

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

**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.

BofAS considers a Subscriber's identity, orders, and conditional placements routed to, and trades effected by, Instinct X (including data analytics related to a Subscriber's transactions) confidential trading information. However, certain post-execution information involving Instinct X transactions may be included in various reports, data, and commentary communicated internally and externally to Clients directly or through vendors, provided such information is anonymized, aggregated with execution information from other desks or from BofAS as a whole (such that no individual trade, Client, or Subscriber is identifiable), and communicated with appropriate delay.

BofAS does not have any employees solely responsible for Instinct X. ~~BofAS considers Subscribers' order and execution-related information, conditional placements, and data or analytics related to a Subscriber's transactions to be confidential trading information subject to protection (with the exception of post-execution transaction information typically of the type made public under reporting rules or regulations, or of an aggregated nature).~~ Set forth below are the shared employees that service both Instinct X and BofAS or a BofAS Affiliate and have access to Subscriber confidential trading information and the basis for such access.

**TECHNOLOGY GROUPS**--Various technology-related groups, e.g., development teams and application support teams, within Bank of America, N.A. ("BANA") are responsible for the development, operation and stability of the infrastructure of all BANA systems, including BofAS systems. For BANA, these groups are responsible for developing, monitoring, and testing various systems. For Instinct X, dedicated subsets of these groups serve as developers or network engineers for Instinct X and are responsible for reviewing and testing Instinct X's coding and network infrastructure to ensure stability and functionality. These dedicated groups have access to Instinct X's real-time production environment. Accordingly, a small number of technology-oriented employees have the ability to access log files

containing Subscriber order, conditional placement, and execution information, along with BANA or BofAS order and execution information, to support the development, operation, and infrastructure of ~~the ATS~~ Instinct X, BANA, or BofAS systems.

**MARKET ACCESS GROUP ("MAG")**--The MAG team is a dedicated support team within BofAS's ETS business unit identified in Part II, Item 1(a) that assists Clients with direct market access to the U.S. equities and options markets, including Instinct X. For BofAS, the MAG team's responsibilities include integrating new electronic trading Clients, maintaining Clients' trading system configurations, and managing the operation of various market access gateways, including the third-party external market access gateways. For Instinct X, members of the MAG team are responsible for addressing BofAS Client inquiries related to connectivity to Instinct X and real-time trading activity and can access real-time and post-trade Subscriber order, conditional placement, and execution information in connection with executing their duties

**ELECTRONIC TRADING PRODUCTS & CONSULTING ("ET Products," "ET Consulting" or, collectively "ET Products and Consulting")**--The ET Products ~~team is a~~ and Consulting teams are dedicated support ~~team~~ teams within BofAS's ETS business unit identified in Part II, Item 1(a) that ~~manages~~ manage BofAS's various electronic trading products, including Instinct X. ~~For BofAS, the~~ The ET Products group is responsible for managing products such as the BofAS SOR, BofAS algorithms, and other market access components, ~~and~~. The ET Products and Consulting groups are responsible for compiling data and analytics in response to Client and/or BofAS governance requests. ~~For Instinct~~ Employees of the ET Products and Consulting groups have access to real-time and post-trade Indirect Subscriber order, conditional placement, and execution information for purposes of managing the BofAS SOR and algorithms and/or responding to Client requests. These employees have visibility into where an order was ultimately routed by the BofAS SOR or algorithms and/or executed, whether involving Instinct X or any other market center. In addition, for Instinct X, a subset of the ET Products group is responsible for managing Instinct X and for compiling data and analytics in response to requests from Subscribers and the ATS Working Group. These This subset of ET Products employees have has access to post-trade Subscriber order, conditional placement, and execution information for purposes of responding to such requests.

