker-dealers and held orders transmitted by institutions. The majority of these orders are SEC Rule 605 eligible orders and are handled and executed on a fully automated basis. VCMM sales and trading personnel handle larger and less liquid orders manually and can use VET algorithms in connection with their market making activities. VCMM enters or directs the entry of orders to MatchIt as principal, riskless principal and agent to acquire inventory to fill orders or to acquire positions for its own account using the following MPIDs: VALR and VALX.

Virtu Institutional Trading ("Institutional Trading"). Institutional Trading handles not held orders transmitted by institutional clients and facilitates block transactions in single stocks. Institutional Trading uses VET algorithms to enter or direct the entry of orders as principal or riskless principal in connection with its client facilitation activities under the MPID s VALX.

Virtu Hi-Touch Portfolio Trading: Traders on this desk handle not held orders in baskets of stocks and ETFs. Traders can enter or direct the entry of orders through VAL Electronic Systems into the ATS as agent under the MPID VALR.

Virtu ETF Trading ("ETF Trading"). ETF Trading makes markets on exchanges and facilitates block transactions in exchange traded products for broker-dealer and institutional clients. ETF Trading uses VET algorithms to enter or direct the entry of orders as principal or riskless principal in ETFs and singles stocks using the MPID VALX.

Virtu Principal Market Making (“VPMM”). VPMM is a market maker in NMS equity securities. VPMM enters or directs the entry of orders as principal to both MatchIt crossing sessions utilizing the MPID VIRT.

- b. If yes to Item 1(a), are the services that the NMS Stock ATS offers and provides to the business units required to be identified in Item 1(a) the same for all Subscribers?

☐ ☐ Yes

☒ ☒ No

If no, explain any differences in response to the applicable Item number in Part III of this form, as required, and list the applicable Item number here. If there are differences that are not applicable to Part III, explain those differences here.

As is described in Part II, Item 1(a) and Part III, Item 5(c), the Firm's business units utilize electronic algorithms that can enter or direct orders to the ATS. As is described in Part III, Item 9(b), only VAL and VAL Affiliates are permitted to enter conditional orders and interests into the Conditional Session and only VAL and VAL affiliates are permitted to enter orders to Hosted Sessions. As is described in Part III, Item 14(b), only VAL business units and VAL Affiliates are permitted to utilize order instructions that limit interactions with certain principal orders of VAL and its Affiliates ("Virtu Principal Opt Out"). See Part II, item 3(a). These instructions are not available to subscribers who enter orders directly into MatchIt ("Direct Subscribers").

Item 2: Affiliates Trading Activities on the ATS

- b. If yes, to Item 2(a), are the services that the NMS Stock ATS offers and provides to the Affiliates required to be identified in Item 2(a) the same for all Subscribers?

☐ ☐ Yes

☒ ☒ No

If no, explain any differences in response to the applicable Item number in Part III of this form, as required, and list the applicable Item number here. If there are differences that are not applicable to Part III, explain those differences.

Only VAL and VAL Affiliates are permitted to enter orders into the Conditional Session and Hosted Sessions. See, Part III, Items 7, 9, ~~and 11~~, and 14 for information about the Conditional Session and Hosted Sessions. Only VAL business units and VAL Affiliates are permitted to utilize order instructions that limit interactions with certain Virtu principal order flow. These instructions are not available to Direct Subscribers. See Part III, Item 7 for information on order types and available instructions.

Item 5: Other Products and Services

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

☐ ☐ Yes

☒ ☒ No

If no, identify and explain any differences.

VAL does not permit Direct Subscribers to access the Conditional Session or ~~use conditional order types~~ Hosted Sessions. As described in Part 2 Item II, (b), only VAL and VAL Affiliates are permitted to enter orders into the Conditional Session and Hosted Sessions. Only VAL business units and VAL Affiliates are permitted to utilize order instructions that limit interactions with certain principal order flow of VAL and its Affiliates in the Main Session. VAL does not make these instructions available to Direct Subscribers.

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.

