

# FAQs: Barclays ATS – LX

As of November 2023

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# Electronic Trading Practices

This document is limited to products and services offered by Barclays that access the US Markets through electronic trading products and does not refer to any products that route to other markets, such as markets in Europe or Asia. Please note, when reviewing this document all references to "LX" or "Barclays LX" are referring to the firm's alternative trading system (ATS) that is registered with the Securities and Exchange Commission and trades NMS securities in the United States. References to 'Electronic Order Handling FAQ' numbers are from the 'FAQs: Equities Electronic Order Handling' document available at [barx.com/eqdisclosures](http://barx.com/eqdisclosures). This document should be read in conjunction with the LX FIX Specification documents.

## 1. Access to confidential trading information

Barclays does not have any personnel solely responsible for LX. Barclays considers Subscribers' identities, information relating to live orders, trading interests and executions in LX and post-execution information that Barclays reasonably believes contains evidence of a Subscriber's contemporaneous interests in the same or additional live orders and trading interests in LX (as well as data or analytics related to such post-execution information) to be confidential trading information. The foregoing notwithstanding, Barclays does not consider post-execution information to include information made public under reporting or regulation (e.g., information that is reported to the consolidated tape pursuant to FINRA trade reporting requirements), or information of an aggregated and anonymized nature (e.g., aggregated and anonymous execution statistics of the type reported on Barclays website (as described in Part III, Item 26) and the information disclosed as described in Part II, Item 7(b) below) to be confidential trading information. Barclays also does not consider any post-execution information when used by its settlements, operations and middle office personnel in the ordinary course of their job functions to be confidential trading information. Barclays administers the ability to monitor client electronic trading flow through permission-based systems.

For a summary of the Barclays personnel that service both LX and BCI or a BCI Affiliate, including the Electronic Trading Department, Service Desk, Statistical Modelling and Development ("SMAD"), Product Development, Electronic Sales and Origination, Electronic Trading Senior Management, Electronic Markets Risk & Control, Equities QPS Personnel, Equities Sales and Trading, Equities Sales, Equities Trading, Barclays Senior Management, technology-related groups, Best Execution Working Group, ATS Governance Forum, Control Functions and other groups, please see Part II, Item 6 of LX form ATS-N filing posted on the SEC's web page available at <https://www.sec.gov/divisions/marketreg/form-ats-n-filings.htm>.

In addition to Barclays personnel, certain Nasdaq and Nasdaq OCEAN employees have access to Subscriber confidential trading information. Such employees include Nasdaq and OCEAN staff from Compliance, Operations, Technology Development (including trading and surrounding systems), Product Management, and Business Management.

## 2. Protection of confidential trading information

The LX matching engine and associated gateways on the Ocean technology platform are on separate hardware from other systems hosted and/or operated by Ocean and gateways for LX hosted on Barclays' technology platform run on standalone hardware (i.e., server) that is not shared with any other Barclays trading venue (such as BARX Book, Barclays' single dealer platform) or other trading system (such as order management and trade capture systems). The hardware for LX on the Barclays technology platform is housed in the same data center as other Barclays systems; Ocean's technology platform is housed in a different data center from Barclays' systems. All orders bound for LX, whether through the Barclays smart order router, the router component of Barclays' algorithms, or direct connection to LX, pass through the LX gateways hosted on Barclays' technology platform as the access point to LX; Barclays then sends orders in those symbols to OCEAN. Barclays maintains physical restrictions, policies and procedures designed to safeguard the confidential trading information of Subscribers. (see FAQ 1).

For additional details about the safeguards and procedures to protect the confidential trading information of LX Subscribers, please see Part II, Item 7 of LX form ATS-N filing posted on the SEC's web page available at <https://www.sec.gov/divisions/marketreg/form-ats-n-filings.htm>.

## 3. Advertisement of executed volume

We advertise our electronic volumes in combination with our high-touch volumes in near real time via Bloomberg IOIA and RANKA screens. Only symbol and aggregated volume are displayed for Bloomberg users utilizing this function. Advertising is generally published in batch intervals for periodic advertising where all trades during that time period are advertised together, however, individual trades can be advertised on a more frequent basis.

Please note, these advertisements do not include the executed volume of clients who have opted out. To opt out of your executions with Barclays being included in aggregated volume reporting or analytics, please contact your Barclays sales representative.

ATS volume data is published by FINRA on a delayed basis at [finra.org/ats](http://finra.org/ats).

## 4. Execution and venue transparency

To provide order transparency, Barclays offers its clients the ability to receive a variety of information and reports regarding their own orders. This information varies from time to time and may include, but is not limited to, execution venues, percentage of order flow executed in various venues, crossing rates in LX, percentage of order flow executed against various types of counterparties in LX, and a client's algorithmic and Router settings.

In addition, Barclays publishes on its website ([barx.com/eqdisclosures](http://barx.com/eqdisclosures)) monthly statistics related to LX which includes the following:

- Various aggregated and anonymized order and execution metrics
- Aggregated LX reported shares for the previous 3 months
- Number of Subscribers that have changed Liquidity Profiling category (see FAQs 12 and 13), and the percentage of LX take flow they represent in notional value
- Number of and framework for any Liquidity Profiling Overrides from the previous month's review (see FAQ 12) and the percentage of LX take flow they represent in notional value
- Percentage of execution by Subscriber Type (see FAQ 10).

Barclays also may include aggregated and anonymized analysis in its marketing materials or its client presentations related to various order and execution metrics about orders and executions in LX.

