

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).

The UBS ATS is operated by UBS Securities LLC as the Broker-Dealer Operator. UBS Securities LLC ("UBS") is a broker and dealer registered with the Securities and Exchange Committee (SEC).

The following UBS Equities business units of the Broker-Dealer Operator (the "Business Units") are permitted to enter or direct the entry of agency or principal orders and Conditional Indications (CIs) for execution in the UBS ATS:

Global Cash Equities - This business unit is comprised of both sales and trading desks, which provide services to institutional (including other broker-dealers), retail, and corporate clients in cash equity securities. The business unit primarily executes client orders on an agency basis, but it also maintains principal trading books to satisfy clients' liquidity needs as a market maker. This business unit is comprised of the following desks which are permitted to enter or direct the entry of agency or principal orders and CIs for execution in the UBS ATS: (1) High Touch Cash Trading, (2) Portfolio Trading, (3) Central Risk Book, (4) Retail Market-Making (RMM), and (5) Electronic Trading.

Global Equity Derivatives - This business is primarily a client facilitation business that services clients in flow and structured derivatives. The derivative products typically traded include but are not limited to OTC, listed, structured notes, dynamic strategies, corporate derivatives, convertible bonds, and commodity index products. The trading desk generally hedges its risk on both a security-by-security and portfolio basis, as appropriate. This business unit is comprised of the following desks which are permitted to enter or direct the entry of agency or principal orders and CIs for execution in the UBS ATS: (1) Flow Derivative Trading, (2) Structured Products, (3) Public Distribution, and (4) Fund Derivative Trading.

Global Financing Services - In addition to providing prime brokerage services to clients, this business operates a market making business in delta-one equity products (e.g., total return swaps, security futures and options). The business also offers securities lending and inventory management services to the UBS Global Equities business. Risks are generally hedged on a trade-by-trade basis. This business unit is comprised of the following desks which are permitted to enter or direct the entry of agency or principal orders and CIs for execution in the UBS ATS: (1) Equity Finance, and (2) Securities Lending.

All Business Units have the same levels of access to services (e.g., connectivity, liquidity, restrictions) within the UBS ATS and all orders or CIs from the Business Units reach the UBS ATS through the UBS Smart Order Router ("UBS SOR"). The desks of the Business Units, as described above, are Class A Direct Subscribers. For the definitions of each class of ATS Subscriber, please see Part II, Item 5.

Class A Direct Subscribers are permitted to enter and direct the entry of agency and principal orders and CIs into the UBS ATS, using the MPID "UBSS".

- 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.

The UBS ATS offers certain services to the Class A Direct Subscribers that differ from those provided to other classes of Subscribers. Listed below are descriptions of those differentiated services, along with applicable references to Part III of this submission.

- Item 3, Exclusion from ATS Services – Class A Direct Subscribers are not subject to reversion analysis and Source Category grading or Conditional Scoring, and therefore are not subject to exclusion from ATS Services. ~~However, orders from clients of the US Retail Market Making Desk (RMM), and orders from Retail Broker Dealer clients of Global Cash Equities categorized as Source Category 2 are subject to reversion analysis and Source Category grading.~~ Details of that grading process and the definition of the term "Source Category" are available in Part III, Item 13.
- Item 5, Means of Entry – Class A Direct Subscribers do not have direct connectivity to the UBS ATS; their orders and CIs enter the UBS ATS through the UBS SOR using the industry standard Financial Information eXchange protocol (FIX 4.2).
- Item 9, Conditional Orders and Indications of Interest – Conditional Indications (CIs) sent by Class A Direct Subscribers are not included in the UBS ATS monthly evaluation process in which the quality of CIs and subsequent Firm-Up orders are measured and assigned a Conditional Score (the "Score"). CIs are described in Part III, Item 9.
- Item 13, Segmentation; Notice – Class A Direct Subscribers are not subject to reversion analysis and Source Category grading or Conditional Scoring, and therefore are not subject to exclusion from ATS Services. ~~However, orders from clients of the RMM and orders from Retail Broker Dealer clients of Global Cash Equities categorized as Source Category 2 are subject to reversion analysis and Source Category grading.~~ Details of the grading process and the term "Source Category" are defined in Part III, Item 13.
- Item 14, Counter-Party Selection – For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.
- Item 19, Fees – The UBS ATS does not charge an execution fee for Class A Direct Subscribers.
- Item 21, Trade Reporting – Business Unit principal orders crossing with other Business Unit principal orders will be treated as internal journal movements if the same legal entity is on each side of the cross and will not be reported to a trade reporting facility. All other Business Unit principal order crosses will be reported as principal.

- c Are there any formal or informal arrangements with any of the business units required to be identified in Item 1(a) to provide orders or trading interest to the NMS Stock ATS (e.g., undertaking to buy or sell continuously, or to meet specified thresholds of trading or quoting activity)?

☐ Yes ☒ No

If yes, identify the business unit and respond to the request in Part III, Item 12 of this form.

- d. Can orders and trading interest in the NMS Stock ATS be routed to a Trading Center operated or controlled by the Broker-Dealer Operator?
- ☐ Yes ☒ No

If yes, respond to request in Part III, Item 16 of this form.

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).

Affiliates of the Broker-Dealer Operator are permitted to enter or direct the entry of orders and trading interest into UBS ATS through the UBS SOR using FIX 4.2. For purposes of this Form ATS-N, UBS has defined the term "Affiliate Orders" to mean orders and Conditional Indications (CIs) sent to the UBS ATS on behalf of an affiliate of the Broker Dealer Operator.

Affiliate Orders use the "UBSS" MPID and may be sent as principal or agency but all Affiliate Orders are handled by the UBS ATS on an agency basis (i.e., the Broker-Dealer Operator, UBS Securities LLC, acts as agent for its Affiliates).

Affiliate Orders are classified as either Class A Direct Subscriber or Class A Indirect Subscriber depending on from where the Affiliate Order originates. If the Affiliate Orders originates from either the UBS Algorithmic platform or Retail Market Making (RMM) then that Affiliate Order would be classified as a Class A Direct Subscriber, otherwise it would be classified as a Class A Indirect Subscriber.

The following Affiliates entered or directed the entry of agency and principal orders, CIs and trading interest into UBS ATS in Q2 2019:

- UBS AG, acting through various global branches (e.g., UBS AG London Branch)
- UBS Financial Services Inc.
- UBS Europe SE
- UBS Securities Canada Inc.
- UBS Securities Australia Limited
- UBS Switzerland AG

In general, these Affiliates are members of the following types of business operated within the larger UBS organization:

- Investment Bank: provides investment banking, advisory, capital markets, research, and sales and trading services to institutional clients around the world.
- Wealth Management: provides comprehensive financial advice, solutions and services to wealthy families and individuals around the world.
- Personal & Corporate Banking: provides comprehensive financial products and services to UBS's private, corporate and institutional clients in Switzerland.
- Asset Management: offers investment capabilities and investment styles across all major traditional and alternative asset classes to institutions, wholesale intermediaries and wealth management clients around the world.

- Corporate Center: comprised of Services, Group Treasury, Asset and Liability Management, and Non-core and Legacy Portfolio.

Please note the above does not represent an exhaustive listing of all Affiliates that have the ability to enter or direct the entry of orders and trading interest into UBS 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.

The UBS ATS offers certain services to Affiliates that differ from those provided to Subscribers. Listed below are descriptions of those differentiated services, along with applicable references to Part III of this submission:

- Item 3, Exclusion from ATS Services – Affiliates are not subject to Source Category grading or Conditional Scoring, ~~except for clients of RMM, which clients are subject to Source Category grading.~~
- Item 5, Means of Entry – Affiliates do not have direct connectivity to the UBS ATS. All Affiliate orders and CIs enter the UBS ATS through the UBS SOR using FIX 4.2.
- Item 9, Conditional Orders and Indications of Interest – Conditional Indications (CIs) sent by Class A Direct Subscribers on behalf of an Affiliate are not included in the UBS ATS monthly evaluation process in which the quality of CIs and subsequent Firm-Up orders are measured and assigned a Conditional Score (the "Score"). CIs are described in Part III, Item 9.
- Item 13, Segmentation; Notice – Affiliates are not subject to Source Category grading or Conditional Scoring, ~~except for clients of RMM, which clients are subject to Source Category grading.~~
- Item 14, Counter-Party Selection – For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.
- Item 19, Fees – Affiliates do not pay an execution fee to the UBS ATS.