VAL has discretion to exclude Subscribers for any reason. Subscribers may be excluded as a result of regulatory or counterparty risk concerns which would generally 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 a client of VAL 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 VAL. For example, a disciplinary history related to market abuse or a change in financial condition such that the Subscriber fails to satisfy VAL's counterparty risk criteria could preclude a Subscriber from continued access to the ATS.

Direct Subscribers do not have access to the Conditional Session or Hosted Sessions, See, Part III, Item 11 and 14. Segmentation and counterparty selection, See Part III, Items 13 and 14, can serve to limit access to the full breadth of liquidity available in MatchIt.

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.

VAL, VAL Affiliates, and Direct Subscribers can enter orders directly to the MatchIt Main Session through an API in the NY5 Datacenter. See, Part II, Item 5. All orders must be submitted electronically via FIX. VAL provides a MatchIt FIX Specification document for the MatchIt Main Session describing the transmission formats for order messages. MatchIt supports FIX versions up to V4.2.

MatchIt only accepts orders that satisfy clearly defined parameters which include:

Orders must satisfy certain security parameters - for example, orders must be transmitted from a known IP address that has been permissioned by MatchIt.

Orders must adhere to the parameters provided in the FIX specification document.

VAL and VAL Affiliates access the Conditional Session and Hosted Sessions through the same API. VAL

provides Direct Subscribers with a FIX specification document that contains message formats for the main session. VAL utilizes a FIX specification document that contains message formats for both the main session and the conditional session. Hosted Sessions use the same FIX specification as the Main Session.

- 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.

All Subscribers and VAL and VAL Affiliates submit orders to the MatchIt Main Session using the same MatchIt Fix specification formats and the same API. The MatchIt Conditional Session and Hosted Sessions is-are only available to VAL and VAL Affiliated broker-dealers. VAL and VAL Affiliates utilize a different FIX specification document for the Conditional Session than the one provided to Direct Subscribers which contains message formats for conditional orders.

- 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.

VAL and its Affiliates provide algorithms that are used by its business units and by clients, i.e. Indirect Subscribers, which enter or direct the entry of orders to the MatchIt Main Session and Hosted Sessions and orders and conditional interests to the Conditional Session. The conditions described in Part III, Item 2 are the only conditions for entering orders through the algorithms provided by VAL and its Affiliates. Specifically, Subscribers must execute an electronic access agreement, and submit standard on-boarding documentation that all clients must submit, including know your customer information, financial information to assess counterparty risk and establish a trading limit, and relevant agreements information to facilitate trade clearance and settlement, and be approved as a client of VAL or its Affiliates.

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:
- 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;
 - 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;

- iii. 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;
- iv. whether an order type is eligible for routing to other Trading Centers;
- v. the time-in-force instructions that can be used or not used with each order type;
- vi. 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
- vii. 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.

For the Main Session, MatchIt accepts Peg orders, Day orders and Immediate or Cancel (IOC) orders. Peg and Day orders may cross with contra-side Peg orders, contra-side Day orders or with IOC orders. IOC orders may only cross with contra-side Peg orders or contra-side Day orders. These order types may be entered with other instructions that will be used by the matching algorithm to determine whether and how they will interact with other orders.

For the Conditional Session, MatchIt accepts Peg orders and IOC orders. Peg orders may cross with contra-side Peg orders or with IOC orders. IOC orders may only cross with contra-side Peg orders. These order types may be entered with other instructions that will be used by the matching algorithm to determine whether and how they will interact with other orders.

For Hosted Sessions, all order types and attributes are the same as the Main Session.

Priority in the MatchIt Main Session and Hosted Sessions for all order types is price, then time. If a Subscriber modifies the terms of a previously transmitted order, the order will receive a new order time stamp for matching purposes (i.e. the order will lose queue spot). The only exception is a reduction in order quantity which, absent any other changes to the terms of the order, will not update the order time stamp for matching purposes.

Priority in the MatchIt Conditional Session for all order types is price, then size, then time. If the algorithm modifies the terms of a previously transmitted order, the order will receive a new order time stamp for matching purposes (i.e., the order will lose queue spot). The only exception is a reduction in order quantity which, absent any other changes to the terms of the order, will not update the order time stamp for matching purposes.