In addition, Barclays may make available to clients the following tools:

- Near real-time trade monitoring through our Portfolio WebBench<sup>®</sup> analytics toolkit (not available to LX Direct Subscribers; for additional information, please contact your Barclays sales representative)
- Detailed reporting of both routing and LX results, including venue and LX execution analysis (through our Portfolio WebBench<sup>®</sup> analytics toolkit)
- Various FIX tags, e.g., trade destination, executing broker, add/take details
- Access to SPECS<sup>™</sup>, an online client interface where clients may view, verify, and request changes to their order handling settings with Barclays.

Please contact your Barclays sales representative for any additional information.

## **5. Order handling customizations**

Barclays provides its clients with the ability to customize certain handling of their electronic orders. For example, as discussed in more detail in other FAQs, Barclays provides its clients with the ability to opt out of the following:

- Participating in conditional order negotiations (see FAQ 16)
- Interacting in LX with certain Subscribers, Subscriber types, or order flow (see FAQ 13)
- Crossing their orders in a locked market on a trade-by-trade or default basis in LX (see FAQ 19)
- Including their LX order information in the aggregated information provided to Barclays' smart order router ("Router") (see FAQ 28)

Clients also may customize other default settings for order flow handled by Barclays algorithms or the Router.

Clients may view, verify, and request changes to their order handling settings through the online client interface SPECS<sup>™</sup>. Note: If after being granted access to SPECS and receiving your settings, you do not notify us that you wish to make changes to your settings, then by continuing to transact with Barclays, you are deemed to have provided consent that those settings are correct.

For additional information regarding your ability to customize the handling of your orders, please contact your Barclays sales representative.

## **6. Platform enhancements**

At any time, Barclays may implement enhancements to its equities electronic trading platform, which includes Barclays LX and its core infrastructure components. The enhancements may be rolled out across the platform as a whole or in multiple phases. For some enhancements a group made up of internal traders, and in some circumstances clients who have opted in, may be given access to functionality for verification purposes that is not available to all clients and which is not fully described in this document. Internal traders who are given access to this functionality may be trading on behalf of clients. Barclays may run periodic plant-wide experiments to evaluate the effectiveness of select features. Orders that are part of a control group in an experiment may or may not have select features available, depending on the nature of the experiment. Once the testing of a new feature (or the removal of an existing feature) has been completed, Barclays will harmonize the availability of features across all clients. Please contact your Barclays electronic sales representative for details on enhancements or new features currently being rolled out.

# The Barclays ATS – LX<sup>®</sup>

## 7. Right to restrict access

Barclays reserves the right to restrict access to LX or associated features to any Subscriber at its sole discretion.

## 8. Connectivity and order entry

All Subscribers can access Barclays ATS (a) directly via an electronic order entry connection, (b) through Barclays' Algos, or (c) through the Router. LX supports direct order entry only via FIX. There is no proprietary protocol available. Cross connection to LX is available to connect directly to the LX gateway housed in the Equinix NY5 data center in Secaucus, NJ. All orders bound for LX via direct connection to LX will first pass through the LX gateways hosted on Barclays' technology platform as the access point to LX and Barclays will then send the order to the LX matching engine hosted by Ocean in the Equinix NY4 data center in Secaucus, NJ.

## 9. Access fees and commissions

Per-share commissions and fees for electronic trading are negotiated.

Barclays does not charge LX Subscribers access fees. Subscribers may be charged a commission when executing in LX. Commissions for trading in LX are negotiated.

Barclays does not offer rebates for trading in LX.

## 10. Subscribers

The following types of clients (each a "Subscriber Type")<sup>1</sup>, have access to our internal dark pool, LX:

- Barclays Institutional Clients & Client Algo/Router Users: Institutional and broker-dealer clients that route orders to LX via Barclays' Algorithmic Trading products ("Algos") and/or Router and Institutional clients (i.e., non-broker-dealer clients) that route orders directly to LX.
- Broker-Dealers: Third-party broker-dealers that route orders directly to LX on behalf of their clients, or on behalf of their clients and themselves.
- ELPs: Third-party broker-dealers that route orders directly to LX solely on a principal basis and/or ATS Subscribers who self-identify as ELPs.
- Barclays Trading Desks: Barclays client-facing trading desks when executing in a principal capacity in LX and affiliate trading desks executing in LX.

## 11. Barclays' principal orders in LX

Barclays Trading Desks have the ability to place principal orders for execution in LX. Barclays Trading Desks do not receive any information regarding orders or executions within LX. For an explanation of the execution priority of Barclays principal orders, please refer to FAQ #14. Clients can also choose to opt out of interacting with all Barclays' orders with an order capacity marked as principal. A Subscriber may apply this opt-out on an order-by-order basis or as a change to its default trading profile applicable to all of its orders. Please note, however, that if a

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<sup>1</sup> Barclays uses its best efforts in placing Subscribers into a Subscriber Type based on publicly-available information and information obtained by Barclays from the Subscriber. Please note, Subscribers in the Broker-Dealer group may have underlying clients that are institutional clients, ELP clients, or other Broker-Dealer clients. Barclays does not categorize based on the Broker-Dealer's underlying clients, unless Barclays has a direct relationship with a Broker-Dealer's underlying client, as that client will be on-boarded with Barclays directly and will be categorized accordingly.

