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Trading the Auctions

Webinar

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April 5, 2017

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
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Ed Coughlin
Director of
Trading
Services
Nasdaq



The Auction Mechanism

OPENING AND CLOSING AUCTIONS IN THE TRADING DAY



LIQUIDITY BUILDING PHASE FOR OPENING AUCTION:

Existing auction orders may not be canceled/ Only imbalance orders can be submitted

PRICE	AGGREGATE BUY LIQUIDITY	AGGREGATE LIQUIDITY	INDICATIVE CROSS SIZE	AGGREGATE LIQUIDITY	AGGREGATE SELL LIQUIDITY
\$45.61	1,100	1,100	1,100	205,300	73,600
\$45.60	4,400	5,500	5,500	131,700	43,600
\$45.59	9,800	15,300	15,300	88,100	31,100
\$45.58	17,500	32,800	32,800	57,000	27,300
\$45.57	33,600	66,400	29,700	29,700	16,300
\$45.56	48,100	114,500	13,400	13,400	10,200
\$45.55	65,900	180,400	3,200	3,200	2,100
\$45.54	96,000	276,400	1,100	1,100	900
\$45.53	152,900	429,300	200	200	200

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.

LIQUIDITY BUILDING PHASE FOR CLOSING AUCTION:

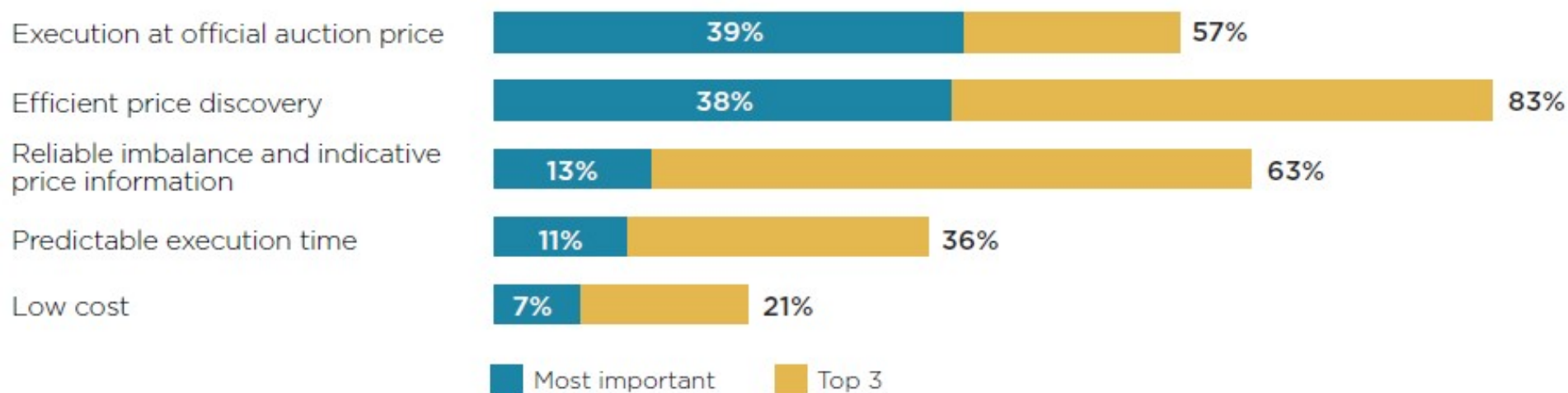
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The Most Important Attributes Of Change Auctions