The following instructions are available for orders entered in ~~both~~ the Main Session, and the Conditional Session, and Hosted Sessions. The instructions placed on orders will affect whether an order is eligible to be executed against contra-side 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 the order can pay the full spread. For example, 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 pay 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.

A Limit Price instruction can be specified for Peg orders in conjunction with the above referenced execution instruction.

(2) **Day Orders:** Day orders remain open until executed, canceled by the Subscriber or until the end of the daily matching session. Day orders can also include a Market, Mid-Point, Primary or Limit Price instruction.

(3) **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. IOC orders can also include a Market, Mid-Point, Primary, or Limit Price instruction. IOC orders will default to Primary Peg if a peg instruction is not specified.

Other available Instructions and Designations for the Main, ~~and~~ Conditional, ~~and~~ Hosted Sessions: The following instructions may be applied to the above order types unless otherwise indicated. These instructions may be implemented by transmitting specified values on the order or by requesting configurations that will apply particular instructions after receipt of the order:

- (i) **Minimum Execution Quantity (“MEQ”):** An MEQ instruction specifies the minimum number of shares that must be available for a contra side order to be eligible for execution.
- (ii) **Locked Market:** A Locked Market instruction 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.
- (iii) **Peg Order Add-Only Liquidity Instruction (“Add Only”):** An Add-Only instruction specifies that the order is only eligible for execution when it adds liquidity to MatchIt upon entry. Peg orders that would remove liquidity from MatchIt will be accepted by MatchIt and remain open but ineligible for execution until such a time as the order adds liquidity to MatchIt. Contra-side Peg orders on the book at the time a Peg order with an Add Only instruction is entered will not interact with the Peg Add Only order.
- (iv) **Soft Dollar Instruction:** A Soft Dollar instruction will only allow riskless principal or agency crossing. To the extent that an order with a Soft Dollar instruction interacts with an order submitted by VCMM, MatchIt will pass information on the execution message so that the market maker's systems transact with its underlying client according to FINRA's definition of "riskless principal," i.e., at the same price, as the execution received in MatchIt.
- (v) **Virtu Principal Opt Out:** VAL and VAL Affiliates may submit instructions on orders that prevent interactions with Virtu principal orders, as described in Part II, item 3(a). This instruction is not available to Direct Subscribers.
- (vi) **MatchIt Subscriber Profiles and Limits on Interaction:** This instruction specifies the types of counterparties that an order may interact with based on the counterparty's Liquidity Profile. MatchIt uses quantitative metrics to create one or more Liquidity Profiles for each

MatchIt Subscriber. The metrics include execution performance relative to the market over different time horizons when removing liquidity from MatchIt. MatchIt makes discretionary decisions in assigning a Liquidity Profile to a new or previously uncategorized Subscribers. MatchIt will inform Subscribers about their own profile information upon request.

- (vii) **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.

See Attachment for Part III, 7a for details on available instructions and designations for the Conditional Session only.

- 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.

The Virtu Principal Opt Out and Soft Dollar Instruction are only available on orders transmitted by VAL and VAL Affiliate algorithms. The Conditional Crossing Session and Conditional Session Order Types are only available to VAL and VAL Affiliates. Hosted Sessions are only available to VAL and VAL Affiliates.

Item 10: Opening and Reopening

- a. Explain how the NMS Stock ATS opens or re-opens for trading, including when and how orders and trading interest are priced, prioritized, matched, and executed, and identify any order types allowed prior to the start of regular trading hours or following a stoppage of trading in a security during regular trading hours.

MatchIt begins accepting all order types at 7:00 AM EST. MatchIt does not execute orders before the U.S. market's open, after the U.S. market's close, and during a trading halt. There are no limitations on the types of orders MatchIt will accept prior to the start of regular trading hours or during a trading halt; however, IOC orders will be cancelled back and Peg orders will remain on the MatchIt order book until trading begins. Unexecuted orders will be cancelled at the market's close time.