Note: Some Subscribers may execute under multiple Subscriber identifiers (or acronyms) for different trading strategies, different groups within a firm, or different means of accessing LX. Each Subscriber acronym is evaluated independently and assigned the applicable Subscriber Type. As a result, a Subscriber may have multiple Subscriber Types associated with it. For example, a broker-dealer that routes to LX, both with a direct connection as well as via Barclays Algos, would be classified as a Broker-Dealer for the order flow that is routed to LX directly and as a Barclays Institutional Clients & Algo/Router User for their order flow through Barclays Algos.

Subscriber elects to restrict interaction with Barclays orders with an order capacity marked as principal, they will also be restricted from interacting with all Barclays affiliates' order flow in the ATS.

## 12. Segmentation of order flow

Barclays employs a framework called Liquidity Profiling for categorizing liquidity removing activity within our ATS.

Liquidity Profiling categorization applies only to Subscribers that route Firm Orders (excluding Firm-Up Orders and LX Closing Cross ("LXCC") orders; for information on LX Closing Cross, see FAQ #33 below) directly to LX when removing liquidity, and is based on one-second alpha, which is the midpoint-to-midpoint market movement over a one-second horizon, normalized by the daily average spread.

Based on this metric, Subscribers are placed into one of three alpha categories: Low, Medium, and High (Low being the lowest alpha category  $<0.141$  and High being the highest alpha category  $>0.201$ ). Barclays reserves the right to review and adjust the factors considered when categorizing Subscribers based on their order flow that removes liquidity. Orders routed to LX by the Router or the Algos are placed into the Low alpha category by default.<sup>2</sup>

On a monthly basis, Barclays reviews the Liquidity Profiling categorizations of Subscribers that route directly to LX, based on trading data from the prior three calendar months. Barclays retains discretion to override a Subscriber's Liquidity Profiling categorization by maintaining that Subscriber in its previous, higher alpha category (an "Override"). Barclays will consider previous trading behavior when determining whether to apply an Override and may wait for additional data before implementing a change to a lower alpha category, if such a change to a lower alpha category is indicated by Liquidity Profiling.<sup>3</sup> Note: Barclays' discretion is not used to move a Subscriber to a lower alpha category than that indicated by Liquidity Profiling.

## 13. Counterparty restriction functionality

### A. Blocking by Liquidity Profiling category

A Subscriber may customize its posted order interactions in LX by designating Liquidity Profiling categories it wishes to interact with (e.g., block all counterparties from the High category).<sup>4</sup> Subscribers can apply blocking by Liquidity Profiling category to their posted orders sent directly to LX or routed through the Algos or Router.

### B. Blocking by Subscriber Type

As an alternative to the Liquidity Profiling framework Barclays Institutional Clients & Client Algo/Router Users may request to suppress interaction with certain Subscriber Types (i.e., Barclays Institutional Clients & Client Algo/Router Users, Broker-Dealers, ELPs, Barclays Trading Desks; see FAQ 10). Unlike blocking by Liquidity Profiling category, which can only be applied by a Subscriber when providing liquidity, blocking by Subscriber Type can be applied by a Subscriber when providing or taking liquidity, or both.

Subscriber Type blocking can be utilized for orders sent directly to LX or routed through the Algos or Router. This type of counterparty restriction functionality is not currently offered to Subscribers that are ELPs, Broker-Dealers, or Barclays Trading Desks.

Note: The ability to suppress interaction on an order-by-order basis with particular Subscriber Types and to simultaneously avoid having liquidity taken by particular Liquidity Profiling categories is not a supported functionality.

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<sup>2</sup> This group of Subscribers includes, but is not limited to, clients that utilize the Router to send directed orders to the ATS, and Barclays Trading Desks that utilize Barclays Algos or Router.

<sup>3</sup> Barclays reserves the right to Override a Subscriber to a higher alpha category intra-month, if a review of that Subscriber's trading activity warrants such an Override in Barclays' discretion.

<sup>4</sup> Some Subscribers may execute under multiple Subscriber identifiers (or acronyms) for different trading strategies, different groups within a firm or different means of accessing LX. For Liquidity Profiling purposes each Subscriber acronym is evaluated independently and placed into the applicable category. As a result, a Subscriber may have multiple Liquidity Profiling categories associated with it.

### C. Blocking by specific Subscriber

Separately, Barclays Institutional Clients & Client Algo/Router Users may request that Barclays suppress the interaction of their orders in LX with specific Subscribers. While Barclays will not confirm to a Subscriber whether an entity that it wishes to block is an LX Subscriber, Barclays will use commercially reasonable efforts to suppress interaction with the entity if it is a Subscriber. Customized blocking can be utilized for orders sent directly to LX or routed through the Algos or Router. This type of counterparty restriction functionality is not currently offered to Subscribers that are ELPs, Broker-Dealers or Barclays Trading Desks.

Barclays offers Institutional Clients & Client Algo/Router Users the ability to request that Barclays evaluate orders and/or executions to determine if strategies of other Subscribers may be adversely affecting their interactions within LX. If Barclays determines that a certain Subscriber or group of Subscribers may be adversely impacting the Subscriber that inquired, Barclays will allow the Subscriber the ability to block further interactions with those Subscribers<sup>5</sup>, without disclosing their identities.

### D. Blocking Barclays principal orders

In addition to the above described counterparty restriction functionalities, Subscribers also have the ability to restrict interaction with all Barclays orders with an order capacity marked as principal. Please note, however, that if a Subscriber elects to restrict interaction with Barclays orders with an order capacity marked as principal, they will also be restricted from interacting with all Barclays affiliates' order flow in the ATS.

