

Order Routing

Report Period: 1st QTR, 2018

Securities Listed on NYSE

Summary Statistics: (As percentage of total customer orders and non-directed orders):

Order Type	Percentage
Non-directed	100%
Market orders	0%
Limit orders	0%
Other orders	100%

Venues Receiving Significant Percentage of Total Non-Directed Orders:

Venue	Percentage
Bloomberg Tradebook LLC	30.16%
FIS Brokerage & Securities Services, LLC	16.51%
Knight Execution & Clearing Services	10.43%
Clearpool Execution Services, LLC	9.58%
NASDAQ	8.40%
Bank Of America Merrill Lynch	7.45%
Credit Suisse First Boston Corporation	7.19%

Information Concerning Significant Venues

Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Bloomberg Tradebook LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
2	FIS Brokerage & Securities Services, LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
3	Knight Execution & Clearing Services	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.

4	Clearpool Execution Services, LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
5	NASDAQ	0.00%	0.00%	100.00%	ities and Exchange Traded Funds (ETFs) shares that provide liquidity to the system.
6	Bank Of America Merrill Lynch	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
7	Credit Suisse First Boston Corporation	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.

Securities Listed on NASDAQ

Summary Statistics: (As percentage of total customer orders and non-directed orders):

Order Type	Percentage
Non-directed	100%
Market orders	0%
Limit orders	0%
Other orders	100%

Venues Receiving Significant Percentage of Total Non-Directed Orders:

Venue	Percentage
Clearpool Execution Services, LLC	22.94%
Vandham Securities Corp	16.37%
Goldman Sachs Execution & Clearing, L.P.	14.61%
Knight Execution & Clearing Services	14.14%
Bloomberg Tradebook LLC	12.06%
NASDAQ	10.62%

Information Concerning Significant Venues

Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Clearpool Execution Services, LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
2	Vandham Securities Corp	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
3	Goldman Sachs Execution & Clearing, L.P.	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
4	Knight Execution & Clearing Services	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
5	Bloomberg Tradebook LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or

					receive payment for order flow from this venue/market center.
6	NASDAQ	0.00%	0.00%	100.00%	ities and Exchange Traded Funds (ETFs) shares that provide liquidity to the system.

Securities Listed on AMEX/Other Exchanges

Summary Statistics: (As percentage of total customer orders and non-directed orders):

Order Type	Percentage
Non-directed	100%
Market orders	0%
Limit orders	0%
Other orders	100%

Venues Receiving Significant Percentage of Total Non-Directed Orders:

Venue	Percentage
Knight Execution & Clearing Services	43.57%
Archipelago Stock Exchange	18.87%
Bank Of America Merrill Lynch	14.19%
UBS Securities, LLC	11.36%

Information Concerning Significant Venues

Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Knight Execution & Clearing Services	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
2	Archipelago Stock Exchange	0.00%	0.00%	100.00%	take liquidity from the system and is rebated for OTC and Exchange Traded Funds (ETFs) shares that provide liquidity to the system.
3	Bank Of America Merrill Lynch	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
4	UBS Securities, LLC	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.

Exchange Listed Options

Summary Statistics: (As percentage of total customer orders and non-directed orders):

Order Type	Percentage
Non-directed	100%
Market orders	0%
Limit orders	0%
Other orders	100%

Venues Receiving Significant Percentage of Total Non-Directed Orders:

Venue	Percentage
DASH ((D) Dash Financial Options)	54.01%
PCX ((P) Pacific Exchange)	35.88%
CBOE ((C) Chicago Board Options Exchange)	5.68%

Information Concerning Significant Venues

Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	DASH ((D) Dash Financial Options)	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
2	PCX ((P) Pacific Exchange)	0.00%	0.00%	100.00%	JonesTrading does not have a profit sharing arrangement with or receive payment for order flow from this venue/market center.
3	CBOE ((C) Chicago Board Options Exchange)	0.00%	0.00%	100.00%	As of April 20, 2009, JonesTrading and Barclays Capital signed an agreement wherein Barclays Capital will rebate from its pool accrual to JonesTrading the orders routed to Barclays Capital's market makers. This agreement includes orders routed to the Chicago Board Options Exchange.

Upon request, JonesTrading will provide to customers information on the order routing of their orders pursuant to SEC Rule 606. Customers may submit a request for a written copy of the report by emailing compliance@jonestrading.com.

Customers may request the identity of the venue where specific orders were routed for execution for any order in the previous six (6) months by sending a written request to:

JonesTrading Institutional Services
Attn: Compliance Department
32133 Lindero Canyon Road
Suite 208
Westlake Village, CA 91361

Please include the security and trade date with your request.