MatchIt does not have an opening auction or have any specific procedures to reopen after a stoppage of trading in ~~either~~ the Main Session, ~~or the~~ Conditional Session, or Hosted Sessions. Prior to the market's open, and during a trading halt, Peg orders will remain on the book and be prioritized by price, then time, for the Main Session and Hosted Sessions, subject to the constraints placed on an order by a Subscriber. For the Conditional Session, orders will remain on the book and be prioritized by price, then size, then time, subject to the constraints placed on an order. After the market opens, MatchIt will execute orders to the extent there are contra-side matches.

- c. Explain how unexecuted orders and trading interest are handled at the time the NMS Stock ATS begins regular trading at the start of regular trading hours or following a stoppage of trading in a security during regular trading hours.

MatchIt does not have an opening auction or have any specific procedures to reopen after a stoppage of trading in either the Main Session, ~~or the Conditional Session,~~ or Hosted Sessions. For the Main and Hosted Sessions, unexecuted Peg orders are prioritized by price and then time and are executed to the extent there is contra-side liquidity and subject to the constraints placed on an order by a Subscriber.

For the Conditional Session, unexecuted Conditional Orders are prioritized by price, size and then time and are executed to the extent there is contra-side liquidity and subject to the constraints placed on an order by a Subscriber. Once the market opens or resumes after a stoppage, MatchIt will execute orders to the extent there are contra-side matches.

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.

MatchIt is an electronic crossing system that does not display orders and executes all orders at or within the NBBO as determined by VAL's Market Data Systems. MatchIt consists of ~~two crossing sessions,~~ the Main Session, ~~and the Conditional Session,~~ and Hosted Sessions, which operate independently of each other. VAL business units, VAL Affiliates and Direct Subscribers enter or direct the entry of orders into the Main Session. The Main Session employs a price, time priority crossing methodology. VAL business units and VAL Affiliates enter orders and conditional interests into the Conditional Session. The Conditional Session employs a price, size, time priority crossing methodology. Hosted Sessions have the same trading services, facilities, and rules as the Main Session, and are only available to VAL business units and VAL Affiliates. Within a single Hosted Session, VAL or VAL Affiliates will direct the orders of a single Indirect sSubscriber and principal orders of its market making business units for potential crossing. All NMS securities listed on a national securities exchange are eligible for trading in MatchIt, except MatchIt does not make Virtu Financial, Inc., symbol VIRT, available for trading, and may, in its sole discretion, stop trading certain symbols from time to time for, among other reasons, the purpose of remaining below the volume thresholds for (i) classification as an "SCI Entity" under Regulation SCI and (ii) certain regulatory requirements as set forth in Rules 301(b)(3) and (5) of Regulation ATS.

- 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.

Main and Hosted Sessions: MatchIt will execute Peg and Day orders against eligible contra-side IOC, Day and Peg orders. For Peg and Day orders, priority is determined on a price, time basis. If a Subscriber modifies the terms of a previously transmitted order, the order will receive a new order time for matching purposes (i.e. the order will lose queue spot). The only exception is a reduction in order quantity which, absent any other changes to the terms of the order, will not update the order time for matching purposes. For IOC orders priority is based on a first in time basis.

Removers receive price improvement. In the case of an IOC order, the IOC order is always the removing order. In the case of two Peg and/or Day orders, the second in time is the removing order.

Conditional Session: The MatchIt Conditional Session accepts Conditional Orders and IOC orders. Conditional Orders rest in the Conditional Session but are not firm or executable. MatchIt will send an

invitation to Firm-Up to the algorithm that entered a Conditional Order when a potential matching opportunity exists. When multiple Conditional Orders are present the invitation to Firm-Up will be transmitted to one Conditional Order based on price, size, time, priority. For an execution to occur, the algorithm that has entered a Conditional Order and received an invitation to Firm-Up must respond to the invitation by transmitting an automated Firm-Up Response Order.