### E. Blocking by minimum duration ("LX MinTime")

LX MinTime is a counterparty restriction functionality that allows Barclays Institutional Clients & Algo/Router Users to limit interactions with LX direct Subscribers to only those orders of LX direct Subscribers<sup>6</sup> that have rested on the LX order book for a minimum of one second.<sup>7</sup>

Who can use LX MinTime?

- Barclays Institutional Clients & Client Algo/Router Users<sup>8</sup>

What orders can a Subscriber enable LX MinTime for?

- Firm orders
- Conditional eligible firm orders<sup>9</sup>

What orders can a Subscriber not enable LX MinTime for?

- Conditional orders and the related firm-up orders

What order flow does LX MinTime restrict interaction with?

- LX MinTime restricts interaction with orders from LX direct Subscribers unless the LX direct Subscriber's order has rested for at least one second

What contra-side order flow does LX MinTime not restrict interaction with?

- Algo/Router orders

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<sup>5</sup> Note: a Subscriber can elect to block that Subscriber entirely or to block specific order types of that Subscriber.

<sup>6</sup> LX direct Subscribers are Subscribers who route their orders to LX via an electronic FIX connection and not through Barclays Algos/Router. (see FAQ 8).

<sup>7</sup> Note: this does not restrict the client's interactions with any other order flow in the ATS that is not entered from a direct order entry connection. Also, the LX MinTime length is configured by Barclays' personnel and may be periodically updated.

<sup>8</sup> Barclays Institutional Clients that route directly to LX (see FAQ 10) may elect to utilize LX MinTime on an order-by-order or default basis. A client that utilizes Barclays Algo/Router may utilize LX MinTime across all orders or on an individually configured basis depending on the client's execution objectives. This type of counterparty restriction is not currently offered to Subscribers that are ELPs, Broker-Dealers, or Barclays Trading Desks.

<sup>9</sup> LX MinTime can be used when sending conditional eligible firm orders, but it will only affect a Subscriber's interactions with firm orders, not conditional orders or the related firm-up orders.



- Conditional orders and the related firm-up orders

How will utilizing LX MinTime apply in relation to other counterparty blocking instructions that the Subscriber may be using?

- LX MinTime will override instructions to block by Liquidity Profiling category<sup>10</sup> unless the contra-side order is a Conditional order or the related firm-up orders
- LX MinTime will override instructions to block by Subscriber Type<sup>11</sup> unless the contra-side order is a Conditional order or the related firm-up orders
- LX MinTime can be used in conjunction with requests to block specific Subscribers<sup>12</sup>
- LX MinTime can be used in conjunction with instructions to block Barclays Principal Orders<sup>13</sup>

How will LX MinTime apply with respect to conditional order interactions?

- LX MinTime will not affect a Subscriber's interactions with contra-side conditional and firm-up orders<sup>14</sup>

## **F. Private counterparty interaction**

Subscribers may request that their orders only interact with one or more specific Subscribers (a "Private Counterparty Interaction"), thereby suppressing interaction with the remaining Subscribers in LX. Each Subscriber to the arrangement must submit a written request indicating their desire to only interact with the designated Subscribers. Barclays will not fulfill Private Counterparty Interaction requests unless requests are made by all designated parties to the arrangement. A Subscriber to such Private Counterparty Interactions may request to discontinue the arrangement without the notification or consent of the other parties to the arrangement.

## **G. Potential effect of counterparty restriction functionality**

Counterparty restriction functionality may result in reduced execution rates, either because a Subscriber may have chosen to suppress certain Subscriber interactions or because a Subscriber is within a segment of flow that has been suppressed by other Subscribers.

The purpose of the counterparty restriction functionality is to allow Subscribers more control over the execution of their orders.<sup>15</sup> For example, a Barclays' Subscriber may disable interaction with Barclays principal order flow, Subscribers that are categorized as High under Liquidity Profiling, with specific Subscriber Types, or with applicable contra-side orders that don't meet the LX MinTime requirement. Each Subscriber determines whether it will use any blocking functionality.

To activate counterparty restriction functionality for blocking by (A) Liquidity Profiling category, (B) Subscriber Type, or (C) specific Subscriber, or to enable (E) LX MinTime, please contact your Barclays sales representative.

Barclays reserves the right to deny a Subscriber access to any counterparty restriction functionality.

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<sup>10</sup> For example, if a Subscriber that normally blocks the High category enables LX MinTime, they may interact with orders from Subscribers in the High category as long as those orders have met the LX MinTime requirement.

<sup>11</sup> For example, if a Barclays Institutional Client or Algo/Router User has blocked interactions with ELPs and has enabled LX MinTime, they may interact with orders from ELPs as long as those orders have met the LX MinTime requirement.

<sup>12</sup> For example, if a Subscriber has requested not to trade against a specific counterparty and has enabled LX MinTime for the order, trading with that counterparty will still be blocked.

<sup>13</sup> For example, if a Barclays Institutional Client or Algo/Router User has blocked interactions with Barclays Principal Orders and has enabled LX MinTime for the order, trading with Barclays Principal Orders will still be blocked.

<sup>14</sup> For example, for interactions with contra-side Conditional Orders, if a Barclays Institutional Client or Algo/Router User has Subscriber Type Blocking or Liquidity Profiling enabled as a default for all of their orders, and they subsequently enable LX MinTime, LX MinTime will not apply and only the default blocking will apply.

