

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

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)?

Subscribers can access Sigma X2 directly ("Direct Subscribers") or indirectly ("Indirect Subscribers"), and all Subscribers can utilize both ATS and non-ATS GSCO offered products and services.

Direct Subscribers access Sigma X2 via a FIX connection. Indirect Subscribers access Sigma X2 via non-ATS GSCO offered products and services, which may include:

- i. GSCO algorithms, which accept parent-level orders and can send portions of such orders (i.e., child orders) to GSCO's SOR. GSCO's SOR may route such orders to Sigma X2 or other market centers, as described below;
- ii. The GSCO SOR (hosted in Carteret and NY4), which can route various orders to Sigma X2 or other market centers or may route directed orders to Sigma X2 ~~through routing logic known as Blacklight, GSCO's dark routing logic;~~ and
- iii. The GSCO Direct Market Access ("DMA") System, which GSCO clients may use to direct orders to Sigma X2 or other market centers using their own algorithms, i.e., non-GSCO algorithms. Orders routed via the GSCO DMA System do not pass through, and are not known by, GSCO's SOR.

Direct Subscribers' orders experience less latency than Indirect Subscribers' orders.

Sigma X2 does not display orders to Participants, or outside of Sigma X2. However, GSCO's SOR is aware of orders it has posted in all venues, including Sigma X2. The GSCO SOR uses knowledge of such orders to predict venue-level fill rates. This data is not communicated outside of the SOR.

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.

Part III: Manner of Operations

Item 5: Means of Entry

c. Are there any other means for entering orders and trading interest into the NMS Stock ATS (e.g., smart order router, algorithm, order management system, sales desk)?.

☒ Yes ☐ No

If yes, identify and explain the other means for entering orders and trading interest, indicate whether the means are provided through the Broker-Dealer Operator, either by itself or through a third-party contracting with the Broker-Dealer Operator, or through an Affiliate of the Broker-Dealer Operator, and list and provide a summary of the terms and conditions for entering orders or trading interest into the ATS through these means.

Indirect Subscribers access Sigma X2 via non-ATS GSCO offered products and services, which may include:

- i. GSCO algorithms, which accept parent-level orders and can send portions of such orders (i.e., child orders) to GSCO's SOR. GSCO's SOR may route such orders to Sigma X2 or other market centers, as described below;
 - ii. The GSCO SOR (hosted in Carteret and NY4), which can route various orders to Sigma X2 or other market centers or may route directed orders to Sigma X2 ~~through routing logic known as Blacklight, GSCO's dark routing logic~~; and
 - iii. The GSCO DMA System, which GSCO clients may use to direct orders to Sigma X2 or other market centers using their own algorithms, i.e., non-GSCO algorithms. Orders routed via the GSCO DMA System do not pass through, and are not known by, GSCO's SOR.
- Orders sent to Sigma X2 by Indirect Subscribers, GSI, and GSCO business units via GSCO algorithms and the GSCO SOR are sent directly to Sigma X2 once the routing decision is made by the GSCO SOR, and use a FIX connection and the same FIX protocol as described in the response to Part III, Item 5.a. above.