LX ATS Monthly Summary
For the month of August 2019

Execution Metrics
Average Daily Volume (mm single counted) 56.4
Average Daily Notional ($mm) 2,074
Shares Executed (mm) 1,242
Average Trade Size (shares) 194

Executions by Subscriber Type
Barclays Institutional Clients 14.5%
& Client Algo/Router Users 14.5%
Broker-Dealers 40.7%
ELPs 42.2%
Barclays Trading Desks 2.7%
Barclays Principal Desk 0.0%

Executions by Price Relative to NBBO
At NBBO or Locked 42.0%
At Midpoint 50.1%
Inside NBBO excluding Midpoint 7.9%

Block Metrics (% of shares)
Block ≥10K shares 2.7%
Block ≥$200K notional 3.5%
Demi-block 2K-10K shares 10.6%
Demi-block $100K-$200K notional 3.2%

Executions by Liquidity Profiling Category
High Alpha 19.7%
Medium Alpha 8.0%
Low Alpha 72.3%

Results of Liquidity Profiling Review
Subscribers that changed 24 12.7%
Barclays LP Overrides 0 0.0%

Note: Barclays implemented no overrides to maintain subscribers in their previous, higher alpha category. All changes as a result of the profiling review took effect on 8/10/19. Percentages reflect take flow of subscribers that changed, over all take flow in LX in notional value, for the period 7/3/19 to 7/31/19.

Executions by Sector
ETF 27.5%
Energy 11.8%
Financials 9.9%
IT 9.7%
Cons Disc. 9.3%
Health Care 7.6%
Industrials 5.9%
Materials 5.0%
Telecomm 3.4%
Cons Staples. 3.3%
Communicat. 2.6%
Real Estate 2.5%
Utilities 1.4%

Executions by Market Cap
Micro 12.8%
Small 14.9%
Mid 28.1%
Large 28.1%
Mega 16.1%

Mega >$50 billion
Large $10 - $50 billion
Mid $2 - $10 billion
Small $750 million - $2 billion
Micro <$750 million

LX reported shares for the previous 12 Months

*All data includes aggregate volume as reported on SEC Form ATS-R
Note: This information pertains to Barclays LX in the US.
### Execution Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Volume</td>
<td>Total shares executed in LX divided by the number of trading days in the month</td>
</tr>
<tr>
<td>Average Daily Notional</td>
<td>Total notional executed in LX divided by the number of trading days in the month</td>
</tr>
<tr>
<td>Shares Executed</td>
<td>Total shares executed in LX for the month</td>
</tr>
<tr>
<td>Average Trade Size</td>
<td>Total shares executed divided by the number of executions in LX</td>
</tr>
</tbody>
</table>

### Block Metrics

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<tr>
<td>Block ≥10K shares</td>
<td>Percentage of shares executed in blocks of 10,000 shares or greater</td>
</tr>
<tr>
<td>Block ≥$200K notional</td>
<td>Percentage of shares executed in blocks of $200K notional or greater</td>
</tr>
<tr>
<td>Demi-block 2K-10K shares</td>
<td>Percentage of shares executed where each execution has traded shares &gt;= 2,000 and &lt;10,000</td>
</tr>
<tr>
<td>Demi-block $100K-$200K notional</td>
<td>Percentage of shares executed where each execution has traded notional &gt;= $100k and &lt; $200K</td>
</tr>
</tbody>
</table>

### Executions by price relative to the NBBO

<table>
<thead>
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<tr>
<td>At NBBO or Locked</td>
<td>Percentage of shares executed at the national best bid or offer or shares executed when NBBO is locked</td>
</tr>
<tr>
<td>At Midpoint</td>
<td>Percentage of shares executed directly at the midpoint</td>
</tr>
<tr>
<td>Inside NBBO excluding Midpoint</td>
<td>Percentage of shares executed within the NBBO excluding the midpoint</td>
</tr>
</tbody>
</table>

### Subscriber Types

<table>
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<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barclays Institutional Clients &amp; Client Algo/Router Users</td>
<td>Institutional and broker-dealer clients that route orders to LX via Barclays’ Algorithmic Trading products (“Algos”) and/or Dynamic Router and Institutional clients (i.e., non broker-dealer clients) that route orders directly to LX.</td>
</tr>
<tr>
<td>Broker-Dealers</td>
<td>Third-party broker-dealers that route orders directly to LX on behalf of their clients, or on behalf of themselves</td>
</tr>
<tr>
<td>ELPs</td>
<td>Third-party broker-dealers that route orders directly to LX solely on a principal basis and/or ATS Subscribers who self-identify as ELPs.</td>
</tr>
<tr>
<td>Barclays Trading Desks</td>
<td>Barclays client-facing trading desks when executing in a principal capacity in LX and affiliate trading desks executing in LX.</td>
</tr>
<tr>
<td>Barclays Principal Desk</td>
<td>Barclays registered options market making desk</td>
</tr>
</tbody>
</table>

### Executions by Liquidity Profiling Category

Barclays employs a framework called Liquidity Profiling for categorizing activity within our ATS. Liquidity Profiling categorization applies only to subscribers that route 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 and High being the highest alpha category).

<table>
<thead>
<tr>
<th>Category</th>
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</tr>
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<tbody>
<tr>
<td>High Alpha</td>
<td>Executions where the taking subscriber is in the high-alpha category (≥0.201)</td>
</tr>
<tr>
<td>Medium Alpha</td>
<td>Executions where the taking subscriber is in the medium-alpha category (≥0.141 and &lt;0.201)</td>
</tr>
<tr>
<td>Low Alpha</td>
<td>Executions where the taking subscriber is in the low-alpha category (&lt;0.141); subscribers who route orders to LX via Barclays’ algorithms or Dynamic Router are placed in the Low Alpha category by default.</td>
</tr>
</tbody>
</table>

### Average 1-Second Take Alpha

Midpoint to midpoint market movement over a 1-second horizon, normalized by the daily average spread.

### Subscribers that changed

On a monthly basis Barclays reviews the Liquidity Profiling categorizations of subscribers that route directly to LX, based on their average 1-second take alpha. The percentage of LX take flow is the take flow traded by the subscribers who changed Liquidity Profiling category, to either a higher or lower category, divided by the total take flow traded in LX, in notional.

### Override

On a monthly basis Barclays reviews the Liquidity Profiling categorizations of subscribers and retains discretion to override a subscriber’s categorization by placing that subscriber in a higher alpha category than what it would have been if it was based solely on the objective application of the liquidity profiling metric. Barclays may consider previous trading behavior when determining whether to apply an “Override” to a subscriber and may wait for additional data before implementing a change to a lower alpha category. Barclays’ discretion is not used to place a subscriber in a lower alpha category than that indicated by Liquidity Profiling. The percentage of LX take flow is the take flow traded by those overridden subscribers, divided by the total take flow traded in LX, in notional.

### Contact

**LX Service**
LXService@barclays.com
+1 212-526-9190

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