<sup>15</sup> Each Subscriber has its own execution objectives. Such objectives might include, for example, maximizing fill rates, limiting adverse selection, and interacting only with specific Subscriber Types.

#### 14. Execution priority

For non-LXCC orders, LX employs a price-tier-time priority. For providing liquidity, all trading Subscribers are assigned to one of two tiers:

- Tier 1 consists of Barclays Institutional Clients & Client Algo/Router Users
- Tier 2 consists of all other Subscribers including Broker-Dealers, ELPs, and Barclays Trading Desks

Tier 1 receives execution priority over Tier 2.

Note: Client tiering does not apply when participants are taking liquidity from LX; only when participants are providing liquidity to LX. Also note, Subscriber Types (i.e., Barclays Institutional Clients & Client Algo/Router Users, Broker-Dealers, ELPs, and Barclays Trading Desks) are defined in FAQ 10.

##### *Example*

An ELP Subscriber places a day order at 10:00am to buy ABC stock at mid and it rests on the book. At 10:01am a Barclays Institutional Clients & Algo/Router User Subscriber places a day order to buy ABC stock at mid and it also rests on the book. At 10:02am a Subscriber places an order to take liquidity in ABC stock. That order will transact against the Barclays Institutional Clients & Algo/Router User Subscriber prior to transacting against the ELP Subscriber.

#### 15. For information on execution priority of LXCC orders, see FAQ 33 below). Order types

Other than for the LXCC (see FAQ 33 for LXCC order types), LX accepts limit orders, pegged orders (including pegged orders with limit prices), and conditional orders. Market orders are not accepted. Only Day and IOC time in force are accepted. Additionally, ATS Subscribers have the option to set execution parameters based on their trading objectives on an order-by-order or default basis. These optional execution parameters include: NoLockCross, MinQty, Add Liquidity Only (ALO), and AllowConditionals (Conditional Eligible). The use of particular order types or parameters may impact the execution priority and the fill rate (e.g., an order with a minimum execution size may not be executed against contra-side interest that does not meet the minimum size requirement). For more information on LX order types, please refer to part III, item 7 of LX Form ATS-N and Barclays LX FIX Specification documents.

#### 16. Conditional order negotiations

- **Conditional orders**

LX provides a process for negotiating trades based on conditional parameters, called a “conditional order negotiation” (or “conditional order”). Conditional order is a feature that maximizes the liquidity available to a client’s order by over-exposing the order quantity without the risk of over-filling (barring any unforeseen technology errors).

A client may submit a conditional order to LX via the electronic order entry connection, the Router, or a Barclays’ algorithm which will generate a conditional order message. This message describes the client’s potential interest in a trade with information on price, size, side, and symbol. Because the message is marked “conditional,” it is not executable. Note: As further described in FAQ 28, information about posted firm orders is shared with the Router. Information about posted Conditional Orders, however, is not shared with the Router.

If a conditional order in LX finds a potential contra-side match<sup>16</sup>, LX will send back a “conditional invitation” indicating that a potential match has been found. Where there are multiple conditional potential contra-side matches, the Barclays platform will send conditional invitations all eligible contra orders; on the OCEAN platform, a conditional invite will only be sent to the contra order with first priority. The conditional invitation

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<sup>16</sup> Conditional orders may interact with either conditional or conditional-eligible firm orders; the ability to limit the interaction of a Subscriber’s conditional orders to only other conditional orders is not supported.

confirms the price, side, and symbol of the potentially matching interest. In addition to the price, side and symbol, the Router is also informed of the size of the potential match (which is smaller of the Conditional Order size and the potential contra side order size). At this time a match timer begins. The duration of the match timer is currently set at 100 ms. Depending on how the conditional order was entered into LX, the client, the Router, or Barclays' algorithms may then send a "firm-up" order in response to the conditional invitation. This firm-up order is treated as any other order sent to LX, and is executed according to the price/tier/time priority. Firm-up orders received by the matching engine after the match timer expires will not receive an execution, and will be canceled back, provided no other orders are resting on the book that can execute against the firm-up order.

Currently, Barclays only offers this functionality to the following Subscriber Types: Barclays Institutional Clients & Client Algo/Router Users, Broker-Dealers, and Barclays Trading Desks. This functionality is not made available to ELPs. Barclays reserves the right to limit or prohibit the use of this order type by a Subscriber at its discretion.

By default, Barclays' algorithms will utilize conditional orders to provide users with the most access to available liquidity. If you are interested in opting out of conditional order negotiations, please contact your Barclays sales representative. Please note, if you elect to opt out of this functionality you will also be opting out of the ability to use conditional-eligible firm orders as described below.

- **AllowConditionals (Conditional-eligible firm orders)**

Conditional Eligible Firm Orders will trigger the sending of a Conditional Invitation if and when there is a contra-side Conditional Order in LX that is a potential match against the Conditional Eligible Firm Order. Firm orders sent to LX that are not designated conditional-eligible will not trigger conditional invitations. Conditional Eligible IOC orders which trigger the sending of a Conditional Invitation will remain on the order book until either fully filled or until the expiration of the match timer. Please note that IOC orders which invite conditionals are still eligible to execute against any firm liquidity during the duration of the match timer. The client sending the conditional-eligible firm order will not receive any indication that there is a potential for a match with a conditional order.

By default, all firm orders sent to LX by Barclays' algorithms will be designated conditional eligible so that client orders may interact with the maximum amount of potential liquidity. Algo clients can opt out of this functionality by contacting your Barclays sales representative. Please note, if you elect to opt out of this functionality you will also be opting out of the ability to use conditional orders as described above.