- c. Are there any formal or informal arrangements with an Affiliate required to be identified in Item 2(a) to provide orders or trading interest to the NMS Stock ATS (e.g., undertaking to buy or sell continuously, or to meet specified thresholds of trading or quoting activity)?

☐ Yes ☒ No

If yes, identify the Affiliate and respond to the request in Part III, Item 12 of this form.

- d. Can orders and trading interest in the NMS Stock ATS be routed to a Trading Center operated or controlled by an Affiliate of the Broker-Dealer Operator?

☐ Yes ☒ No

If yes, respond to the request in Part III, Item 16 of this form.

Item 5: Other Products and Services

- a. Does the Broker-Dealer Operator offer Subscribers any products or services for the purpose of effecting transactions or submitting, disseminating, or displaying orders and trading interest in the NMS Stock ATS (e.g., algorithmic trading products that send orders to the ATS, order management or order execution systems, data feeds regarding orders and trading interest in, or executions occurring on, the ATS)?

☒ Yes ☐ No

If yes, identify the products or services offered, provide a summary of the terms and conditions for use, and list here the applicable Item number in Part III of this form where the use of the product or service is explained. If there is no applicable Item in Part III, explain the use of the product or service with the ATS here.

The Broker-Dealer Operator offers a wide range of execution products and services (the "Electronic Trading Services" or "Services") that enable clients to interact with displayed and non-displayed liquidity, including the UBS ATS, through algorithmic trading, UBS SOR, and Direct Market Access (DMA). The use of the Services is governed by the relevant contractual agreements between the client and UBS Securities LLC with no specific terms and conditions for routing orders and/or Conditional Indications to the UBS ATS.

UBS ATS Subscribers fall into one of the following categories:

- Class A Direct Subscribers are the trading desks (see Part II, Item 1 for more information) which are within UBS Securities LLC ("UBS" or "Broker-Dealer Operator"), where the trading desks route orders and trading interest to the UBS ATS using the Broker Dealer Operator Services and UBS makes the routing decision. This consists of UBS Algorithmic child orders and CIs from the UBS SOR routed on behalf of UBS clients, and also includes Principal flow from UBS trading desks and orders and CIs from RMM.
- Class A Indirect Subscribers are clients of the Broker-Dealer Operator that direct orders or CIs to the UBS ATS through the Electronic Trading Services provided by the Broker-Dealer Operator. They must undergo UBS' standard onboarding and Know Your Client (KYC) review processes.
- Class B Direct Subscribers must be a US registered broker-dealer and a member of at least one self-regulatory organization. They must provide information via an ATS questionnaire, which is reviewed by the ATS Desk (See Part II, Item 6a for definition), Legal, and Compliance & Operational Risk Control ("Compliance"). If approved, they must undergo UBS' onboarding and KYC review processes and sign a specific UBS ATS Subscriber Agreement. Class B Direct Subscribers direct orders and CIs to the UBS ATS through their own direct connections to the UBS ATS;
- Class B Indirect Subscribers must be US based and fully disclosed to and approved by the UBS ATS to direct orders and CIs to the UBS ATS through a Class B Direct Subscriber. They must provide information via an ATS questionnaire, which is reviewed by the ATS Desk (See Part II, Item 6a for definition), Legal, and Compliance. If approved, they must undergo UBS' onboarding and KYC review processes, but Class B Indirect Subscribers do not sign a specific UBS ATS Subscriber Agreement. The Broker-Dealer Operator has the authority and discretion to deny any Class B Indirect Subscriber proposal made by a Class B Direct Subscriber.

The Services that UBS offers to Subscribers are as follows.

- Class A Direct Subscribers: The Broker Dealer Operator offers all of the aforementioned Services to the Class A Direct Subscribers.

- Class A Indirect Subscribers: UBS offers Class A Indirect Subscribers the ability to enter orders and CIs directly into the UBS ATS (DMA) either through the UBS SOR and/or a UBS developed FIX 4.2 client connectivity proxy and/or through a UBS controlled third party technology platform.
 - Class B Direct Subscribers and Class B Indirect Subscribers: UBS offers Class B Direct Subscribers and Class B Indirect Subscribers the ability to enter orders and CIs directly into the UBS ATS through a FIX 4.2 or UBP connection (See Part III, Item 5) as well as the ability to establish a direct cross-connect to the UBS ATS (See Part III, Item 6). In addition to being approved by the Broker Dealer Operator, Class B Direct Subscribers and Class B Indirect Subscribers of the UBS ATS must complete an onboarding questionnaire and be approved by the UBS ATS for access to the UBS ATS.
- b. If yes to Item 5(a), are the terms and conditions of the services or products 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.

The UBS ATS offers certain services to the Broker Dealer Operator that differ from those provided to other classes of Subscribers. Listed below are descriptions of those differentiated services, along with applicable references to Part III of this submission:

- Item 3, Exclusion from ATS Services – All orders and CIs from Class B Direct and Indirect Subscribers are subject to reversion analysis and Source Category grading and Conditional Scoring, and therefore are subject to exclusion from ATS Services. However, not all Class A Direct and Indirect Subscriber orders and CIs are subject to reversion analysis and Source Category grading and Conditional Scoring. For more information, please see Part III, Item 13(a).
- Item 9, Conditional Orders and Indications of Interest – Conditional Indications (CIs) sent by Class A Direct Subscribers are not included in the UBS ATS monthly evaluation process in which the quality of CIs and subsequent Firm-Up orders are measured and assigned a Conditional Score (the "Score"). CIs are first defined in Part III, Item 9.
- Item 13, Segmentation – All orders and CIs from Class B Direct and Indirect Subscribers are subject to reversion analysis and Source Category grading or Conditional Scoring, and therefore are subject to exclusion from ATS Services. ~~However, not all~~ Class A Direct ~~and~~ Subscriber orders and CIs are not subject to reversion analysis, Source Category grading, or Conditional Scoring. Class A Indirect Subscriber orders and CIs are subject to reversion analysis, Source Category grading, and Source Category grading or Conditional Scoring only when not received through the UBS SOR.
- Item 14, Counter-Party Selection – For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.
- Item 19, Fees – The UBS ATS does not charge an execution fee for Class A Direct Subscribers.

It is possible for a US registered broker-dealer to be a Class B Direct Subscriber of the UBS ATS, and also sign the relevant contractual agreement with the Broker-Dealer Operator that provides the client with access to the Electronic Trading Services. In this case, the manner in which such a client sends an order or CI to the UBS ATS determines how the order is classified. If the client's order or CI enters the UBS ATS through the Broker-Dealer Operator's Electronic Trading Services, it would

be classified either as a Class A Direct Subscriber or a Class A Indirect Subscriber, according to the definitions in Part II Item 5(a). If the client's order or CI enters the UBS ATS through their direct connection, it would be classified as a Class B Direct Subscriber.

Similarly, it is also possible for a Class B Indirect Subscriber to sign the relevant contractual agreement with the Broker-Dealer Operator that provides the client with access to the Electronic Trading Services, in which case the manner in which such a client sends an order or CI to the UBS ATS determines how the order or CI is classified. If the client's order or CI enters the UBS ATS through the Broker-Dealer Operator's Electronic Trading Services, it would be classified either as a Class A Direct Subscriber or a Class A Indirect Subscriber, according to the definitions in Part II Item 5(a). If the client's order or CI enters the UBS ATS through their directed access provided by a Class B Direct Subscriber, it would be classified as a Class B Indirect Subscriber.

