

Order Routing

Report Period: 4th QTR, 2017

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
Knight Execution & Clearing Services	20.25%
Bank Of America Merrill Lynch	17.77%
Clearpool Execution Services, LLC	16.98%
FIS Brokerage & Securities Services, LLC	14.26%
UBS Securities, LLC	6.70%
NASDAQ	6.40%
Vandham Securities Corp	6.17%

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	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.
3	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.
4	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.

5	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.
6	NASDAQ	0.00%	0.00%	100.00%	As of November 1, 2002, JonesTrading is party to Instinet's standard Schedule of Transaction Fees for US broker-dealers. Under this schedule, JonesTrading is charged for routing U.S. Equities that take liquidity from the system and is rebated for U.S. Equities and Exchange Traded Funds (ETFs) shares that provide liquidity to the system.
7	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.

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
Knight Execution & Clearing Services	38.37%
Clearpool Execution Services, LLC	21.04%
FIS Brokerage & Securities Services, LLC	9.33%
UBS Securities, LLC	7.73%
Credit Suisse First Boston Corporation	6.75%

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	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.
3	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.
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.
5	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 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	50.09%
Clearpool Execution Services, LLC	16.94%
Credit Suisse First Boston Corporation	11.46%
UBS Securities, LLC	8.90%

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	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.
3	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.
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)	45.54%
PCX ((P) Pacific Exchange)	39.18%
CBOE ((C) Chicago Board Options Exchange)	7.44%
AMEX ((A) American Stock Exchange)	6.06%

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.
4	AMEX ((A) American Stock 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.

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.