For clients accessing LX directly, Barclays will treat all Firm Orders with a time in force of Day as eligible to interact with Conditional Orders by default; Firm Orders with a time in force of IOC are marked not eligible to interact with Conditional Orders by default. Subscribers using a direct connection have the ability to designate a Firm Order's eligibility to interact with Conditional Orders on an order-by-order basis or as a change to their default trading profile. Subscribers using a direct connection to LX may opt out of using Conditional Eligible Firm Order functionality without affecting the Subscriber's ability to use Conditional Orders.

	<b>Default conditional eligibility</b>	<b>Customization options</b>
<b>Direct Subscribers</b>	<ul style="list-style-type: none"> <li>• DAY orders conditional eligible</li> <li>• IOC orders not conditional eligible</li> </ul>	<ul style="list-style-type: none"> <li>• Can set client level default (on/off)</li> <li>• Order-by-order basis</li> </ul>
<b>Barclays algo/router users</b>	<ul style="list-style-type: none"> <li>• All orders conditional eligible</li> </ul>	<ul style="list-style-type: none"> <li>• Opt out across all of the subscriber's orders</li> <li>• If disabled, turns off all conditionals sent from algo/router</li> </ul>

## **17. Minimum quantity**

LX supports minimum quantity instructions for non-LXCC orders. LX does not “bunch” fills to satisfy the minimum quantity requirement of a client. Each fill from LX will be of a quantity equal to or greater than the minimum quantity specified by the client on the order. If the remaining open shares (leaves quantity) falls below the minimum quantity, LX will, by default, treat the remaining quantity as the minimum quantity. As an alternative, a Subscriber may send an instruction to cancel the order if the leaves quantity falls below a designated minimum quantity.

## **18. Odd and mixed lots**

LX supports firm orders for odd-lot quantities. Odd-lot orders reside in the same order queue and have the same priority as round-lot orders. By default, all orders submitted to LX will be eligible to interact with odd-lot order quantities. Subscribers can opt-out from interacting with orders with an odd-lot quantity either on an order-by-order basis or as a Subscriber profile setting. Any odd-lot order submitted by a Subscriber will automatically be eligible to interact with odd-lot orders irrespective of any election or profile setting made by that Subscriber.

LX also supports mixed-lot orders. Mixed-lot orders reside in the same order queue and have the same priority as round-lot orders. Mixed-lot orders are automatically eligible to interact with other mixed-lot orders. Mixed-lot orders will interact with odd-lot quantities according to the elections of the Subscriber submitting the mixed-lot order in respect to interaction with odd-lot quantities.

When two mixed-lot orders are of the exact same quantity, the full order size will cross (e.g., 140 shares bought against 140 shares sold).

If a mixed-lot order and a round-lot order cross, the quantity executed depends on whether the Subscriber submitting the round-lot order opted-out of interacting with odd-lot quantities. If round-lot order is eligible to interact with odd-lot quantities, the maximum order quantity will cross. Any residual odd-lot leaves quantity will remain in the order book and retain its execution priority or be canceled back to the submitting Subscriber according to the odd-lot elections made by the Subscriber submitting the larger of the two orders. For example, if 240 shares to buy crosses with 300 shares to sell and the round-lot sell order had a time in force of Day and was submitted by a Subscriber that is eligible to interact with odd-lot quantities, 240 shares will trade and the 60 share leaves quantity will remain in the order book as an odd-lot quantity. If a Subscriber submitting a round lot has opted-out of interacting with odd-lot orders (whether in respect of that order or as a profile setting), any cross between that round-lot order and a mixed-lot order will be limited to the largest common round lot quantity. Any residual odd-lot leaves quantity will either remain in the order book and retain its execution priority or be canceled back to the submitting Subscriber according to the time in force and the odd-lot elections made by the Subscriber submitting the larger of the two orders. For example, if 240 shares to buy crosses with 200 shares to sell, 200 shares will trade and 40 shares will either be immediately canceled back to the buyer or remain in the order book according to the elections of the Subscriber submitting the buy order.

If two mixed-lot orders of different quantities cross, the maximum order quantity will cross and the residual odd-lot leaves quantity will either remain in the order book and retain its execution priority or be canceled back to the submitting Subscriber according to the time in force and odd-lot elections made by the Subscriber submitting the larger of the two mixed-lot orders. For example, if 240 shares to buy, crosses with 220 shares to sell, 220 shares will trade and 20 shares will either be immediately canceled back to the buyer or remain in the order book according to the elections of that Subscriber. In any case, any mixed-lot leaves quantity for orders with a time in force of Day will remain in the order book.

## **19. Locked markets**

By default, LX does not cross orders during a locked market. Subscribers may opt into having their orders cross in a locked market for all of their orders or on an order-by-order basis.

LX will not execute non-LXCC orders during a crossed market. Orders will reside on the order book until the crossed market has ended. Because LXCC orders are not priced by reference to the continuous limit order book, they can be matched and executed without regard to a locked or crossed market state.

## 20. Price improvement

When there is spread overlap, price improvement opportunities are divided between the provider and taker of liquidity 50/50 where the split results in an execution price within 4 decimal places.

### *Example*

The market for XYZ is 152.05/152.06. Subscriber A provides liquidity with an order to buy at the offer price (buy at 152.06). An order comes in from Subscriber B to sell at the bid (sell at 152.05).