**SALES AND TRADING**--BofAS Sales and Trading employees within the EES, ECS, and ESSL business units identified in Part II, Item 1(a) handle orders that may, based on the discretion of a BofAS algorithm or the BofAS SOR, be routed to Instinct X. With respect to BofAS, these employees are responsible for providing Clients order routing and execution support. With respect to Instinct X, these employees are responsible for addressing Indirect

**Subscriber inquiries related to their orders or conditional placements routed to Instinct X. Through order and execution management systems, these employees can access real-time and post-trade order, conditional placement, and execution information only for the Indirect Subscribers covered by the respective employee. Specifically, they have system entitlements only for the accounts they cover and only have visibility into where an order was ultimately routed and/or executed, whether in Instinct X or any other market center. These employees forward any Indirect Subscriber requests for detailed trading information to the ET Products team for resolution.**

**ATS WORKING GROUP--This group is comprised of BANA and BofAS employees from various business, support and control functions. While these shared employees have responsibilities specific to BANA (e.g., Legal and Market Risk) and BofAS (e.g., Compliance, Business Control Officers, ETS and/or EES senior management), the ATS Working Group's mandate focuses on the ATS. ETS and EES senior management are included in the ATS Working Group to contribute to and be apprised of risk management efforts. ETS and EES senior management serve on the Working Group in their supervisory capacities. While such senior managers oversee risk for BofAS equity trading activities, neither they nor any other member of the ATS Working Group are involved in day-to-day principal trading. As such, the ATS Working Group is responsible for evaluating and reviewing Subscriber performance, assessing Subscriber trading activity in connection with segmentation determinations (See Part III, Item 13), reviewing and approving requests for direct access to Instinct X (See Part III, Item 2), and reviewing market developments to adhere to regulatory obligations. In furtherance of this mandate, the ATS Working Group has access to aggregated Subscriber post-trade order and conditional placement execution information, which it receives from the ET Products team no less than quarterly or on an as needed basis. The members of the ATS Working Group are subject to the safeguards and oversight procedures outlined in Part II, Item 7(a).**

**VARIOUS CONTROL FUNCTIONS--Certain BANA employees within BANA's Legal, and Operations departments provide ancillary support to BofAS. These employees assist BofAS with tasks including responding to regulatory inquiries or performing internal audits of the electronic trading platform, including Instinct X. For example, employees within Legal can be tasked with responding to a regulatory inquiry or examination and employees within Operations would assist in those efforts by, for example, obtaining relevant transaction data. When providing regulatory inquiry or internal audit support related to Instinct X or trading activity within Instinct X, these employees are provided post-trade execution information to complete their Instinct X related tasks.**

- b. Does any entity, other than the Broker-Dealer Operator, support the services or functionalities of the NMS Stock ATS ("service provider") that are required to be explained in Part III of this form?

Yes ☒ No ☐

If yes, both identify the service provider and provide a summary of the role and responsibilities of the service provider in response to the applicable Item number in Part III of this form, as required. List the applicable Item number here. If there are services or functionalities that are not applicable to Part III, identify the service provider, the services and functionalities, and also provide a summary of the role and responsibilities of the service provider here.

**EQUINIX, INC. - Equinix operates the Equinix NY4 New York IBX Data Center which hosts the servers that operate Instinct X. Additionally, Equinix provides connectivity services to Instinct X as described in Part III, Item 6 (Connectivity and Co-location). Equinix does not have access to the Subscriber confidential trading information within Instinct X.**

- c. If yes to Item 6(b), does the service provider, or any of its Affiliates, use the NMS Stock ATS services?

Yes ☐ No ☒

If yes, identify the service provider, or the Affiliate as applicable, and the ATS services that the service provider or its Affiliates use.

- d. If yes to Item 6(c), are the services that the NMS Stock ATS offers and provides to the entity required to be identified in Item 6(c) the same for all Subscribers?

Yes ☐ No ☐

If no, identify and explain any differences.

Item 7: Protection of Confidential Trading Information

- a. Describe the written safeguards and written procedures to protect the confidential trading information of Subscribers to the NMS Stock ATS, including:
- i. written standards controlling employees of the ATS that trade for employees' accounts; and
  - ii. written oversight procedures to ensure that the safeguards and procedures described above are implemented and followed.

*GENERAL BACKGROUND AND SCOPE OF SUBSCRIBER  
CONFIDENTIAL TRADING INFORMATION--*

Instinct X is comprised of a standalone hardware (i.e., server) and software application (collectively, the operating plant). Instinct X does not share an operating plant with any other BofAS system, but it is housed in the same data center as other BofAS systems.

