

**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).

The following Affiliates are subscribers of the ATS (parentheticals following each name lists the Affiliate' MPID(s), capacity and description): (i) Fidelity Clearing Canada ULC (FIDT & FCCU, Agency, Canadian entity engaged in broker-dealer activities); (ii) FMR Co., Inc (N/A, Agency, Investment advisor registered with the SEC); and (iii) Fidelity Management and Research Company (N/A, Agency, Investment advisor registered with the SEC). Affiliate orders routed to the ATS via Fidelity Capital Markets would reflect an MPID of NFSC. The following Affiliates may access the ATS indirectly by routing trading interest through other ATS subscribers, including the Affiliate-subscribers listed above (parentheticals following each name lists the Affiliate' MPID(s), capacity and description): (i) Fidelity Personal and Workplace Advisors LLC (N/A, Agency, Investment advisor registered with the SEC); (ii) Luminex Trading & Analytics LLC (LMNX), Agency & Principal, Broker-dealer registered with the SEC); (iii) Impresa Management (Agency, Investment advisor registered with the SEC); (iv) Fidelity Personal Trust Company (Agency, Domestic trust company); (v) Fidelity SelectCo, LLC (Agency, Investment advisor registered with the SEC); (vi) Fidelity Management & Research (Japan) Limited (Agency, Investment advisor registered with the SEC); (vii) Fidelity Management & Research (Hong Kong) Limited (Agency, Investment advisor registered with the SEC); (viii) Fidelity (Canada) Asset Management ULC (Agency, Canadian entity engaged in investment advisory activities); (ix) Fidelity Institutional Asset Management Trust Company (Agency, Domestic trust company); (x) FIAM LLC (Agency, Investment advisor registered with the SEC); (xi) Ballyrock Investment Advisors LLC (Agency, Investment advisor registered with the SEC); (xii) Fidelity Global Brokerage Group, Inc. (Domestic entity engaged in securities activities); (xiii) Fidelity Investments Canada, ULC (Agency, Canadian entity engaged in investment advisory activities.); (xiv) Fidelity Management Trust Company (Agency, Domestic Trust Company);(xv) Fidelity Distributors Corporation (Agency, Investment advisor registered with the SEC); (xvi) Fidelity Investments Money Management, Inc. (Agency, Investment advisor registered with the SEC); (xvii) FMR Investment Management (UK) Limited (Agency, Investment advisor registered with the SEC); (xviii) Strategic Advisers LLC (Agency, Investment advisor registered with the SEC); (xix) Fidelity Investments

Institutional Services Company, Inc. (Agency, Investment advisor registered with the SEC); (xx) Fidelity Institutional Wealth Adviser LLC (Agency, Investment advisor registered with the SEC); (xxi) Fidelity Brokerage Services LLC (FIBS, Agency, Broker-dealer registered with the SEC); and (xxii) Digital Brokerage Services LLC (DIBS, Agency, Broker-dealer registered with the SEC). (xxiii) Green Pier Fintech LLC, (PIER) (Agency, Broker-Dealer registered with the SEC); (xxiv) Fidelity Diversifying Solutions LLC (Agency, Investment Advisor registered with the SEC). Affiliate orders routed to the ATS via another Subscriber would reflect the MPID of that Subscriber.

Part 2, Item 6

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.

The following Broker-Dealer operator personnel may have access to information about trading interest submitted to the ATS: i. Fidelity Capital Markets Equity Trading and Operations- Responsible for monitoring trading connections and addressing client trading issues. ii. Fidelity Brokerage Technology - Responsible for real-time diagnostics, system development, hardware maintenance, and monitoring of the ATS. ~~Brokerage Technology employees may have access to confidential trading information for both CrossStream and Luminex.~~ iii. Fidelity Capital Markets Product Development and Data Science- Responsible for the generation and distribution of pre- and post-trade transaction cost analysis in addition to product-specific functionality. iv. Fidelity Risk & Compliance- For monitoring purposes.

Part 3, Item 9

Does the NMS Stock ATS send or receive any messages indicating trading interest

☒ Yes ☐ No

(e.g., IOIs, actionable IOIs, or conditional orders)?

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).