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

IMPORTANCE OF EXCHANGE AUCTION FEATURES



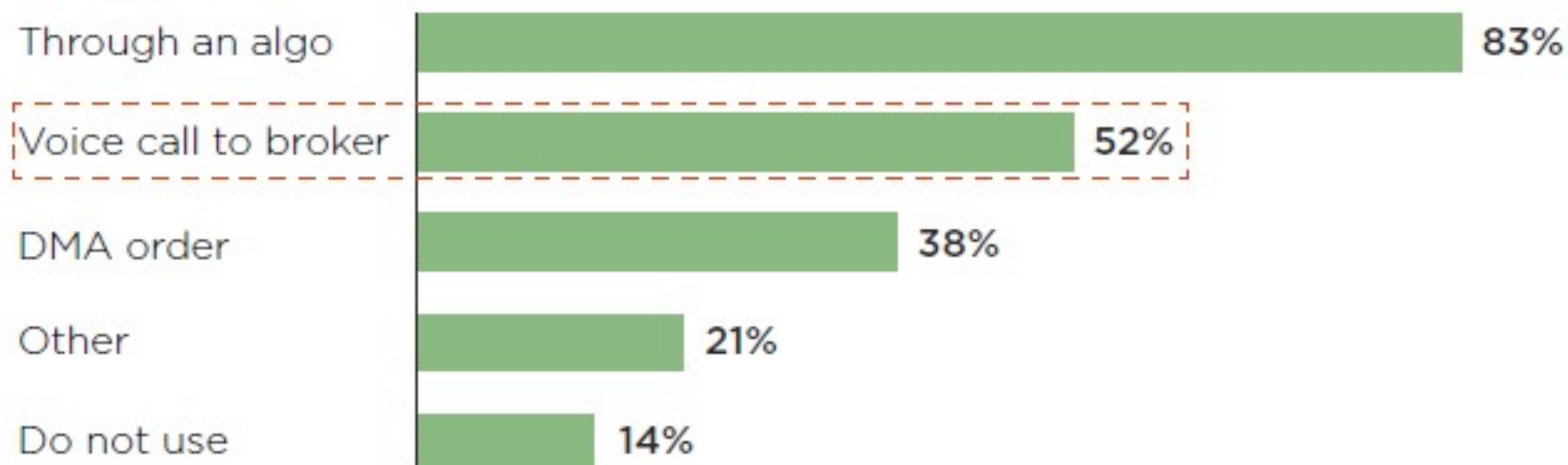
Note: Based on 32 buy-side and sell-side respondents.
Source: Greenwich Associates 2016 U.S. Auctions Study

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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



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



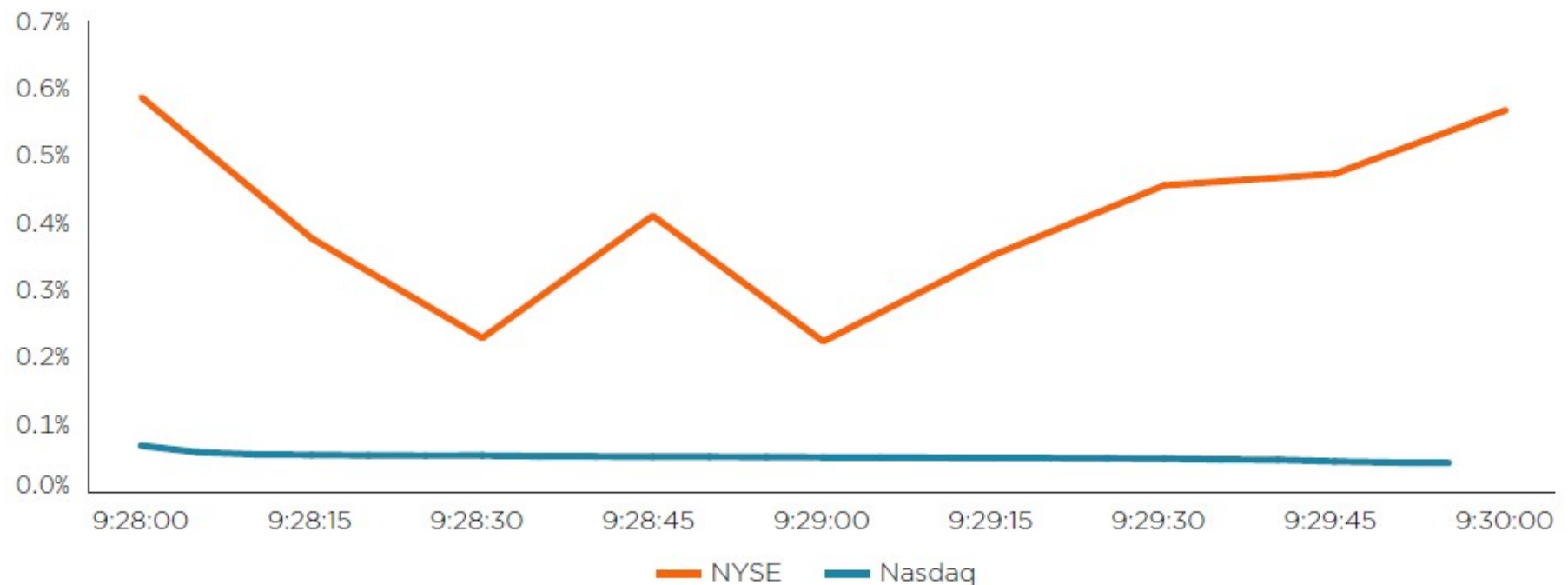
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Auction Data Feeds