MatchIt will transmit an invitation to Firm-Up that contains the number of shares that are potentially available for execution and a response time within which the Firm-Up order must be received for an execution to occur. The response time will be in a range of single digit to hundreds of milliseconds. The algorithm receiving an invitation to Firm-Up may then respond by sending a Firm-Up Response Order that references the invitation and matches the attributes of the invitation in terms of symbol, side and quantity. A Firm-Up Response order may be transmitted with a quantity less than the invited quantity. An execution will occur to the extent that Firm-Up Response Orders are received by MatchIt within the designated response time.

IOC orders may only be executed against contra-side Firm-Up Response Orders. A Firm-Up Response Order to buy and a Firm-Up Response Order to sell may be executed against one another. Firm-Up Response Orders will only interact with the specific contra-side orders that caused MatchIt to transmit the invitation to Firm-Up.

MatchIt will send invite messages to systems that have transmitted eligible Conditional Orders based upon price, size, and time priority when multiple Conditional Orders are present. IOC orders interact based on time priority. MatchIt will utilize any limit price, Peg and Peg Offset instructions when determining price. IOC Orders and Firm-Up Response Orders that result from Conditional Orders that cause an invitation sequence to begin are considered removal orders and receive price improvement, i.e. resting orders pay any additional portion of the spread to the extent the price or peg instructions of the contra side orders overlap.

If a Subscriber modifies the terms of a previously transmitted order, the order will receive a new order time for matching purposes (i.e. the order will lose queue spot). The only exception is a reduction in order quantity which, absent any other changes to the terms of the order, will not update the order time for matching purposes. For IOC orders priority is based on a first in time basis.

In the case of an IOC order matching against a Conditional Order, the Conditional Order is always the liquidity adding order. In the case of Conditional Orders, the first in time is the liquidity adding order. For orders that have entered short sell Market Peg order instructions in securities subject to a Reg SHO Rule 201 price restriction, the adding order will receive a de minimis amount of price improvement of \$0.0001, such that the execution price is compliant with the Reg SHO price restriction. However, if the order has a price restriction that would prevent it from receiving an execution above the NBB then no execution will occur.

Both-All Sessions:

Locked and Crossed Markets: MatchIt 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 on an order by order basis.

Errors and Accommodations: MatchIt 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 MatchIt 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, MatchIt may also take into account the volume of transactions as compared to the normal volume of transactions for the relevant security as executed by MatchIt. MatchIt 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 effected client(s).

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”. For adders that have entered short sell Market Peg order instructions in securities subject to a Reg SHO Rule 201 price restriction, the adding order will receive a de minimis amount of price improvement of \$0.0001, such that the execution price is compliant with the Reg SHO price restriction, unless the amount of price improvement would exceed any limit price placed on the order.

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

☐ ☐ Yes ☒ ☒ No

If no, identify and explain any differences.

The Conditional Crossing Session and Hosted Sessions ~~is~~ are only available to VAL and VAL Affiliates. Direct Subscribers are not able to transmit orders to this crossing session.

The Soft Dollar Instruction and Virtu Principal Opt Out are not available to Direct Subscribers.

Item 13: Segmentation; Notice

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

☒ ☒ Yes ☐ ☐ No

If yes, explain the segmentation procedures, including (i) a description for how orders and trading interest are segmented; (ii) identify and describe any categories, classification, tiers, or levels

and the types of orders and trading interest that are included in each; (iii) provide a summary of the parameters for each segmented category and length of time each segmented category is in effect; (iv) any procedures for overriding a determination of segmented category; and (v) how segmentation can affect order interaction.