- c. Does any Affiliate of the Broker-Dealer Operator offer Subscribers, the Broker-Dealer Operator, or both, any products or services for the purpose of effecting transactions or submitting, disseminating, or displaying orders or trading interest in the NMS Stock ATS?
☐ Yes ☒ No

If yes, identify the products or services offered, provide a summary of the terms and conditions for use, and list here the applicable Item number in Part III of this form where the use of the product or service is explained. If there is no applicable item in Part III, explain the use of the product or service with the ATS here.

- 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.

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.

General Background and Scope of Subscriber Confidential Trading Information: The Broker-Dealer Operator operates the UBS ATS trading systems and is involved in the execution, processing, clearing, and settling of transactions executed in the UBS ATS.

UBS considers Subscriber confidential trading information (CTI) to consist of Subscribers' identities as well as Real-Time CTI and Post-Trade CTI (see below) relating to orders, trading interests, and executions in UBS ATS.

UBS does not consider information publicly disseminated pursuant to regulatory requirements (e.g., information that is reported to the consolidated tape pursuant to SRO trade reporting requirements, etc.), or information of an aggregated and anonymized nature (e.g., aggregated and anonymous order, trading interest, and execution statistics (see Part III, Item 26), advertisements, etc.) to be CTI.

For the purpose of this Form ATS-N, the term "Real-Time CTI" means order, trading interest, and execution information available for viewing in a Graphical User Interface (GUI) that provides visibility to such information on a near real time basis.

Furthermore, for the purpose of this Form ATS-N, the term "Post-Trade CTI" means order, trading interest, and execution information available for viewing in either a database, log file, or report format solely after the event occurs (including canceled and expired orders) and the information is stored in its respective location and medium. The UBS ATS aggregates Post-Trade CTI across the entire ATS, by sector, by order type, by market capitalization, by size, by symbol or any other criteria deemed appropriate by the ATS Desk (see definition under ACE). The UBS ATS aggregates and anonymizes Post-Trade CTI on a daily, weekly, monthly, quarterly, semi-annual, or annual basis.

UBS administers access to CTI through a permission-based bank access system (the "Access System"). The Access System allows Persons to submit a request documenting a reason why the access to CTI is required. When a request is submitted, the Access System creates notifications for the line manager and ATS Supervisor to review the access request in the Access System and either approve or reject the request. Furthermore, the UBS ATS systems are physically segregated with dedicated permissions to the segregated trading environment.

UBS Americas Cash Equities (referred to as "ACE"): UBS ATS employees reside within ACE and are responsible for the management and supervision of the UBS ATS. ACE is part of the UBS Global Cash Equities business unit as described in Part II, Item 1. Within ACE the UBS ATS Desk is separate from all other groups. For purposes of this Form ATS-N, the term "ATS Desk" refers to the UBS ATS Supervisor, authorized delegates, and ATS senior management. The following groups provide shared resources within ACE: Senior Management, Market Structure (MS), Quantitative Analytics and Development (QAD), Product Development Group (PDG), Regulatory Risk Management (RRM), and Chief Operating Office (COO). While no other groups within ACE have direct access to the UBS ATS or visibility into the UBS ATS systems or order book, each of these shared functions has different levels of access to CTI based on their roles and responsibilities related to the UBS ATS.

- Senior Management ("Senior Management"): Senior Management within the Global Cash Equities business is ultimately responsible for the operations of the ACE business, including the UBS ATS. Senior Management may have access, on a case-by-case basis, to all CTI available to any member of the ATS Desk for the sole purpose of strategically operating the broader business. Access is approved through the Access System or separate supervisory approval.
- Market Structure (MS): The Americas Market Structure team is responsible for closely monitoring market structure and regulatory developments and regularly sharing UBS' insights through micro and macro market updates to all clients of UBS including UBS ATS Subscribers. MS may be made aware that a client is a UBS ATS Subscriber for purposes of discussions with that client, however, MS will not have access to any other CTI. Access is approved through the Access System or separate supervisory approval.
- Quantitative Analytics and Development (QAD): The Quantitative Analytics and Development team is responsible for Post-Trade CTI analytics for Equities including the UBS ATS with a focus on items such as Subscriber-specific and aggregated data for distribution, Source Category grading, Conditional Scoring analyses, and developing new functionality. QAD generally has access to Post-Trade CTI, but QAD also may have access to Real-Time CTI, on a case by case basis, as necessary for the performance of their responsibilities. Access is approved through the Access System.
- Product Development Group (PDG): The Product Development Group is responsible for the management and coordination of new development items and enhancements to existing systems within UBS ACE including the UBS ATS. PDG has access to Post-Trade CTI on a case-by-case basis, but in some cases access to Real-Time CTI may be provided if necessary for the performance of responsibilities. Access is approved through the Access System.

- Regulatory Risk Management (RRM): The Regulatory Risk Management team is responsible for the development and implementation of governance and control processes. RRM serves several roles including, but not limited to: 1) helping to ensure the UBS ATS operates within the applicable regulatory framework, and 2) performing surveillance monitoring on a T+1 basis. RRM personnel have access to Post-Trade CTI to perform their responsibilities and to assist with the development and enforcement of governance controls. Access is approved through the Access System or separate supervisory approval
- Chief Operating Officer (COO): The Chief Operating Office staff assists with the development and implementation of governance and control processes. One of the roles of COO is to help ensure the UBS ATS operates within the applicable control framework. COO personnel have access to Post-Trade CTI to support the control oversight of the UBS ATS and help ensure the UBS ATS operates consistent with the offering and bank standards. Access is approved through supervisory approval.

UBS Business Solutions US LLC ("UBS Business Solutions"): UBS Business Solutions is an Affiliate of the Broker-Dealer Operator that provides development, support (e.g., monitoring, Subscriber support, deployment, systems engineering, etc.), control functions (e.g., Legal, Compliance, Surveillance, etc.), and other general corporate functions necessary for the operation of UBS ATS. Employees of UBS Business Solutions that service the operations of the UBS ATS as well as other UBS trading desks, business units and/or Affiliates of the Broker-Dealer Operator ("shared employees") have access to CTI if required to perform their job function. Access to Real-Time CTI monitoring tools for the UBS ATS is restricted and only granted to business, technology, and support staff on a case-by-case basis when necessary to perform their responsibilities. The functions within UBS Business Solutions that have access to CTI are listed below.

- Development: UBS' Order Management System technology development team (Development) is responsible for the software technology (e.g., development, testing, deployment, stability, support, etc.) of the UBS ATS. Development has access to Real-Time CTI and Post-Trade CTI to perform their responsibilities. This access is through the Access System.
- Support: Support personnel are responsible for addressing Subscriber inquiries related to orders, trading interest, and executions as well as escalating client market access limit issues, implementing limit change requests, deploying changes for Subscribers, monitoring the operation of the UBS ATS, and working with data center operations, networking, engineering, and incident management and response. Support personnel have access to Real-Time CTI (including alerting) and Post-Trade CTI in the UBS ATS to ensure the system operates consistent with the offering and to assist Subscribers with Real-Time CTI or Post-Trade CTI analysis. This access is through the Access System.
- Legal, Compliance and Surveillance: Personnel within Legal, Compliance and Surveillance cover both the operations of the UBS ATS and other business units of the Broker-Dealer Operator and its Affiliates. Legal, Compliance and Surveillance staff have access to Post-Trade CTI on a case-by-case basis. Access to Post-Trade CTI is necessary for the performance of their responsibilities related to ensuring the ATS operates in accordance with applicable rules and regulations, as well as performing T+1 surveillance monitoring. This access is through supervisory approval.
- Finance, Clearing, and Settlement: Personnel within Finance, Clearing, and Settlement cover both the operations of the UBS ATS and other business units of the Broker-Dealer Operator and its Affiliates. The systems supporting Finance, Clearing, and Settlement have standing access to Post-Trade CTI to ensure proper support of the ATS. The staff within Finance, Clearing, and Settlement must have approved access to these systems which is managed

through the Access System. This access is through the Access System and approvals are managed by the team managers.

