

Order Routing

Report Period: 4th QTR, 2019

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
Virtu Americas LLC	43.40%
Citadel Securities, LLC	18.37%
Clearpool Execution Services, LLC	13.55%
FIS Brokerage & Securities Services, LLC	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	Virtu Americas 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.
2	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.
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	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
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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	55.75%
Clearpool Execution Services, LLC	15.65%
FIS Brokerage & Securities Services, LLC.	5.42%
Virtu Americas LLC	5.42%

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 Americas 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.
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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	50.02%
Virtu Americas LLC	26.77%
Clearpool Execution Services, LLC	6.11%

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	Virtu Americas 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.
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.

Exchange Listed Options

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

Order Type	Percentage
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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	51.22%
PCX (P) Pacific Exchange	42.75%
CBOE (C) Chicago Board Options Exchange	6.03%

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%	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.