There is no segmentation in the Conditional Session and in the Hosted Sessions. In the Main Session, VAL segments Direct Subscribers into five distinct Liquidity Profiles based upon their removal orders. Direct Subscribers may enter instructions that when present on liquidity adding orders will prevent interaction with liquidity taking orders from Subscribers who fall into specified Liquidity Profiles. VAL scores and segments Direct Subscribers at the MPID level. VAL and its Affiliates' own MPIDs are scored and segmented. VAL does not score and segment Indirect Subscribers. To the extent that VAL, its Affiliates or Direct Subscriber's transmit the orders of multiple Indirect Subscribers through a single MPID, the Liquidity Profile will be the composite of all of the Indirect Subscribers. An exception is that

VAL permits Direct Subscribers to have different order flows scored independently based upon a Segment ID FIX tag. The Current MatchIt FIX Specification Document provides Direct Subscribers the ability to use up to four Segment IDs labeled Segment 1, Segment 2, Segment 3 and Segment 4. VAL uses a scoring methodology to determine a Subscriber's Liquidity Profiles that is derived from the price move of a stock from the midpoint price at the time of fill to a weighted average of midpoint prices of various durations after the time of fill, divided by the stock's spread (a "mark out"). Only a Subscriber's removal flow (IOC orders and Day orders that remove liquidity) are included in the Liquidity Profile computation. Liquidity Profiles are generated monthly, based on the prior 3 months of trading activity. There is no de minimis volume rule in the Liquidity Profile generation.

VAL creates Liquidity Profiles by sorting Subscribers by their mark-out score. The five Liquidity Profile tiers are called Highest, High, Neutral, Low, and Lowest, where the Highest Liquidity Profile contains Subscribers who exhibit the lowest mark outs relative to other Subscribers' taking flow, and the Lowest Liquidity Profile contains Subscribers who exhibit the largest mark outs (in the Subscribers favor) relative to other Subscribers' taking flow. The Liquidity Profiles are constructed such that approximately 40% of the taking share volume is placed into the Highest category, 20% of the taking share volume is placed in the High category, 20% of the taking share volume is placed in the Neutral category, 10% of the taking share volume is placed in the Low category, and 10% of the taking share volume is placed in the Lowest category. The percentages are approximations. Based on the mix of Subscribers' share volume, they may not perfectly fit into a quintile such that the percentages are exact. MatchIt will use its discretion in these circumstances and typically will elect to include more Subscribers in a higher quintile. Subscribers that rest Day orders in MatchIt can elect to prevent various combinations of the quintiles from interacting with their resting orders on an order by order basis via FIX tag. VAL uses its own discretion to place new Subscribers into a quintile. Quintile selection for new Subscribers is based on VAL's subjective judgment of the trading and investment process employed by the new Subscriber. VAL reserves the right to move a Subscriber's liquidity profile bucket intra-month if that Subscriber's mark outs during the month deviate widely from prior trading activity. Direct Subscribers who add liquidity can block any of the liquidity profile buckets from interacting with their add flow. As an example, if a Subscriber specifies that their Day order only interact with the Highest Liquidity Profile, then any contra-side removal flow that is not from a Subscriber designated as Highest will not interact with the resting Day order. Liquidity removal orders may be blocked from interacting with resting orders based on the adding Subscriber's preferences. Liquidity removal orders cannot specify Liquidity Profile blocking. If a liquidity removal order includes a Liquidity Profile blocking instruction, the order will still be accepted, but the blocking instruction will be ignored. Other than what has been described, no other order interaction is effected by the Liquidity Profile designation of a particular Subscriber. Liquidity Profiles only apply to order interaction in the Main Session and have no influence on order interaction in the Conditional Session and in the Hosted Sessions.

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.

Virtu Principal Opt Out: VAL and VAL Affiliates may submit instructions on orders that prevent interactions with Virtu principal orders, as described in Part II, Item 3(a). This instruction is not available to Direct Subscribers. See Part III, Item 7 which lists order instructions including this instruction.

MatchIt Liquidity Profile Interaction: All Direct Subscribers have the option to block interaction against specific Liquidity Profiles, as described in Part III, Item 13. VAL programs its algorithms to use blocking when analysis suggests it may improve execution outcomes. VAL implements the logic of the algorithms such that decisions are made on specific child orders in specific circumstances. Indirect Subscribers cannot make decisions to block based on Liquidity Profiles. MatchIt will prevent liquidity removing orders from matching with liquidity adding orders from counterparties falling into the specified liquidity profiles when Subscribers place the blocking instruction on their liquidity adding orders. Subscribers can send instructions designating which Liquidity Profiles to interact with on an order by order basis via FIX tag. These Profiles are only created for the Main Session and only effect counterparty interaction in the Main Session. See Part III, Item 7 which lists order instructions including this instruction.