Please note that certain individuals with access to CTI may change roles and move among different groups/functions within Global Cash Equities and UBS Business Solutions. When employees change roles, the UBS ATS may allow certain employees to temporarily maintain their existing level of access to CTI for the sole purpose of transitioning their responsibilities to another employee. When the transition of responsibilities is complete and the ATS Desk determines the employee's legacy access to CTI is no longer required, access will be removed.

- 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.

UBS Business Solutions, an Affiliate of the Broker-Dealer Operator, provides compliance, legal, development, systems engineering, accounting, and corporate functions necessary for the operation of UBS ATS. Listed below are summaries of the roles and responsibilities performed by UBS Business Solutions as they relate to items specified in Part III:

- Item 6: Connectivity and Co-location – UBS Business Solutions provides data center support and networking resources to establish and maintain client connectivity for trading purposes.
- Item 22: Clearance and Settlement – UBS Business Solutions performs clearance and settlement services for the Broker-Dealer Operator's principal and institutional executions.

- 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.

UBS Business Solutions is an Affiliate of the Broker-Dealer Operator, and, because it is part of the UBS corporate organization, UBS Business Solutions is likewise considered an Affiliate of the Broker-Dealer Operator's Affiliates. As described above in Item 2 of Part II, certain entities that are Affiliates of both the Broker-Dealer Operator and UBS Business Solutions use certain services offered by the UBS ATS.

- 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

The UBS ATS offers certain services to Affiliates that differ from those provided to Class A Indirect Subscribers, Class B Direct Subscribers and Class B Indirect Subscribers. Listed below are descriptions of those differentiated services, along with applicable references to Part III of this submission:

- Item 3, Exclusion from ATS Services – Affiliates are not subject to Source Category grading or Conditional Scoring, ~~except for clients of RMM.~~

- Item 5, Means of Entry – Affiliates do not have direct connectivity to the UBS ATS. Affiliate Orders enter the UBS ATS through the UBS SOR using FIX 4.2.
- Item 6, Connectivity and Co-location – Affiliates do not have direct connectivity to the UBS ATS. Affiliate Orders enter the UBS ATS through the UBS SOR using FIX 4.2 and traverse a client-facing firewall.
- Item 9, Conditional Orders and Indications of Interest – Conditional Indications (CIs) sent by the Broker-Dealer Operator on behalf of an Affiliate are not included in the UBS ATS monthly evaluation process in which the quality of CIs and subsequent Firm-Up orders are measured and assigned a Conditional Score (the "Score"). CIs are defined in Part III, Item 9.
- Item 13, Segmentation; Notice – Affiliates are not subject to Source Category grading or Conditional Scoring, ~~except for clients of RMM.~~
- Item 14, Counter-Party Selection – For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.
- Item 19, Fees – Affiliates do not pay an execution fee to the UBS ATS.

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.

For purposes of this Form ATS-N, UBS has defined exclusion from UBS ATS services as follows:

- Whole exclusion means any flow (or subset of flow) eligible for grading that is completely excluded from accessing the UBS ATS.
- Partial exclusion means any flow (or subset of flow) eligible for grading that has its interactions in the UBS ATS limited by virtue of a contra-party crossing restriction and/or the Source Category assigned to that flow (or subset of flow).

The UBS ATS will suspend/wholly exclude any flow (or subset of flow) which is eligible for grading if the associated reversion metric exceeds 100% reversion for three consecutive monthly reviews. The UBS ATS reserves the right to suspend or wholly exclude any flow (or subset of flow) for reputational, regulatory, conduct, or other similar reasons.

A Subscriber's partial exclusion from ATS services is determined by the Subscriber's assigned Source Category, and by the crossing restrictions associated with contra-party orders or CIs. A Subscriber's Source Category (if eligible for grading) is determined by the grading process described in Part III, Item 13. Crossing restrictions are also described in Part III, Item 13.

Similarly, the Conditional Indication (CI) handling process allows for partial exclusions dependent on the crossing restrictions entered on the contra order or CI. Handling and scoring of CIs is described further in Part III, Item 9.

- b. If yes to Item 3(a), are the conditions required to be identified in Item 3(a) the same for all Subscribers?
- ☐ Yes ☒ No

If no, identify and explain any differences.

For the purpose of this Form ATS-N, the term Subscriber Flow refers to a subset of orders and CIs originated by a Subscriber and attributed to such subset on an a-priori basis.

Orders and CIs received through the UBS SOR (i.e., all Class A Direct ~~Subscribers~~Subscriber Flow and certain Class A Indirect Subscriber Flow) are not subject to reversion analysis and Source Category grading or Conditional Scoring, and therefore are not subject to exclusion from ATS Services. ~~However, orders from clients of the US Retail Market Making Desk (RMM) and orders from a Retail Broker Dealer via the UBS SOR categorized as Source Category 2 are subject to reversion analysis and Source Category grading.~~

~~Affiliate Orders are eligible for grading if received from RMM.~~ Details of the grading process and the definition of the term "Source Category" are available in Part III, Item 13.

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 4.2), 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).

Conditional Indications (CIs) represent an intent to trade, specifying a security, a side (buy or sell), a price, a quantity and a minimum executable quantity. A CI will be held by the UBS ATS until cancelled or expired at the end of the day. CIs can only be sent to the UBS ATS via FIX 4.2 protocol.

If either two CIs or an order and a CI match in criteria, the UBS ATS will send a message to one (or more) CI sender(s) indicating that there is a potential opportunity to trade (an "Invite" or "Invitation"), but will not provide any information on price or quantity available. An Invite message is represented as an Unsolicited Cancel Execution Report (FIX 4.2 Tag 35=8 and Tag 39=4). The Invite is sent to the sender of the CI by the UBS ATS to notify them that an eligible contra (i.e. CI or order) is present.

Upon receipt of the Invite, the CI sender is expected to respond to an Invite message by sending a Day Order (a "Firm-Up Order") (NewOrderSingle, FIX 4.2 Tag 35=D) message to the UBS ATS with a reference to the Invite ID in the Invite message. The Firm-Up Order may be for a quantity different than the quantity of the CI (although UBS reasonably expects Firm-Up Orders to be at least equal to the minimum executable quantity) and should be received by UBS within 100 milliseconds. While the UBS ATS will still accept Firm-Up orders received more than 100 milliseconds after the Invite was sent, for scoring purposes a late response will be considered as not responding at all. Regardless of if/when the CI sender responds to an Invite, the CI is always cancelled after the UBS ATS sends an Invite. The sending of an Invite will not delay or prevent any orders from matching in the UBS ATS prior to receipt of a responding Firm-Up Order.

Firm-Up Orders are not required or destined to match with the contra order or CI that generated the Invite. Firm-Up Orders, from a matching logic perspective, will match in a price/time priority taking into account applicable crossing restrictions.

All Firm-Up Orders entered into the UBS ATS will expire and be cancelled back to the sender after 500 milliseconds if not fully filled or cancelled by the sender. During the lifecycle of a Firm-Up

Order, it may execute against any eligible contra order, but the Firm-Up Order will never generate an Invite to another CI.

Senders of CIs will be subject to a monthly evaluation in which the quality of their CIs and subsequent Firm-Up Orders are measured and assigned a Conditional Score (the "Score"). The metrics used to measure the quality of CIs are: 1) a blended reversion metric that assesses impact to the quote five (5) seconds after an Invite is sent or an execution occurs, 2) percentage of responses to Invites within 100 milliseconds, 3) Firm-Up Order quantity as a percentage of CI quantity, and 4) Firm-Up Order minimum quantity as a percentage of CI minimum quantity. A Score will be assigned based on consideration of these measurements. A new sender of CIs that has not been previously assigned a Score will be categorized as Medium during an initial phase, and a new Score (which may be the same or different) will be assigned when the requisite evaluation is performed.

At any time in its reasonable discretion, UBS ATS through an ad-hoc or regularly scheduled governance meeting may revise a Score by changing it to a lower category (i.e. from High to Medium). Such a revision would generally occur in response to a significant intra-month change in CI metrics and/or behavior.

Any change to a Score, regardless of the reason, will be communicated to the affected Subscriber at least one business day before the change is effective.