- Subscriber A is posted to buy .01 above the bid, creating a spread overlap of .01
- 50% of the spread will go to Subscriber A, who is providing liquidity:  $50\% \times .01 = .005$
- 50% of the spread will go to Subscriber B, who is taking liquidity:  $50\% \times .01 = .005$
- The trade will execute at 152.055
- Therefore, Subscriber A buys at 152.055 instead of 152.06, resulting in 50 mils of price improvement. Subscriber B sells at 152.055 instead of 152.05, resulting in 50 mils of price improvement.
- Note: Subscribers may get sub-penny executions in LX due to price improvement logic.

If the 50% split is outside 4-decimal point precision then the execution price will be conservatively rounded to the nearest 4-decimal place price level, such that any residual amount is allocated to the provider as long as all of the standard crossing constraints are met (e.g., the crossing price is at, or within, the NBBO).

## 21. Sub-penny limit price orders in LX

Limit prices in LX must follow minimum price variance rules as dictated by Regulation NMS. Any limit price over \$1 can have at maximum 2 decimals, and any limit price under \$1 can have at maximum 4 decimals. Otherwise, non-conforming orders will be rejected.

## 22. Self-trades

By default, LX does not allow the interaction of orders originating from the same Subscriber identifier (i.e., client acronym). However, Subscribers with a single acronym that are registered broker-dealers may request that their orders be allowed to interact in LX, if they can attest that a change in beneficial ownership will occur.

For Subscribers with multiple acronyms, orders from two different acronyms of the same Subscriber can interact in LX. Subscribers must notify Barclays if they would like to prevent the interaction of their orders from different acronyms and may specify directions by pairs of acronyms.

## 23. Market Access Rule (Rule 15c3-5)

Barclays is subject to, and maintains controls pursuant to, SEC Rule 15c3-5 with respect to the orders sent to LX by non-broker-dealer Subscribers. However, Barclays has no obligations under SEC Rule 15c3-5 when receiving orders from Broker-Dealers and ELPs.

LX has various controls in place to prevent the entry of erroneous orders (e.g., maximum order quantity and notional value limits). For more information on Barclays controls, please reach out to your Barclays sales representative.

## 24. Reg SHO price test

LX will not execute and trade when the following criteria are met: (1) a Reg SHO price test indicator is in effect, (2) the seller has marked his order short, and (3) the cross price is calculated to be less than or equal to the current

national best bid. Orders will remain on the order book as is, and will not be re-priced to allow for crossing. LX will not automatically reject or cancel orders for Reg SHO price test; however, all resting orders will be canceled at the market close.

## **25. Limit up/limit down bands**

LX will accept orders outside of the bands; however, if the market is in a Straddle State, LX pauses all matching. All other crossing constraints (e.g., NBBO, Reg SHO price test) still apply. LX will not re-price orders to allow for crossing within the bands. LX will not automatically reject or cancel orders if the crossing price is outside of crossing constraints; however, all resting orders are canceled at the market close.

During a trading pause or regulatory halt in an NMS stock subject to the LULD Plan, LX will not reject or cancel orders in the security (including LXCC orders). Following the trading pause or regulatory halt, LX will resume executing orders once trading has commenced on the primary listing exchange, LX has received the price bands from the SIP (provided that if the primary listing exchange is unable to reopen due to technology or system issues, LX will resume trading upon receipt of the price bands from the direct market data feeds and SIP, as set forth in Part III, Item 23 of the LX Form ATS-N) and at least one execution has occurred on any other Trading Center.

For LXCC orders, where the LULD halt occurs before the LXCC Offset Time but is lifted after the LXCC Offset Time, or where the LULD halt occurs at or after the LXCC Offset Time, all LXCC orders will be canceled.

## **26. Trading halts**

For non LXCC, if a symbol is halted, orders on the book will remain on the book as they were prior to the halt. LX will not cancel orders in the event of a halt and will not re-order the book following a halt. As per usual, all posted orders in the book will be canceled at the market close.

For information on treatment of LXCC orders when a trading halt occurs, please see FAQ 33 below.

## **27. Best execution of customer orders**

Barclays has a duty to seek to obtain the most favorable terms reasonably available for customer orders. To help meet this obligation, Barclays periodically reviews the quality of its customers' executions, including orders routed to LX. In addition, LX is designed to execute orders at or within the NBBO in accordance with Rule 611 under Regulation NMS of the Securities Exchange Act of 1934.

## **28. LX is a non-displayed ATS**

LX is a non-displayed ATS. Subscribers do not receive information from LX other than details pertaining to their own orders, and Subscribers that elect to engage in conditional order negotiations may receive information related to conditionally-matched orders (see FAQ 16).

LX provides, aggregated information about posted orders (other than about Conditional Orders, as described in Part III, Item 9 of Form ATS-N) to the Router on a real-time basis. The feed contains aggregated buy and sell interest per symbol within the current NBBO; no client information is present. The Router uses the posted order information from LX solely to decide whether to route an order to the ATS. The Router does not share this information with any other Barclays trading system, desk, or any third party. Clients can opt out of having their LX order information included in the aggregated information provided to the Router (see FAQs 9 of the Smart Order Router FAQs document accessible at [barx.com/eqdisclosures](http://barx.com/eqdisclosures)). To learn more or opt out, please contact your Barclays sales representative.

The Router does not generate indications of interest based on information from LX.

LX does not route orders to any other venues.