BofAS maintains physical restrictions and policies and procedures designed to safeguard the confidential trading information of Subscribers. BofAS considers ~~Subscribers' order and execution-related information, a Subscriber's identity, orders, and~~ conditional placements routed to, and trades effected by, Instinct X (including data or analytics related to a Subscriber's transactions to be) confidential trading information ~~subject to protection (with the exception of. However, certain post-execution transaction information typically of the type made public under reporting rules or regulations, or of an aggregated nature).~~ Access involving Instinct X transactions may be included in various reports, data, and commentary communicated internally and externally to clients directly or through vendors, provided such information is anonymized, aggregated with execution information from other desks or from BofAS as a whole (such that no individual trade, Client, or Subscriber is identifiable), and communicated with appropriate delay. Subject to the above, access to Subscriber confidential trading information is limited to BofAS employees and systems responsible for operating Instinct X or responsible for its compliance with applicable rules. Set forth below are the BofAS employees and systems with access to Subscriber confidential trading information, as well as a description of the applicable safeguards and oversight procedures.

*EMPLOYEES WITH ACCESS TO SUBSCRIBER CONFIDENTIAL  
TRADING INFORMATION --*

BofAS does not have any employees solely responsible for Instinct X. The shared employees described in response to Part II, Item 6(a) are the only employees who have access to Subscriber confidential trading information. These employees are prohibited from sharing any Subscriber confidential trading information with Persons not authorized to receive such information. BofAS does not provide Subscriber confidential trading information to BofAS business units in furtherance of BofAS principal trading activities.

*SYSTEMS WITH ACCESS TO SUBSCRIBER CONFIDENTIAL  
TRADING INFORMATION--*

BofAS offers third-party external direct market access gateways to customers and clients which are used by some Direct Subscribers to transmit orders and/or conditional placements, including Subscriber confidential trading information, to Instinct X. These gateways communicate to the employees of the third-party responsible for managing the health of the respective gateway (as described in response to Part II, Item 7(d)), real-time information about where the Direct Subscriber's orders and/or conditional

placements were routed and or executed, which could be Instinct X or any other market center.

The order and execution management systems used by the Sales and Trading employees described in response to Part II, Item 6(a) can transmit Indirect Subscribers' confidential trading information to the extent orders handled by a Sales and Trading employee is routed to Instinct X. These systems communicate information to Sales and Trading employees with respect to where their Clients' orders were routed and/or executed, which could be Instinct X or any other market center.

Separately, BofAS algorithms and the BofAS SOR can transmit Indirect Subscribers' confidential trading information to the extent these systems route Indirect Subscribers' orders or conditional placements to Instinct X. Neither the BofAS algorithms nor the BofAS SOR make routing determinations based on information about orders or conditional placements the respective system routes to Instinct X.

All Subscriber orders and conditional placements entering Instinct X pass through the FIX interface. The FIX interface does not retain information about the orders or conditional placements entering Instinct X. The FIX interface does not communicate order or conditional placement information to any other BofAS system.

BofAS maintains a research database containing historical trading information. The ET Products team uses this database to run queries and generate reports as described above. This database includes post-trade Subscriber confidential trading information.

BofAS maintains an internal system containing order, conditional placement, and execution information routed through the BofAS SOR. The ET Consulting group uses this internal system to run queries and generate reports at the request of BofAS business units and Clients using the BofAS algorithms or SOR, including Indirect Subscribers.

BofAS employs a proprietary application for real-time monitoring of Instinct X. The MAG team uses this application to research Subscriber's orders, conditional placements, and executions and monitor the health of Instinct X (e.g., monitor the number of rejections, pending orders or conditional placements, order-to-fill ratios).

BofAS uses internal and external systems to comply with its books and records, trade reporting, surveillance and supervisory obligations. These systems can receive Subscriber order and execution information for purposes of creating surveillance, supervisory and OATS reports.

