

CAMBRIDGE INVESTMENT RESEARCH - Held NMS Stocks and Options Order Routing Public Report

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3rd Quarter, 2021

July 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	89.29	1.14	8.00	1.56

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	35.38	50.06	31.05	10.72	2.52	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	20.21	27.58	23.16	6.87	4.45	0	0.0000	0	0.0000	0	0.0000	0	0.0000
National Financial Services LLC (XSTM)	14.24	0.00	0.00	0.00	90.91	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	9.96	14.07	11.05	3.58	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	7.52	0.00	20.00	40.88	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	6.11	0.00	6.84	33.78	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.44	3.43	4.21	0.78	0.04	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.84	2.57	3.16	0.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.66	2.29	0.53	0.52	0.45	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Cboe EDGX US Equities Exchange (EDGX)	0.39	0.00	0.00	2.18	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

VIRTU Americas, LLC (NITE):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

National Financial Services LLC (XSTM):

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JANE STREET CAPITAL, LLC (JNST):

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NASDAQ Execution Services, LLC (NSDQ):

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New York Stock Exchange (NYSE):

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Two Sigma Securities, LLC (SOHO):

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G1 Execution Services, LLC (ETMM):

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UBS Securities, LLC (UBSS):

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Cboe EDGX US Equities Exchange (EDGX):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

July 2021

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	93.12	1.30	4.47	1.10

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	34.21	49.50	48.65	8.99	0.99	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
National Financial Services LLC (XSTM)	24.18	0.00	0.00	0.00	94.73	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	19.14	26.87	27.25	7.95	1.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	9.86	14.46	9.68	2.42	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.45	3.55	4.28	0.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	2.44	0.00	1.80	33.94	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	2.16	3.07	2.25	0.52	0.25	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.75	2.55	2.03	0.55	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.27	0.00	3.15	17.28	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	1.17	0.00	0.90	16.20	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

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NYSE Arca (ARCA):

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July 2021

Options
Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	84.31	2.71	11.87	1.12

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	48.22	47.43	60.29	48.82	67.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	34.30	38.92	26.47	17.06	17.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	7.64	6.66	5.88	11.57	14.29	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	5.25	1.98	0.00	19.80	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Morgan Stanley & Company LLC (MSCO)	4.59	5.01	7.35	2.75	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

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Dash Financial Technologies LLC (DASH):
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August 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	91.48	0.97	6.33	1.21

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	34.85	49.24	46.15	8.77	1.77	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	19.40	26.90	27.69	4.42	3.53	0	0.0000	0	0.0000	0	0.0000	0	0.0000
National Financial Services LLC (XSTM)	14.81	0.00	0.00	0.00	92.98	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	10.90	15.76	10.00	2.09	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	7.89	0.00	7.69	46.56	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	5.75	0.00	6.15	33.86	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.21	3.17	1.54	0.52	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.82	2.65	0.77	0.31	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.62	2.27	0.00	0.31	0.37	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	0.53	0.00	0.00	3.17	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

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August 2021

Non-S&P 500 Stocks
Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	94.29	1.05	3.69	0.98

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	33.98	49.61	49.16	7.06	0.97	0	0.0000	0	0.0000	0	0.0000	0	0.0000
National Financial Services LLC (XSTM)	24.76	0.00	0.00	0.00	95.09	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	18.55	26.79	23.46	4.94	1.08	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	10.35	15.27	12.29	1.94	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	2.21	0.00	2.51	31.48	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.14	3.13	3.07	0.65	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.97	2.89	3.91	0.41	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
UBS Securities, LLC (UBSS)	1.69	2.30	0.84	0.21	0.57	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.42	0.00	1.68	20.18	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	1.41	0.00	2.79	20.04	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

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August 2021

Options
Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	80.18	2.61	15.61	1.60

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	45.41	45.51	49.21	42.52	81.58	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	34.62	39.27	39.68	21.02	18.42	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	8.12	6.51	3.17	14.01	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Morgan Stanley & Company LLC (MSCO)	6.07	6.88	6.35	3.98	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	5.77	1.84	1.59	18.47	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

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September 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	92.75	0.87	4.66	1.72

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	35.50	48.92	43.10	8.73	3.52	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
VIRTU Americas, LLC (NITE)	19.89	27.28	18.10	4.74	3.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
National Financial Services LLC (XSTM)	13.36	0.00	0.00	0.00	90.33	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	11.69	16.42	12.07	2.74	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	7.01	0.00	16.38	41.56	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	6.40	0.01	2.59	38.46	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.22	3.13	4.31	0.39	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.91	2.73	0.86	0.28	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.42	1.51	2.59	0.32	2.16	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	0.46	0.00	0.00	2.78	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

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New York Stock Exchange (NYSE):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

NASDAQ Execution Services, LLC (NSDQ):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Two Sigma Securities, LLC (SOHO):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

G1 Execution Services, LLC (ETMM):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

UBS Securities, LLC (UBSS):

[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Cboe EDGX US Equities Exchange (EDGX):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

September 2021

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	93.93	1.16	3.50	1.41

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	33.14	49.45	40.59	6.50	1.23	0	0.0000	0	0.0000	0	0.0000	0	0.0000
National Financial Services LLC (XSTM)	24.03	0.00	0.00	0.00	94.19	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	18.47	26.99	23.76	4.59	1.77	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	10.63	15.91	21.78	2.27	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	3.21	0.00	1.65	34.77	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	2.15	0.00	3.30	23.07	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.97	2.99	2.64	0.26	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	1.77	2.65	2.64	0.40	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.56	2.02	2.64	0.23	0.85	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.07	0.00	0.99	11.51	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

National Financial Services LLC (XSTM):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

VIRTU Americas, LLC (NITE):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

JANE STREET CAPITAL, LLC (JNST):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

NYSE Arca (ARCA):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

NASDAQ Execution Services, LLC (NSDQ):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Two Sigma Securities, LLC (SOHO):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

G1 Execution Services, LLC (ETMM):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

UBS Securities, LLC (UBSS):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

New York Stock Exchange (NYSE):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

September 2021

Options
Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	79.51	2.58	14.88	3.03

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	46.13	45.73	39.66	44.54	76.12	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	34.87	39.48	53.45	20.67	23.88	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	6.70	6.31	3.45	8.91	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	6.26	1.76	1.72	20.67	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Morgan Stanley & Company LLC (MSCO)	6.05	6.71	1.72	5.21	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Susquehanna Capital Group (SUSQ):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Dash Financial Technologies LLC (DASH):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Wolverine Execution Services LLC (WEXX):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]

Morgan Stanley & Company LLC (MSCO):
[Insert discussion of the material aspects of the relationship with this venue pursuant to rule 606(a)(1)(iv).]