The UBS ATS does not generate Invites on orders unless indicated to do so by a Subscriber. Senders of CIs are required to send an Invite Grade (as described below) on each CI to indicate what contra CIs an Invite may be sent to. CIs without an Invite Grade will be rejected.

Conditional Indication Restrictions (Invite Grade):

CI restrictions can be used to limit interactions to certain types of CIs on an order by order basis. More specifically, the CI restrictions are available by inserting one of the below values in the Conditional Invite Grade field on a CI or an order:

- Generate Invites to all Conditional Indications (Invite Grade = 1)
- Generate Invites to Conditional Indications with a Medium Score or better (Invite Grade = 2)
- Generate Invites to Conditional Indications with a High Score or better (Invite Grade = 3)
- Generate Invites to Conditional Indications from UBS Algorithms only (Invite Grade = 4)

- 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.

Class A Direct Subscriber CIs are excluded from the UBS ATS monthly evaluation process in which the quality of the CIs and subsequent Firm-Up Orders are measured and assigned a Score. Class A Indirect Subscriber CIs are included in the UBS ATS monthly evaluation process only when not received through the UBS SOR.

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.

The UBS ATS is operational during regular US market hours, generally 9:30 AM to 4:00 PM Eastern Time; any orders and CIs received outside of this timeframe are rejected. The UBS ATS will not match in a security until a transaction in such security has been executed on a national securities exchange, the UBS ATS has opened for trading, LULD bands for the security have

been publicly disseminated, and there is a valid two-sided quote available (valid, non-crossed, non-locked NBB and NBO are present).

With respect to IPO securities, the UBS ATS will reject orders and CIs in IPO securities received prior to 9:30 AM Eastern Time, and will not match in an IPO security until a transaction in such security has been executed on the security's listing exchange, the UBS ATS has opened for trading, LULD bands for the security have been publicly disseminated, and there is a valid two-sided quote available (valid, non-crossed and non-locked NBB and NBO are present).

Limit Up/Limit Down Bands:

Rights and Warrants are currently exempt from LULD, and UBS ATS will match in such securities without regard to LULD bands.

For all other eligible securities, UBS ATS will match only if LULD bands are present and the effective price of a potential match is not constrained by a LULD band.

Trading Halts:

The UBS ATS will promptly react to "halt" or "pause" messages it receives from the direct market data feeds or the SIP from all U.S. equities exchanges. Upon receipt and processing of halt messages, the UBS ATS will not match in a security during periods in which a security is halted (e.g., subject to a LULD Trading Pause, Single Stock Circuit Breaker, or regulatory halt). The UBS ATS will resume matching when it receives a message from the SIP or direct market data feed of the primary market indicating that trading has resumed in the security (a transaction has occurred on at least one exchange), LULD bands are present, and there is a valid two-sided quote available (valid, non-crossed and non-locked NBB and NBO are present).

Pricing Methodology:

Matches in the UBS ATS are priced based on the NBBO as calculated by UBS by aggregating the "top of book" quotations of all U.S. equities exchanges using direct market data feeds maintained by the UBS ATS. If quotations from one or more exchanges are not available from the UBS direct market data feeds for any reason, the UBS ATS will rely on quotation data from the SIP (for the affected exchange feed(s)) to calculate an NBBO. For example, if UBS's direct market data feed from an exchange is not available the UBS ATS will use the attributed quote for that exchange from the SIP.

Additionally, when aggregating the top of book quotations to determine the NBBO, the UBS ATS seeks to mitigate quote flickering through performance optimizations. As an example, if an individual network data packet received from an exchange contains multiple price updates for a security, UBS ATS will recognize and use only the last sequential price update contained in the packet.

In the case of the Broker-Dealer Operator declaring "self-help" against a trading center's protected quote due to inaccurate or inaccessible quotes, the UBS ATS NBBO may exclude all quotes from that trading center from the calculation of the NBBO until "self-help" is revoked. The UBS ATS uses the Limit-Up/Limit-down (LULD) bands communicated through the Securities Information Processor (SIP) market data feeds.

Both Day Orders and IOC Orders are eligible to receive price improvement. Incoming orders are executed against the best priced (lowest seller, or highest buyer) eligible order that is not constrained by a LULD band. When a Day Order is eligible for crossing with an IOC Order, the crossing price is determined by the Day Order's price.

In the case of Conditional Indications (CIs), if a CI sender receives an Invite and responds by sending a Day Order, a match may occur as described above.

The UBS ATS will prevent matches at a price that is determined to be excessively wide. More specifically, if the spread is greater than \$0.01 and larger than 10 percent of the offer, the UBS ATS will prevent a match from occurring.

- b. Are the processes and procedures governing opening and re-opening the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

- 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.

Handling of orders and CIs at the start of regular trading:

The UBS ATS will not match in a security until a transaction in such security has been executed on a national securities exchange, the UBS ATS has opened for trading, LULD bands for the security have been publicly disseminated, and there is a valid two-sided quote available (valid, non-crossed and non-locked NBB and NBO are present). Furthermore, Invitations will not be sent to CIs until the above conditions have been met.

Handling of orders for IPOs (Initial Public Offerings):

The UBS ATS will reject orders and CIs in IPO securities received prior to 9:30 AM Eastern Time. The UBS ATS will reject orders and CIs in an IPO security until a transaction in the IPO security has been executed on the listing national securities exchange, the UBS ATS has opened for trading, LULD bands for the security have been publicly disseminated, and there is a valid two-sided quote available (valid, non-crossed and non-locked NBB and NBO are present).

Handling of orders following a stoppage of trading:

The UBS ATS will promptly react to "halt" or "pause" messages it receives from the direct market data feeds or the SIP from all U.S. equities exchanges. Upon receipt and processing of halt messages, the UBS ATS will not match in a security during periods in which a security is halted (e.g., subject to a LULD Trading Pause, Single Stock Circuit Breaker, or regulatory halt). The UBS ATS will resume matching when it receives a message from the SIP or direct market data feed of the primary market indicating that trading has resumed in the security (a transaction has occurred on at least one exchange), LULD bands are present, and there is a valid two-sided quote available (valid, non-crossed and non-locked NBB and NBO are present).

- d. Are the processes or procedures governing unexecuted orders and trading 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, the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.

- e. Are there any differences between pre-opening executions, executions following a stoppage of trading in a security during regular trading hours, and/or executions during regular trading hours?

☐ Yes ☒ No

If yes, identify and explain the differences.

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.

The UBS ATS is a proprietary non-displayed system for continuous matching of orders in NMS Stocks. The UBS ATS matching algorithm searches all buy and sell orders in the UBS ATS to identify orders that may be matched at a price at or better than the NBBO as calculated by UBS ATS by aggregating the “top of book” quotations of all U.S. equities exchanges using direct market data feeds maintained by the UBS ATS. If quotations from one or more exchanges are not available from the UBS ATS direct market data feeds for any reason, the UBS ATS will rely on quotation data from the SIP (for the affected exchange feed(s)) to calculate an NBBO.

The UBS ATS also offers Conditional Indication functionality as explained in Part III, Item 9.

- b. Are the means and facilities required to be identified in Item 11(a) the same for all Subscribers and the Broker-Dealer Operator?

☒

Yes

☐

No

If no, identify and explain any differences.

- 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.

Trade Execution:

In the event a match occurs, the UBS ATS will record the NBBO and LULD bands at the time of the match.

If only a partial match of an IOC Order occurs, the remainder of the IOC Order will be cancelled. If a partial match of a Day Order occurs, the remainder of the Day Order will stay open in the UBS ATS (and retain its original time priority) until it is matched, cancelled or expires. Once a match occurs, the UBS ATS sends electronic messages containing execution reports to the sender of the order.

NBBO on EXECUTIONS: In the event a match occurs, the UBS ATS will record the NBBO and LULD bands at the time of match.

LOCKED/CROSSED MARKETS: The UBS ATS will not execute a transaction if the NBBO is either locked or crossed.