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

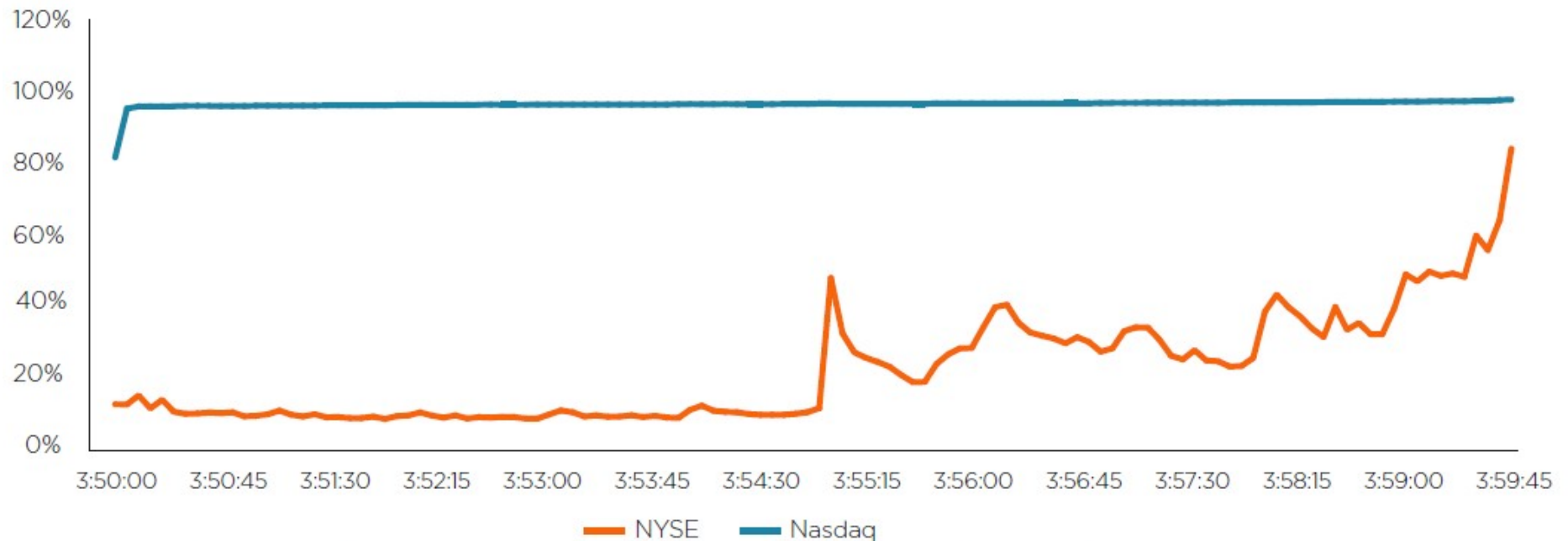
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Auction Data Feeds

The chart below shows the 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).

