Trading the Auctions

Webinar

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Today’s Speakers

Richard Johnson
Vice President
Greenwich Associates
(Moderator)

Joe Wald
Founder & CEO
Clearpool

John Latino
Head Trader
ZPR

Oliver Albers
Global Head of Sales
Nasdaq

Ed Coughlin
Director of Trading Services
Nasdaq
The Auction Mechanism

Opening and Closing Auctions in the Trading Day

Exchange Cutoff Time:
Orders must be submitted to the cross by this time (varies by exchange)

Liquidity Building Phase for Opening Auction:
Existing auction orders may not be canceled/ Only imbalance orders can be submitted

Continuous Market Trading

Exchange Cutoff Time:
Orders must be submitted to the cross by this time (varies by exchange)

Liquidity Building Phase for Closing Auction:
Existing auction orders may not be canceled/ Only imbalance orders can be submitted

Hypothetical auction order book. In the above example, the auction will run seeking to maximize the quantity of shares crossed. In this case, it occurs at a price of $45.58. Aggregate liquidity is calculated by summing the order quantity up to that price level. The indicative cross size is the lower of the aggregate buy liquidity and aggregate sell liquidity.

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The Most Important Attributes Of Change Auctions

Execution at Official Auction Price is the most important factor for traders

**IMPORTANCE OF EXCHANGE AUCTION FEATURES**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Most important</th>
<th>Top 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution at official auction price</td>
<td>39%</td>
<td>57%</td>
</tr>
<tr>
<td>Efficient price discovery</td>
<td>38%</td>
<td>83%</td>
</tr>
<tr>
<td>Reliable imbalance and indicative price info</td>
<td>13%</td>
<td>63%</td>
</tr>
<tr>
<td>Predictable execution time</td>
<td>11%</td>
<td>36%</td>
</tr>
<tr>
<td>Low cost</td>
<td>7%</td>
<td>21%</td>
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</tbody>
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Note: Based on 32 buy-side and sell-side respondents. Source: Greenwich Associates 2016 U.S. Auctions Study

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Access To Exchange-Operated Auctions

Most traders use an algo to access exchange auctions, but over half also call in orders to a broker.

**ACCESS TO EXCHANGE-OPERATED CROSSES**

- Through an algo: 83%
- Voice call to broker: 52%
- DMA order: 38%
- Other: 21%
- Do not use: 14%

Note: Based on 28 buy-side respondents.
Source: Greenwich Associates 2016 U.S. Auctions Study

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Auction Data Feeds

In order to view real-time information about liquidity in exchange auctions, a trader will need access to specific auction data feeds.

Typical feeds:

- **Paired shares** — the total number of shares eligible to be matched at the current indicative price
- **Imbalance** — represented by eligible buy orders minus eligible sell orders; a value less than zero implies a sell imbalance
- **Indicative price** — the expected cross price if the auction were held at that point in time

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Auction Data Feeds

All major exchanges provide data feeds. The chart below shows the how accurately the different exchange feeds forecast the opening price.

Graph 1

DEVIATION BETWEEN INDICATIVE PRICE AND OPEN PRICE

Note: Aggregated data from exchange auction data feeds from Nasdaq (5/16/16-8/31/16) and NYSE (6/3/16-8/31/16).
Source: Greenwich Associates 2016

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Auction Data Feeds

The chart below shows how accurately the different exchange feeds forecast the closing volume.

**Graph 3**
CLOSE: INDICATIVE VOLUME AS A PERCENT OF REALIZED VOLUME

Note: Aggregated data from exchange auction data feeds from Nasdaq (5/16/16-8/31/16) and NYSE (6/3/16-8/31/16).
Source: Greenwich Associates 2016

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Auction Imbalance Information

Almost half of traders believe it is ‘Extremely Useful’ to know the intensity of an imbalance.

HOW USEFUL IS KNOWLEDGE OF AN IMBALANCE

- Intensity of the imbalance: 49% Extremely useful, 26% Very useful, 20% Useful, 5% Somewhat useful.
- Knowing an imbalance: 43% Extremely useful, 26% Very useful, 26% Useful, 5% Somewhat useful.

Note: Based on 35 buy-side and sell-side respondents. Source: Greenwich Associates 2016 U.S. Auctions Study

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ETFs & Passive Strategies Drive Auction Volume

• Passive investment strategies are those that seek to achieve the performance of a benchmark index, such as the S&P 500.

• Global institutional AUM allocated to passive strategies have grown from 14% in 2008 to 22% in 2015.

• Exchange-traded funds, or ETFs, are passive investments that provide exposure to an index via a vehicle that trades like a stock on an exchange.
  – ETFs have also seen significant growth: 2015 was a record-breaking year in the U.S., with positive net flows of approximately $230 billion.
  – U.S. institutions represent approximately 36%, or $756 billion, of the total $2.1 trillion in U.S. ETF assets.

• As passive strategies and ETFs aim to track the performance of a benchmark index, they rely heavily on the closing auction, as it determines the closing price used in the benchmark index price calculation.

• Growth in passive investing and ETFs will thereby make the auction process ever more important.

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Institutional AUM – Active Vs. Passive

- Institutions are allocating a greater proportion of their AUM to passive strategies
- In 2003 passive represented 12% of global institutional AUM
- In 2015 it was 22%
- In 2020 it is forecast to be 26%

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Contact Information

Richard Johnson
Vice President, Market Structure and Technology
+1 203.625.4337
Richard.Johnson@greenwich.com
 @_richjohnson

greenwich.com