PARTIAL EXECUTION: If only a partial execution of an IOC Order occurs, the remainder will be cancelled. If a partial execution of a Day Order occurs, the remainder will remain in the UBS ATS (and retain its original time priority) until it is executed, cancelled or expires. Once an execution occurs, the UBS ATS sends electronic messages containing execution reports to the original sender of the order.

REGULATION NMS: The UBS ATS will reject any order that violates Rule 612 of Regulation NMS (the "Sub-Penny Rule"), and all matches in the UBS ATS will be at or within the NBBO as required by Rule 611 of Regulation NMS (the "Order Protection Rule"). The UBS ATS will accept orders outside of the LULD bands; however, it will not execute if the effective match price were to be outside of the LULD bands.

ERRORS and CLEARLY ERRONEOUS EXECUTIONS: The UBS ATS handles execution errors in accordance with the Global Equities Handbook (the "Handbook"). The Handbook requires notification of errors to the relevant Supervisor, and applies the standards of the risk management framework. The UBS ATS will determine a course of action based on the facts and circumstances surrounding such errors. For instance, one or both sides of the trade could be cancelled. The UBS

ATS will apply the same standard of review to potentially clearly erroneous executions ("CEEs") as set forth in the applicable rules of the self-regulatory organizations. Following a determination of a CEE by the primary market, UBS ATS will cancel both sides of any match impacted by the CEE determination. Additionally, requests for the UBS ATS to review a potential CEE must be submitted to the UBS ATS via email (submitted to ats@ubs.com) within 30 minutes of the subject match.

PRINCIPAL NO SELF-MATCH: The UBS ATS will not effect a match when both sides of the potential match are principal orders from the same legal entity of a Class B Direct or Class B Indirect Subscriber.

MINIMUM QUANTITY: Orders may be routed to the UBS ATS with a minimum quantity value specified; the quantity may be managed by Subscribers on an order-by-order basis. When a minimum quantity is used, the UBS ATS will only perform a match if the specified number of shares or greater are available from a single eligible contra side order. By default, when the leaves quantity on an order becomes smaller than the specified minimum quantity, the minimum quantity constraint will no longer be in effect. Subscribers have the ability to change that behavior by sending a specific MinQuantityLeaveMode value in the order message. The available options are to have the leaves quantity become the minimum quantity or the order can be cancelled. In the latter case, an unsolicited cancel message is sent to the sender of the order and the order is removed from the ATS book.

UBS PIN: The UBS Price Improvement Network in the US ("UBS PIN (US)") is a differentiated segment of liquidity operated within the UBS ATS. UBS PIN (US) facilitates interaction between any combination of UBS Retail Orders, UBS institutional algorithmic order flow, and UBS Principal Orders. Executions on crosses between Source Category 1 and Source Category 2 orders, or between two Source Category 2 orders, will include an identifier describing the execution as a "UBS PIN" execution from the UBS ATS. All other executions from the UBS ATS will not use this identifier.

For other rules and procedures of the UBS ATS as it pertains to this section please see Part III, Item 10.

- 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.

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.

UBS ATS segments incoming order flow into ~~different~~one of five Source Categories. ~~Upon order acceptance by the UBS ATS, orders are designated with a single (named~~ Source Category ~~Category~~1 through 5). Source Categories are used by the UBS ATS when applying certain crossing restrictions.

Grading Eligibility

- Orders not received from the UBS SOR are eligible for grading.
- Orders received from the UBS SOR are not eligible for grading ~~except the following:~~
 1. ~~Orders from clients of the US Retail Market Making Desk (RMM)~~
 2. ~~Orders from a retail broker-dealer via the UBS SOR categorized as Source Category 2~~

Source Categories used in the UBS ATS are defined as follows:

Qualitative Attributes for Source Categories 1 and 2:

- Source Category 1: Retail Orders from RMM received through the UBS SOR. "Retail Orders" are held orders submitted to RMM, irrespective of whether the orders have been attested as meeting the definition in NYSE Rule 107C(a)(3). ~~The reversion level of the flow must be less than or equal to 10%.~~
- Source Category 2: Certain orders received from the UBS SOR (e.g., institutional, retail broker-dealer, UBS Affiliate, UBS Principal); or through Sponsored Access where the underlying client is an institutional client of UBS (this includes clients transacting with full attribution through "Single Ticket" clearing arrangements administered by other broker-dealer firms). A Single Ticket clearing arrangement refers to an institutional client using a broker-dealer to reduce clearing costs and operational complexity around account allocations. ~~For grading purposes, the reversion level of the eligible order flow must be less than or equal to 10%.~~
- ~~Source Category 3: Consists of (i) Order flows received that are eligible for grading and exhibit reversion levels less than or equal to 10%; or (ii) all other order flows received that are not eligible for grading and do not meet the requirements for Source Categories 1 and 2.~~
- ~~Source Category 4: Order flows that are eligible for grading must exhibit reversion levels greater than 10% and less than or equal to 25%.~~
- ~~Source Category 5: Order flows that are eligible for grading must exhibit reversion levels greater than 25%.~~

ATS Execution Committee

The ATS Execution Committee, consisting of representatives from the ATS Desk, Quant/Analytics, and Compliance & Operational Risk Control, is the recognized forum within the UBS Investment Bank which governs execution quality of the UBS ATS. The ATS Execution Committee meets monthly, and examines and evaluates the activity of ~~subscribers~~ Subscribers that are eligible for grading within the ATS, including, but not limited to:

- Subscriber Source Category Segmentation
- Subscriber Grading of Conditional Indications
- Reversion Based Subscriber Suspension

~~Committee membership consists of representatives from the ATS Desk, Electronic Trading-Quant/Analytics, and Compliance & Operational Risk Control.~~

Grading Process:

~~The grading process is a monthly quantitative review of reversion metrics for the prior 3 months of trading activity (the "Review Period"), where the primary, short term reversion metric is based on post-trade changes to the NBBO after trades occur in UBS ATS. The short-term reversion metric is calculated as the notionally-weighted difference between the execution price and the midpoint of the self-derived Best Bid Offer ("BBO") one (1) second after the time of the execution, expressed as a percentage of the spread at the time of the execution.~~

Initial Source Category Placement:

Class A Indirect Subscribers, Class B Direct Subscribers, and Class B Indirect Subscribers may request to have their order flow split into separate ~~flows (a subset of flow)~~ Subscriber Flows for the purposes of grading by sending an email request to the UBS ATS. Initial Source Category placements will remain in effect until the UBS ATS Execution Committee has sufficient data to provide a statistically significant analysis and decision.

- All Class A Direct Subscriber orders will be placed into the Source Category determined by the Broker-Dealer Operator depending on client type. The Broker-Dealer Operator does not split ~~flow~~ Subscriber Flows for grading purposes.
- All ~~flows~~ Subscriber Flows that are new business from clients defined as a Class A Indirect Subscriber, a Class B Direct Subscriber, or broker-dealers that are a Class B Indirect Subscriber will initially be placed in Source Category 5.
- ~~All flows that are new business from institutional clients that are Class B Indirect Subscribers will initially be placed in Source Category 3.~~
- ~~All flows that are new business and from institutional clients defined as Class A Indirect Subscribers that access the ATS via the SOR will be placed in Source Category 2.~~
- ~~All flows that are new business and from clients defined as institutional Class A Indirect Subscribers that do not access the ATS via the SOR will initially be placed in Source Category 3.~~
- ~~All new subsets of flows~~ All new Subscriber Flows that are created by separating existing business, for the purpose of Source Category Grading will initially be placed in the current Source Category of the existing ~~flow~~ Subscriber Flow.

Grading Process and Reversion Analysis

The ATS Execution Committee performs a quantitative review of reversion metrics (the "Grading Process") for Subscriber Flow eligible for grading for the prior 3 months of trading activity (the "Review Period") and utilizes several reversion metrics, all of which involve a notionally weighted price difference expressed as a percentage of the spread at time of execution, where the price difference can be based on:

- The difference between the midpoint at time of execution and the midpoint one second after the trade ("mid-to-mid").
- The difference between the execution price and the midpoint one second after the trade ("exec-to-mid").