The ATS does not send or receive any IOI's, but does support Conditional Orders in the Conditional Cross. The Conditional Cross prioritizes orders based on the following factors, in the following order: (i) price and (ii) order type, with Firm-Up Orders having priority over Conditional Orders. Amongst Firm-Up Orders on price parity, orders are prioritized based on the following factors, in the following order (a) tier, (b) size, and (c) time. The Conditional Cross' tiers, in order of priority, are as follows: (i) NFS Agency (NFS orders marked as agency) and Channel SOR Orders (Orders submitted to the ATS only by NFS' primary automated routing system, FBSI (or any successor system)); (ii) Broker-Dealer Subscriber (Orders submitted by non-NFS broker-dealers who are subscribers to the system (includes orders marked as "agent" or "principal")); (iii) NFS Principal (NFS orders marked as principal, see Part II Item 1 for detail). Tiers assignments are non-discretionary; there is no method to override an assignment. Amongst Conditional Orders on price parity, orders are invited to firm-up based on the following factors, in the following order ("Invitation Logic"): (w) tier, (x) imbalance, (y) size and (z) time. Where two Firm-Up Orders are eligible to cross, the orders will be executed immediately at the midpoint of the NBBO. Where a Conditional Order is eligible to cross, whether with a Firm-Up Order or another Conditional Order, the ATS will systematically send a notice to the subscriber notifying it of the initial match (via FIX). Only Subscribers or the broker-dealer operator can receive invites messages. The invite message is a standard FIX execution report and contains the Client's Order ID, NFS Order ID, Leaves Quantity, Conditional Order Quantity, Conditional Order Limit Price, Side, Symbol, Invite Message Timestamp, Executing Broker, and a custom field indicating that the message is an invite message. There is no information pertaining to the counterparty or potential execution size. The subscriber will then have a system-determined time period of less than up to 1 second to "firm-up" ("firm-up window") by submitting a firm order, either manually or systematically, in response to the proposed match (such orders, "Firm-Up Orders"). The Firm-Up Order may include a different size, MAQ, time-in-force and/or ultimate limit price from the original Conditional Order. If each side of the proposed match, as relevant, submits a Firm-Up Order within the firm-up window, and provided that each side meets any specified MAQ associated with the contra-side order, the ATS will execute the orders at the midpoint of the NBBO at the time of execution (assuming the midpoint of the NBBO remains an eligible execution price). Conditional Orders are cancelled by the system upon receipt of a corresponding Firm-Up order or at the expiry of the firm-up window. Submitting a Firm-Up order in response to an invite message may not result in an execution. For example, the ATS receives a Conditional Order to buy 10,000 shares (Buyer A). Then the ATS receives a Conditional Order to sell 10,000 shares (Seller A). Seller A and Buyer A will receive invite messages. Seller A submits a Firm-Up order for 10,000 shares and its Conditional Order is cancelled by the system. Buyer A does not submit a Firm-Up order. The firm-up window expires and Buyer A's Conditional Order is cancelled by the system. There is no execution. Seller A's Firm-Up order will remain executable in the system according to order instructions. For example, the ATS receives a Conditional Order to buy 10,000 shares (Buyer A) and a Conditional Order to buy 15,000 shares (Buyer B). Then the

ATS receives a Conditional Order to sell 50,000 shares (Seller A). Seller A, Buyer A, and Buyer B will receive invite messages. Seller A submits a Firm-Up order for 50,000 shares and its Conditional Order is cancelled by the system. Buyer A then submits a Firm-Up order for 50,000 shares (larger than their Conditional Order of 10,000 shares) and its Conditional Order is cancelled by the system. The system will execute the two Firm-Up orders immediately. Buyer B then responds to the invite message by submitting a Firm-Up order for 15,000 shares and its Conditional Order is cancelled by the system. Buyer B's Firm-Up order will receive no execution and will remain executable in the system. Orders entered into the Conditional Cross, including Firm-Up Orders, may only be executed against other orders in the Conditional Cross. NFS's algorithms and smart order router can enter Conditional and Firm-Up orders into the Conditional Cross. If an algorithm or smart order router submits a Conditional Order and subsequently receives an invite, it generally submits a corresponding Firm-Up order. The Firm-Up order may have a different limit price or quantity than the original Conditional Order depending on parent order urgency and market conditions. In some cases, the algorithm or smart order router may not submit a Firm-Up order due to a change in parent order urgency or market conditions from the time of invite.