*SAFEGUARDING AND OVERSEEING SUBSCRIBER CONFIDENTIAL  
TRADING INFORMATION--*

**Access to Instinct X, Other Relevant BofAS Systems, and Subscriber Confidential Trading Information:** BofAS requires permissioned logins to access Instinct X. In addition, BANA's global cyber security efforts, including measures to detect and prevent unauthorized intrusions of BANA systems, apply to BofAS, including the operation of Instinct X.

**Relevant Business Control Officers and Compliance control functions must approve all employee access to Instinct X, including the operating plant, development code (including the FIX interface), and production logs. Any individual seeking access to Instinct X must submit a request through BofAS's Access Review Management System ("ARMS"). A registered principal must review and approve such request before an individual is granted access to Instinct X. In reviewing access requests, the registered principal considers factors including the employee's current role and whether the employee performs a function related to Instinct X. An employee's request to gain access may be denied if it is deemed to be unnecessary or inappropriate. Employees granted access to a system will have access to all Subscriber confidential trading information available in the system. If an employee changes roles, both the prior supervisor and new supervisor are required to review and adjust the employee's access entitlements to appropriately reflect the employee's new role. Additionally, all approved access requests are subject to a periodic review pursuant to BofAS's written supervisory procedures ("WSPs") described below.**

**Pursuant to the BofAS WSPs, on a quarterly basis, the ATS Supervisor or delegate conducts a review to confirm the appropriateness of user access entitlements to Instinct X, including verification that users whose roles have changed and/or, employees who have been inactive, transferred or terminated have their permissioned access removed from the system. This WSP governs access to the interface used to view and/or interact with Instinct X's order book and how the access entitlements to Instinct X should be handled once an individual submits a request for access through the ARMS process, as well as on an ongoing basis after a registered principal has granted access to an individual. Based on this review, the ATS Supervisor or delegate may revoke access rights to Instinct X's order book.**

**Pursuant to another BofAS WSP, on a quarterly basis, the ATS Supervisor or delegate conducts a review to confirm the appropriateness of user access entitlements to Instinct X's server logs, including verification that users whose roles have changed and/or, employees who have been inactive, transferred or terminated have their permissioned access removed from the system. This WSP governs access to the server logs and those with direct business responsibility, or who provide development or other technology**

support to Instinct X. Based on this review, the ATS Supervisor or delegate may revoke access rights to Instinct X's server logs.

Additionally, BofAS's contracts with the third-party external market access gateway providers and the third-party service providers described above require such providers to protect Subscriber confidential trading information. Specifically, and among other things, these third-parties must: (i) keep Subscriber trading information confidential, (ii) not share Subscriber confidential trading information with any Person who does not have a reasonable need to know or access such information, and (iii) not use or act on Subscriber confidential trading information other than to perform their responsibilities under their agreements (including the use of aggregated and anonymous data for internal statistical, forensic and similar purposes). These third-parties also perform periodic reviews of platform access to confirm the system access entitlements remain accurate, i.e., verify that users whose roles have changed and/or, employees who have been inactive, transferred or terminated have their permissioned access removed from the system.

**SEPARATION:** BofAS has physical and information barriers in place to separate employees and systems with access to Subscriber confidential trading information from those not permitted to access such information. Technology department employees are located in a separate physical location from other BofAS business units—either a different building or a different floor. MAG and ET Product [and Consulting](#) employees are located in the same building as other BofAS business units, but in a separate area. As noted above, Instinct X does not share an operating plant with any other BofAS system, but it is housed in the same data center as other BofAS systems.