Eligibility for a specific source category is determined by one or more reversion metrics ("eligibility reversion"):

- PIN Eligibility Reversion: This determines whether a Subscriber Flow that is qualitatively eligible for access to Source Category 2 can be assigned to that Source Category. It is calculated by looking at the exec-to-mid reversion against UBS Algo Midpeg Day Orders.
- Source Category 3 Anchor Set Eligibility Reversion: This determines eligibility for inclusion in the Source Category 3 Anchor Set, which is further described below. It is calculated by looking at the mid-to-mid reversion against Source Category 3 Anchor Set flow, as described below.
- Source Category 3 Eligibility Reversion: This determines whether a Subscriber Flow is eligible to be categorized as Source Category 3. It is calculated by looking at executions against the Source Category 3 Anchor Set, using a combination of metrics as described below.
- Source Category 4 Eligibility Reversion: This determines whether a Subscriber Flow can be categorized as Source Category 4. It is calculated by looking at the aggregate mid-to-mid reversion of all executions for a given Subscriber Flow.

As mentioned above, eligibility for inclusion in Source Category 3 is determined by looking at reversion against the Source Category 3 Anchor Set ("Anchor Set"), which consists of UBS

Algo Flow, and certain Class B Direct and Indirect Subscriber Flow. Class B Subscriber Flow is re-evaluated for inclusion in the Anchor Set on a monthly basis by reviewing executions during the Review Period. The first step of the process of constructing the Anchor Set for a given Review Period involves identifying the Class B Anchor Set Candidate Flow, which consists of all Class B Subscribers that have been assigned to Source Category 3 for the entirety of the Review Period. The Anchor Set is then constructed using the UBS Algo Flow, and some or all of the Class B Anchor Set Candidate Flow such that all Class B Subscriber Flow in the Anchor Set has an Anchor Set Eligibility Reversion of less than or equal to 10% (in other words, all Class B Subscriber Flow in the Anchor Set has an aggregate mid-to-mid reversion against the rest of the Anchor Set that is less than or equal to 10% and has also been categorized as Source Category 3 for the entirety of the Review Period). If a Class B Subscriber is included in the Anchor Set for a given Review Period, it is kept in Source Category 3 and will be re-evaluated for continued inclusion in the Anchor Set at the next monthly review

Order flow not received from the UBS SOR that is not in the Anchor Set, but is categorized as being in Source Category 3 or Source Category 4 at the time of the current monthly review is then evaluated for subsequent inclusion in Source Category 3 by looking at the Source Category 3 Eligibility Reversion, which is defined as the more impactful of the following two metrics:

- The Subscriber's mid-to-mid reversion against all Anchor Set flow where the Anchor Set is willing to interact with Source Category 4, as determined by the crossing restriction on the Anchor Set order. (Note that, as described in Part III Item 14, of all Anchor Set flow, only the UBS Algos are able to restrict crossing against Source Category 4.)
- A blended reversion looking at the Subscriber's executions against all Anchor Set flow, where the exec-to-mid metric is used when the Anchor Set order is a Midpeg Day Order, and the mid-to-mid metric is used otherwise.

Additional elements of the reversion analysis:

- ~~• When an execution occurs in a locked market a \$0.01 spread is used for analysis purposes.~~
- Material outliers are excluded from the analysis.
- Any execution where either side is a Firm-Up in response to a Conditional Invitation is excluded from the analysis.
- Measurement is based on a notional weighted average over a trailing three (3) month period.
- ~~• The analysis of each flow (or subset of flow) to determine if it meets the requirements for Source Category 3 is based on executions against midpoint peg considers both Day and IOC Orders~~
- When a Subscriber Flow is moved to a less restrictive Source Category (e.g., from the UBS algorithms only Source Category 5, to Source Category 4), to remain in the new Source Category the Subscriber Flow's reversion metrics must meet the thresholds described below for its first month in the new Source Category as well as for the entirety of the Review Period. In subsequent months, only the reversion during the Review Period is considered. For example, if a Subscriber Flow is in Source Category 5, and its Source Category 4 Eligibility Reversion is less than 25% for the current Review Period, and it is moved into Source Category 4, its Source Category 4 Eligibility Reversion must be less than 25% for its first month in Source Category 4 in addition to the normal Review Period. After the first month in Source Category 4, the Source Category 4 Eligibility Reversion would be allowed to exceed 25% as long as the Reversion for the duration of the Review Period is still less than 25%.
- ~~• The analysis of each flow (or subset of flow) to determine if it is categorized as Source Category 4 or Source Category 5 is based on executions against all Day Orders.~~

A revision to Source Category can only move lower one grade at a time (e.g., from Source Category 5 to Source Category 4, or from Source Category 4 to Source Category 3)

At any time in its reasonable discretion, UBS ATS management may revise a Source Category for any Subscriber Flow regardless of grading eligibility by changing it to a higher grade (e.g.,

from Source Category 3 to Source Category 4). Such a revision would generally occur in response to a significant change in client behavior or a consistent fluctuation of a Source Category grade, and the determination would be documented in the UBS ATS Execution Committee meeting minutes.

Source Categories used in the UBS ATS are defined as follows:

- Source Category 1: Order flows that meet the qualitative attributes for Source Category 1.
- Source Category 2: Order flows that (i) meet the qualitative attributes for Source Category 2 and are not eligible for grading; or (ii) meet the qualitative attributes for Source Category 2 and are eligible for grading as defined above where the PIN Eligibility Reversion level of the order flow is less than or equal to 2% and the Source Category 3 Eligibility Reversion is less than or equal to 10% and the Source Category 4 Eligibility Reversion is less than 25%.
- Source Category 3: Consists of (i) Order flows that meet the qualitative attributes for Source Category 2 and are eligible for grading as defined above where the PIN Eligibility Reversion level is greater than 2% and the Source Category 3 Eligibility Reversion is less than or equal to 10% and Source Category 4 Eligibility Reversion is less than 25%; (ii) Class B Subscribers that are included in the Source Category 3 Anchor Set; (iii) Order flows that do not meet the qualitative attributes for Source Category 2 and are eligible for grading as defined above, and that are not included in the Source Category 3 Anchor Set, where the Source Category 3 Eligibility Reversion level is less than or equal to 10% and the Source Category Eligibility Reversion level is less than or equal to 25%; or (iv) all other order flows received that do not meet the qualitative attributes for Source Category 1 and Source Category 2 and are not eligible for grading.
- Source Category 4: Any order flows eligible for grading where the Source Category 3 Eligibility Reversion level is greater than 10% and the Source Category 4 Eligibility Reversion level is less than or equal to 25%.
- Source Category 5: Any order flows eligible for grading where the Source Category 4 Eligibility Reversion level is greater than 25%.

Restricting Crossing Against a Specific Source Category

For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.

- b. If yes to Item 13(a), is the segmentation of orders and trading interest the same for all Subscribers and the Broker-Dealer Operator?

☐ Yes ☒ No

If no, identify and explain any differences.

Class A Direct Subscriber orders may be designated as Source Category 1, 2, 3, 4, or 5. ~~Only orders received from RMM, or from a retail broker-dealer, are eligible for grading. For orders from the Broker-Dealer Operator that are not eligible for grading~~ For Class A Direct Subscriber orders entered through the UBS SOR, the Broker Dealer Operator will indicate to the UBS ATS the Source Category that the order should be placed in.

Class A Indirect Subscriber orders may be designated as Source Category 2, 3, 4, or 5. ~~Orders For Class A Indirect Subscriber orders entered through the UBS managed third-party technology platform are eligible for grading and may only be designated as SOR, the Broker Dealer Operator will indicate to the UBS ATS the~~ Source Category 3, 4, or 5 that the order should be placed in.

All Class B Subscriber orders are eligible for grading and may only be designated as Source Category 3, 4, or 5.

- c. Does the NMS Stock ATS identify orders or trading interest entered by a customer of a broker-dealer on the NMS Stock ATS as a customer order?

☒ Yes ☐ No

- d. If yes to Item 13(a), does the NMS Stock ATS disclose to any Person the designated segmented category, classification, tier, or level of orders and trading interest?

