

Order Routing

Report Period: 3rd 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
Citadel Securities, LLC	32.90%
Clearpool Execution Services, LLC	15.88%
FIS Brokerage & Securities Services, LLC	13.68%
VIRTU Financial Capital Markets LLC	13.57%
UBS Securities, LLC	5.53%

Information Concerning Significant Venues Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Citadel Securities, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Citadel's standard Schedule of Transaction Fees for US broker dealers. Citadel will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
2	Clearpool Execution Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Clearpool's standard Schedule of Transaction Fees for US broker dealers. Clearpool will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
3	FIS Brokerage & Securities Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to FIS's standard Schedule of Transaction Fees for US broker dealers. FIS will pass along rebates it receives for executions and reduce the

					amount of transaction fees owed to them.
4	VIRTU Financial Capital Markets LLC	0.00%	0.00%	100.00%	JonesTrading is party to VIRTU's standard Schedule of Transaction Fees for US broker dealers. VIRTU will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
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.

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
Citadel Securities, LLC	48.45%
Clearpool Execution Services, LLC	11.66%
VIRTU Financial Capital Markets LLC	9.49%
FIS Brokerage & Securities Services, LLC	8.94%
UBS Securities, LLC	5.91%

Information Concerning Significant Venues Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Citadel Securities, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Citadel's standard Schedule of Transaction Fees for US broker dealers. Citadel will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
2	Clearpool Execution Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Clearpool's standard Schedule of Transaction Fees for US broker dealers. Clearpool will pass along rebates it receives for executions

					and reduce the amount of transaction fees owed to them.
3	VIRTU Financial Capital Markets LLC	0.00%	0.00%	100.00%	JonesTrading is party to VIRTU's standard Schedule of Transaction Fees for US broker dealers. VIRTU will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
4	FIS Brokerage & Securities Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to FIS's standard Schedule of Transaction Fees for US broker dealers. FIS will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
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.

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
Citadel Securities, LLC	50.60%
FIS Brokerage & Securities Services, LLC	10.85%
Clearpool Execution Services, LLC	9.15%
VIRTU Financial Capital Markets LLC	8.51%

Information Concerning Significant Venues Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	Citadel Securities, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Citadel's standard Schedule of Transaction Fees for US broker dealers. Citadel will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
2	FIS Brokerage & Securities Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to FIS's standard Schedule of Transaction Fees for US

					broker dealers. FIS will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
3	Clearpool Execution Services, LLC	0.00%	0.00%	100.00%	JonesTrading is party to Clearpool's standard Schedule of Transaction Fees for US broker dealers. Clearpool will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.
4	VIRTU Financial Capital Markets LLC	0.00%	0.00%	100.00%	JonesTrading is party to VIRTU's standard Schedule of Transaction Fees for US broker dealers. VIRTU will pass along rebates it receives for executions and reduce the amount of transaction fees owed to them.

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
PCX (P) Pacific Exchange	55.82%
DASH (D) Dash Financial Options	33.64%
CBOE (C) Chicago Board Options Exchange	8.65%

Information Concerning Significant Venues Types of Orders Routed to Venue:

		Market Orders	Limit Orders	Other Orders	Material Aspects of Relationship w/ this Venue
1	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.
2	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.
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.
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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.