### **29. Trade reporting**

All executions in Barclays LX are reported to the Nasdaq TRF in real time. Note: in the event of an issue that would prevent OCEAN from reporting LX trades to the TRF, LX will halt trading in at least the affected securities until the issue has been resolved.

### **30. Market data for LX**

LX uses an NBBO constructed by Ocean. The Nasdaq OCEAN platform uses a combination of full network redundant market data feeds and market data disseminated by the Securities Information Processors ("SIP") to construct the NBBO. Specifically, OCEAN uses direct market data feeds from all exchanges other than LTSE, and FINRA ADF. As a secondary source of the NBBO OCEAN uses full network redundant SIP feeds. LX will arbitrate between the two feeds, direct or SIP, based on the detection of any market data latency. If there is an issue with the constructed NBBO, transactions in LX will be priced solely using the NBBO disseminated by the SIPs

### **31. Data accuracy checks**

In order to ensure that LX is using a timely and accurate NBBO, Barclays employs numerous checks to ensure market data accuracy. These include, but are not limited to, the use of proprietary programs and third-party tools which produce both intra-day and T+1 measures of LX's NBBO accuracy versus an outside data source.

LX is monitored monthly for its compliance with the volume thresholds set forth in Regulation SCI and the Fair Access section of Regulation ATS. If Barclays determines that trading on LX is approaching any such volume threshold in a security, Barclays may determine, at its discretion, to disable trading in that security.

### **32. Location of LX and connectivity**

LX is located at the NY4 Data Center in Secaucus, NJ. Cross connection to LX is available to connect directly to the LX gateway housed in the Equinix NY5 data center in Secaucus, NJ (see FAQ 8 for additional details on cross connections).

### **33. LX Closing Cross ("LXCC")**

LX allows Subscribers utilizing Barclays' order router and algorithms to submit market-on-close orders to LXCC. Market-on-close orders may be entered beginning at 8:00 A.M. ET until a pre-determined cut-off time ("LXCC Offset Time"). LXCC orders must contain the following combination of FIX instructions: market orders with a Time In Force of "at the close;" no other order types and Time In Force combinations will be eligible for the LXCC. Subscribers utilizing Barclays' algorithms or smart order router who wish to trade in the LXCC must request that LXCC be enabled by contacting their Equities Sales Representative or by emailing LXService@barclays.com.

The LXCC Offset Time is 30 seconds before the market-on-close deadline on the primary listing exchange for the relevant NMS Stock. Following the LXCC Offset Time, Subscribers will not be able to place or modify LXCC orders. LXCC orders are matched immediately following the Offset Time and the algorithm or smart order router used to submit the LXCC order is notified of the quantity of the orders matched by LX. Any unmatched quantity is canceled back to the algorithm or smart order router at this time. LXCC orders will only match with other LXCC orders and are prioritized based on (1) size, and then (2) time of receipt.

Subscribers may not apply, and LX will not act upon, a Minimum Quantity parameter (as defined above in FAQ 17) on their LXCC orders. Subscribers can apply a principal order exclusion to their LXCC orders. LXCC orders are subject to the Self Dealing prevention feature described above in FAQ 22. Subscribers cannot apply segment classification or liquidity profiling restrictions to their LXCC orders. LX does not accept short sale or short sale exempt orders for the LXCC.

For LXCC orders, if a LULD or other regulatory halt is in effect during any portion of the time between the LXCC Offset Time and the time the official closing price is disseminated by the primary listing market for the NMS Stock, the LXCC orders will be cancelled back unexecuted. If the halt is in effect at the time an LXCC order is received but lifted before the LXCC Offset Time, the LXCC order will be eligible for matching and execution in the LXCC. If Barclays disables trading in a symbol before the LXCC Offset Time, LX will cancel all open orders and will reject any

new LXCC Orders, including modifications until the halt is lifted. If a Barclays-initiated halt occurs after the LXCC Offset Time, all LXCC Orders will be cancelled. During a freeze initiated by Barclays, if the freeze occurs prior to the LXCC Offset Time, open orders will remain open and new orders or modifications will be accepted. If the freeze is in place at the LXCC Offset Time, open LXCC Orders will be cancelled. If the freeze is implemented after the LXCC Offset Time, all LXCC Orders will be cancelled.

Before LXCC orders are matched, prior to the LXCC Offset Time, they can be cancelled or modified. After the LXCC Offset Time, LXCC orders are matched and cannot be cancelled or modified. Once LX receives the official closing price disseminated by the primary listing market for the relevant NMS Stock, matched LXCC orders will be executed at that price, and the price will be reported to any Subscriber with a matched LXCC order. If an official closing price for an NMS Stock is not received by 5:00 P.M. Eastern Time, all LXCC orders to buy or sell that stock will be cancelled. If a closing price for an NMS Stock is announced but taken down by the primary listing exchange without being replaced before 5:00 P.M. Eastern Time, all LXCC orders to buy or sell that stock will be cancelled. If the primary listing exchange updates the closing price of an NMS Stock at or before 5:00 P.M. EST, LX will adjust the price for any previously executed order, and it will send an updated execution report to the Subscriber that submitted the order. If the primary listing exchange updates the closing price of an NMS Stock after 5:00 P.M. Eastern Time, LX will adjust the execution reports on a T+1 basis.

If a disconnect occurs prior to the LXCC Offset Time, standard cancel on disconnect rules will be applied. At or after the LXCC Offset Time, a matched order will not be cancelled, even if the Subscriber has not yet been notified of the execution.



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