☒ Yes ☐ No

If yes, provide a summary of the content of the disclosure, when and how the disclosure is communicated, who receives it, and whether and how such designation can be contested.

All Class B Direct and Indirect Subscribers are informed at the outset of their initial Source Category.

All Class A Indirect and Class B Subscribers' Score will start at medium quality.

All Subscribers eligible for grading will be informed in writing when the Source Category or Score attributed to each ~~flow (or subset of flow)~~ **Subscriber Flow** originated by them, as the case may be, has been revised to a different Source Category or Score.

Any changes to Source Category or Score will be communicated via email, sent directly to Person(s) designated by the Subscriber. Changes to Source Category or Score cannot be contested.

- e. If yes to Item 13(d), are the disclosures required to be identified in 13(d) 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.

Crossing Restrictions:

The UBS ATS allows all Subscribers to use the following optional crossing restrictions to limit interactions with certain orders, CIs and trading interest:

- No Self Cross: To prevent crossing against a Subscribers "own orders or CIs" (orders or CIs sent that have the same flow identifying name). The No Self Cross restriction can be configured at the UBS ATS upon request to prevent self-crossing across multiple flow identifying names ("Family Group"). It can also be managed by the Subscriber on an order-by-order basis within the same flow identifying name. However, no self cross is always assumed to have been sent if the flow identifying name is in a Family Group.
- No UBS Principal: To prevent crossing against UBS Principal Orders or CIs; managed by Subscribers on an order-by-order basis.
- Round Lot Only: To prevent crossing in other than round lot quantities; managed by Subscribers on an order-by-order basis.

~~• No Locked: To prevent crossing on a pegged order when the NBBO is locked (NBB = NBO); managed by UBS ATS and would apply to all orders on a specific flow identifying name. This crossing restriction also will prevent an Invite during a locked market for pegged CIs.~~

- PeggedMidPointMode: The UBS ATS supports two variants of midpoint Pegged Orders or CIs: (1) FillToLimit (default), and (2) FillToMidpoint. For orders, the variant only affects execution price if the limit price on the order is less aggressive than the midpoint (i.e., a buy order with a limit price below the midpoint or a sell order with a limit price above the midpoint). If FillToLimit is selected, these orders may fill away from the midpoint, whereas orders with FillToMidpoint selected will not. For CIs, the variant may affect if an Invite can be generated.
- Enable Conditionals: To enable a Day Order to interact with Conditional Indications; this crossing restriction can be managed by Subscribers on an order-by-order basis.
- Minimum Quantity: Orders and CIs may be sent to the UBS ATS with a minimum quantity value specified, and managed by Subscribers on an order-by-order basis. When used, UBS ATS will only match or generate an Invite when at least the specified number of shares is available from a single eligible contra side order or CI. By default, when the leaves quantity on an order becomes smaller than the specified minimum quantity, the minimum quantity constraint will no longer be in effect. Subscribers have the ability to change that behavior by sending a specific MinQuantityLeaveMode value in the order message. The available options are to have the leaves quantity become the minimum quantity or the order can be cancelled. In the latter case, an unsolicited cancel message is sent to the sender of the order and the order is removed from the ATS book.

Restricting Crossing Against a Specific Source Category

The below crossing restrictions may be sent to the UBS ATS by each Subscriber on an order by order basis by sending the appropriate crossing restriction value on each order, or by the UBS SOR on behalf of the Subscriber. For details regarding available values please see the UBS ATS Specification at ubs.com/ats.

- Class A Direct Subscriber orders originating from RMM could be opted out of crossing with contras in Source Categories 3, 4 and/or 5. These crossing restrictions are determined by RMM and sent to the UBS ATS by the UBS SOR on behalf of RMM.
- Class A Direct Subscriber orders categorized as Source Category 2 could be opted out of crossing with contras in Source Categories 3, 4 and/or 5. These crossing restrictions are sent to the UBS ATS by the UBS SOR on behalf of the Subscriber. For this case, the Subscriber may only determine to opt out of crossing with contras in Source Categories 4 and/or 5. Only the UBS SOR may determine to opt out of crossing with contras in Source Category 3.
- Class A Direct Subscriber orders categorized as Source Category 3 could be opted out of crossing with contras in Source Categories 4 and/or 5. These crossing restrictions could be sent to the UBS ATS by the Subscriber and/or by the UBS SOR on behalf of the Subscriber, and may be determined by the Subscriber or the UBS SOR.
- Class A Indirect Subscriber orders categorized as Source Category 2 or 3 could be opted out of crossing with contras in Source Category 4 and/or 5. These crossing restrictions could be sent to the UBS ATS by the Subscriber and/or by the UBS SOR on behalf of the Subscriber and may be determined by the Subscriber or the UBS SOR.
- Class A Indirect Subscriber orders categorized as Source Category 2 could be opted out of crossing with contras in Source Category 3, 4 and/or 5. For this case, the Subscriber may only request UBS to opt out of crossing with contras in Source Categories 4 and/or 5. Only the UBS SOR may determine to opt out of crossing with contras in Source Category 3.
- All Subscribers in the UBS ATS could opt out of crossing with contras in Source Category 5. These crossing restrictions could be determined and sent to the UBS ATS by Subscribers

and/or by the UBS SOR on behalf the Subscriber.

Conditional Indication Restrictions:

Conditional Indication restrictions can be used to limit interactions to certain types of Conditional Indications. More specifically, the Conditional Indication restrictions are available for Conditional Indications and firm order messages, on an order-by-order basis, by inserting one of the below designated values in the Conditional Invite Grade field:

- Generate Invites to all Conditional Indications (Invite Grade = 1)
 - Generate Invites to Conditional Indications with a Medium Score or better (Invite Grade = 2)
 - Generate Invites to Conditional Indications with a High Score or better (Invite Grade = 3)
 - Generate Invites to Conditional Indications from UBS Algorithms only (Invite Grade = 4)
- 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.

Restricting Crossing Against a Specific Source Category

For information on counter-party selection please see Part III, Item 14a of this Form ATS-N under the headline "Restricting Crossing Against a Specific Source Category" which dictates the permitted crossing restrictions that can be placed on orders for Class A Direct and Class A Indirect Subscribers as well as all Subscribers.

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.

The UBS ATS consumes three functionally identical sources of direct market data for Nasdaq, Nasdaq PSX, Nasdaq BX, NYSE, NYSE ARCA, and NYSE ARCA National where, weather permitting, the third source uses a faster transport layer over wireless technology. All other exchange direct market data feeds are transmitted over landline only.

All events that require market data use the direct feeds when possible, but may alternatively use the Securities Information Processor (SIP) when necessary. As an example, the UBS ATS uses the SIP for the Limit-Up Limit-Down bands. Matches in the UBS ATS are priced based on a Best Bid Offer ("BBO") aggregated from the "top of book" quotations of all U.S. equities exchanges using direct market data feeds maintained by the UBS ATS. If quotations from one or more exchanges are not available from the UBS direct market data feeds for any reason, the UBS ATS will rely on quotation data from the SIP for the affected exchange feed(s) to calculate the BBO. For example, if UBS's direct market data feed from an exchange is not available, the UBS ATS will use the attributed quote for that exchange from the SIP.

Additionally, when aggregating the top of book quotations to determine the BBO, the UBS ATS seeks to mitigate quote flickering through performance optimizations. As an example, if an individual network data packet received from an exchange contains multiple price updates for a security, UBS ATS will recognize and use only the last sequential price update contained in the packet.

In the case of the Broker-Dealer Operator declaring "self-help" against a trading center's protected

quote due to inaccurate or inaccessible quotes, the UBS ATS BBO may exclude all quotes from that trading center from the calculation of the BBO until "self-help" is revoked.

LULD bands will be taken from the most direct source, which typically will be the SIP that calculates the bands for the particular security.

- b. Are the sources of market data and how the NMS Stock ATS uses market data for the services that it offers the same for all Subscribers and the Broker-Dealer Operator?

☒ Yes ☐ No

If no, identify and explain any differences.