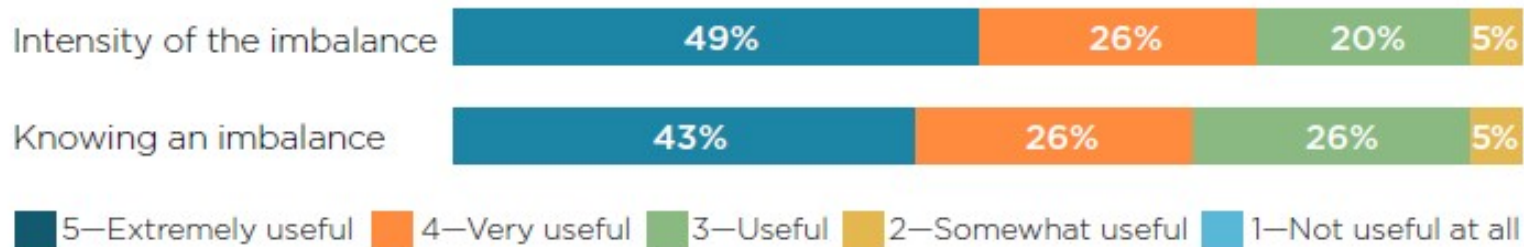
Source: Greenwich Associates 2016

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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



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.

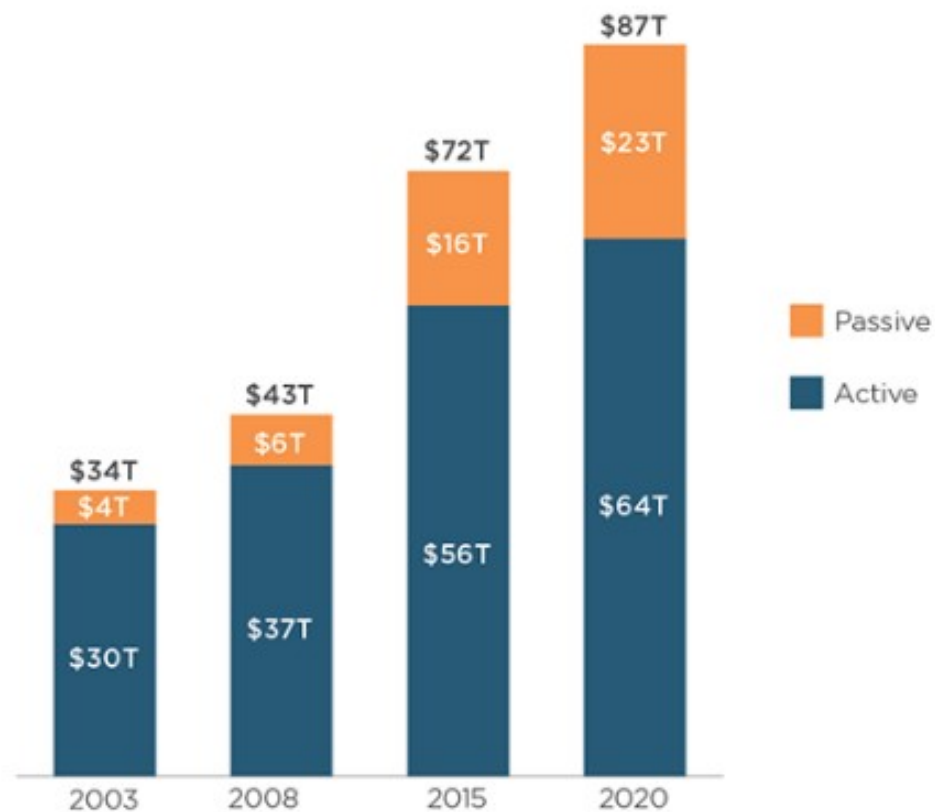


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Institutional AUM – Active Vs. Passive

- 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%

GLOBAL AUM—ACTIVE VS. PASSIVE



Source: Greenwich Associates 2016, BCG Global Asset Management 2016

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