Self-Match Prevention: Direct and Indirect 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.

Other Order Attributes: Direct Subscribers can place other attributes on orders that could limit an order's ability to interact with certain contra side interest. These additional attributes include: Minimum Execution Quantity, Do Not Execute In A Locked Market, and Add Only.

Hosted Sessions

At the request of an indirect subscriber and at VAL's discretion, VAL may establish one or more Hosted Sessions in which only VAL and its affiliates may direct orders. Each Hosted Session is arranged by VAL to facilitate interaction between VAL's VCMM and VPMM business units and a designated Indirect Subscriber of VAL's VET business unit. The VCMM and VPMM business units will transmit principal orders to interact with the order flow of such designated Indirect Subscriber. See Part II, Items 1a and 3a for more detail on Virtu's Business Units and Indirect Subscribers. All subscribers participating in a specific Hosted Session know the identities of the other Subscribers in the Hosted Session, which includes the VCMM and VPMM business units knowing the identity of the Indirect Subscriber in the Hosted Session.

Hosted Sessions are not available to Direct Subscribers of MatchIt. Hosted Sessions have the same matching logic, order priority, rules, and order types and attributes as the MatchIt Main Session. See Part III Item 7a and Part III Item 11 for more detail on the Main Session's order types and attributes, trading services, facilities, and rules. Orders directed to a Hosted Session do not interact with the MatchIt Main Session, the MatchIt Conditional Session, or any other Hosted Session.

- 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.

The Virtu Principal Opt Out is only available to VAL and VAL affiliates. Hosted Sessions are only available to VAL and VAL affiliates.

Item 19: Fees

- 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.

VAL establishes fees for use of its execution products and services, which could include executions in MatchIt, on an individual client basis. VAL will consider a number of factors in determining the fee an individual client will be assessed, including, but not limited to, the client's overall relationship with VAL, the type of trading flow, the amount of trading flow, and the markets that will be traded. Client specific clearing arrangements, as specified in Section III, Item 22, are not considered when establishing a fee for that client. VAL will consider a number of factors in determining whether an Indirect Subscriber can access orders designated as Inbound Retail including, but not limited to, the overall commission rates an Indirect Subscriber pays to the Firm, the client's overall relationship with the Firm, the type of trading flow, and the amount of trading flow. Use of Hosted Sessions would not require subscribers to pay additional fees.

Item 23: Market Data

- a. Identify the sources of market data used by the NMS Stock ATS (e.g., proprietary feed from a national securities exchange, feed from the securities information processor ("SIP")), and how the ATS uses market data from these sources to provide the services that it offers, including how the ATS uses market data to determine the NBBO and protected quotes, and display, price, prioritize, execute, and remove orders and trading interest on the ATS. (How much additional info should be added? This information has already been stated in Item 7)

MatchIt employs a proprietary market data system that uses a combination of direct market data feeds from exchanges and market data disseminated by the Securities Information Processors (SIP) to determine the NBBO. Specifically, MatchIt uses direct market data for all exchanges other than LTSE, for which the SIP is used as LTSE does not offer direct market data feeds. MatchIt utilizes this proprietary system to price, prioritize, and match orders in ~~both~~ the Main Session, ~~and~~ Conditional Sessions, and Hosted Sessions in compliance with regulations, including Reg NMS and Reg SHO.

SIP data is used as a backup feed, and is used in place of a direct feed from a particular exchange if that exchange is experiencing a technical issue. Switching to the SIP data feed is done via an automated process that compares direct feed data to SIP data. Additionally, Core Operations have the ability to switch to the SIP data feed on a discretionary basis. Switching back to direct feed data from the SIP data feed is done purely on a discretionary basis, and is performed by the Core Operations team once this team has confirmed that direct feed data in question is correct. The SIP data feed is also used for regulatory items, including limit up/limit down bands, trading halts, and Reg SHO designations.