**PERSONAL TRADING RESTRICTIONS:** BofAS prohibits all employees, including those with access to Subscriber confidential trading information, from trading based on non-public or other confidential information, which would include Subscriber confidential trading information. Pursuant to the Associate Investment Policy these employees must enter a trade pre-approval request via the Associate Investment Monitoring ("AIM") website for every purchase and sale of a security executed in an employee investment account, which among other things, requires the approval of the employee's supervisor and the AIM Group. When requesting approval for a trade, the employee must provide certain attestations, depending on the employee's role, including whether he or she: (i) reviewed the restricted list and that there are no restrictions, (ii) has no material non-public information, (iii) is not aware that Firm is effecting or proposing to effect a principal or customer trade in the security, and (iv) has held the security for 30 days (for sells). Prior to approving any request, the employee's supervisor and the AIM Group review the attestations. BofAS imposes a 30-day minimum holding period on any approved trades. Pursuant to a BofAS WSP, on a



daily basis, the registered principal (or delegate) with supervisory oversight responsibility for the relevant employee conducts a review of the employee's personal trading activity. Specifically, the relevant supervisor or delegate receives a daily report reflecting the prior day's trade activity for each such employee. The relevant supervisor or delegate assesses whether the employee obtained the appropriate pre-approval or pre-clearance for such trades and for any red flags (e.g., excessive trading).

**FIRM-WIDE CONFIDENTIAL INFORMATION RESTRICTIONS:** As a general matter, BofAS requires all employees to undergo a comprehensive screening before commencing employment and each BofAS employee is bound by and required to observe the BAC Code of Conduct, which includes provisions that address the handling of Client information and impose a duty of confidentiality.

- b. Can a Subscriber consent to the disclosure of its confidential trading information to any Person (not including those employees of the NMS Stock ATS who are operating the system or responsible for its compliance with applicable rules)?

Yes ☐ No ☒

If yes, explain how and under what conditions.

- c. If yes to Item 7(b), can a Subscriber withdraw consent to the disclosure of its confidential trading information to any Person (not including those employees of the NMS Stock ATS who are operating the system or responsible for its compliance with applicable rules)?

Yes ☐ No ☐

If yes, explain how and under what conditions.

- d. Provide a summary of the roles and responsibilities of any Persons that have access to confidential trading information, the confidential trading information that is accessible by them, and the basis for the access.

**The shared employees described in response to Part II, Item 6(a) have access to Subscriber confidential trading information.**

**THIRD-PARTY EXTERNAL MARKET ACCESS GATEWAY PROVIDERS:** As noted in response to Part II, Item 7(a), BofAS operates external direct market access gateways, which are managed by third-parties, that can transmit Direct Subscriber confidential trading information. These platforms receive information about Direct Subscribers' orders, conditional placements, and executions to the extent such information is routed to Instinct X. Similar to systems used by Sales and Trading personnel, these gateways handle orders that may, based on the direction of the Direct

**Subscriber, be routed directly to Instinct X. Dedicated support personnel for these gateways are responsible for addressing BofAS inquiries related to Direct Subscribers' orders or conditional placements routed to Instinct X and for managing the health of the platform. These employees can access real-time order, conditional placement, and execution information through the respective activity logs for Direct Subscribers using the respective gateway. However, they do not have access to the Instinct X order book.**

**THIRD-PARTY BOFAS SERVICE PROVIDERS:** As noted in response to Part II, Item 7(a), BofAS uses third parties to store the trading information associated with BofAS's electronic trading business, which includes trading activity on Instinct X, i.e., Subscriber confidential trading information. As requested by BofAS, dedicated support personnel from the third-party are responsible for generating reports, e.g., regulatory reports, client reports, booking records, based on the stored trading information. Through activity logs, these dedicated support personnel can access real-time order, conditional placement, and execution information. However, they do not have access to the Instinct X order book.

<b>Summary report:</b> <b>Litera® Change-Pro for Word 10.7.0.7 Document comparison done on</b> <b>8/14/2019 5:40:46 PM</b>	
<b>Style name:</b> WH-Default Style	
<b>Intelligent Table Comparison:</b> Active	
<b>Original DMS:</b> iw://imanageworkus.wilmerhale.com/ActiveUS/175281633/1	
<b>Modified DMS:</b> iw://imanageworkus.wilmerhale.com/ActiveUS/175276560/7	
<b>Changes:</b>	
<u>Add</u>	30
<del>Delete</del>	22
<u>Move From</u>	6
<u>Move To</u>	6
<u>Table Insert</u>	0
<del>Table Delete</del>	0
<u>Table moves to</u>	0
<del>Table moves from</del>	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	0
<b>Total Changes:</b>	64