

CITY NATIONAL SECURITIES, INC. - Held NMS Stocks and Options Order Routing Public Report

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1st Quarter, 2020

January 2020

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	79.26	4.02	13.31	3.41

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)	45.12	52.36	33.33	15.79	18.18	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	32.19	34.80	40.00	7.02	81.82	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	7.39	8.45	20.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	5.54	0.00	0.00	36.84	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	3.69	0.00	0.00	24.56	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	2.64	0.00	6.67	15.79	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.85	2.36	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.06	1.35	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
State Street Global Markets, LLC (SSBS)	0.53	0.68	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:Citadel Securities LLC (CDRG):
N/AVIRTU Americas LLC (NITE):
N/AG1 Execution Services, LLC (ETMM):
N/ANASDAQ Execution Services, LLC (NSDQ):
N/ACboe EDGX U.S (EDGX):
N/ANew York Stock Exchange (NYSE):
N/AUBS Securities, LLC (UBSS):
N/ATwo Sigma Securities, LLC (SOHO):
N/AState Street Global Markets, LLC (SSBS):
N/A

January 2020

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	67.56	6.39	25.55	0.50

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)	40.42	53.42	53.49	9.48	66.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	21.27	30.91	20.93	0.95	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	14.65	0.00	0.00	49.29	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	7.46	0.00	0.00	25.12	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	5.49	7.51	6.98	0.95	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)
State Street Global Markets, LLC (SSBS)	3.24	3.97	11.63	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe BZX U.S (ZBAT)	2.68	0.00	0.00	9.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.69	2.43	0.00	0.00	33.33	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.55	0.00	4.65	4.27	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.13	1.55	2.33	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

VIRTU Americas LLC (NITE):
N/A

NASDAQ Execution Services, LLC (NSDQ):
N/A

Cboe EDGX U.S (EDGX):
N/A

G1 Execution Services, LLC (ETMM):
N/A

State Street Global Markets, LLC (SSBS):
N/A

Cboe BZX U.S (ZBAT):
N/A

UBS Securities, LLC (UBSS):
N/A

New York Stock Exchange (NYSE):
N/A

Two Sigma Securities, LLC (SOHO):
N/A

January 2020

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	63.38	0.70	34.51	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)	34.23	29.17	50.00	44.90	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	27.52	36.46	0.00	12.24	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	20.81	28.13	50.00	2.04	100.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	8.05	0.00	0.00	24.49	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citigroup Global Markets, Inc. (CITI)	6.71	6.25	0.00	8.16	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
DASH FINANCIAL TECHNOLOGIES LLC (DASH)	2.68	0.00	0.00	8.16	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

MORGAN STANLEY & CO. LLC (MSCO):
N/A

Susquehanna Capital Group (SUSQ):
N/A

Wolverine Execution Services LLC (WEXX):
N/A

Citigroup Global Markets, Inc. (CITI):
N/A

DASH FINANCIAL TECHNOLOGIES LLC (DASH):
N/A

February 2020

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	81.00	4.52	13.12	1.36

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)	46.90	53.70	25.00	15.79	100.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	27.84	31.51	40.00	9.21	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	8.35	9.32	20.00	1.32	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	6.21	0.00	0.00	38.16	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	3.00	0.00	5.00	17.11	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	2.78	0.00	0.00	17.11	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
State Street Global Markets, LLC (SSBS)	2.14	2.74	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.71	1.64	10.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	0.64	0.82	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	0.21	0.27	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

VIRTU Americas LLC (NITE):
N/A

G1 Execution Services, LLC (ETMM):
N/A

NASDAQ Execution Services, LLC (NSDQ):
N/A

New York Stock Exchange (NYSE):
N/A

Cboe EDGX U.S (EDGX):
N/A

State Street Global Markets, LLC (SSBS):
N/A

UBS Securities, LLC (UBSS):
N/A

Two Sigma Securities, LLC (SOHO):
N/A

JANE STREET CAPITAL, LLC (JNST):
N/A

February 2020

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	76.58	7.04	15.52	0.86

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)	46.88	55.83	60.00	7.43	66.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	21.69	24.91	28.00	7.43	16.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	8.31	9.89	10.00	2.03	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	7.01	0.00	0.00	36.49	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
State Street Global Markets, LLC (SSBS)	4.68	6.18	2.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	3.64	0.00	0.00	18.92	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	2.99	0.00	0.00	15.54	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	2.08	2.47	0.00	0.68	16.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe BZX U.S (ZBAT)	1.56	0.00	0.00	8.11	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	0.52	0.00	0.00	2.70	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:Citadel Securities LLC (CDRG):
N/AVIRTU Americas LLC (NITE):
N/AG1 Execution Services, LLC (ETMM):
N/ANASDAQ Execution Services, LLC (NSDQ):
N/AState Street Global Markets, LLC (SSBS):
N/ACboe EDGX U.S (EDGX):
N/ANew York Stock Exchange (NYSE):
N/AUBS Securities, LLC (UBSS):
N/ACboe BZX U.S (ZBAT):
N/ANYSE Arca (ARCA):
N/A

February 2020

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	63.81	2.86	33.33	0.00

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)	33.33	29.85	0.00	42.86	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	20.00	26.87	0.00	8.57	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	18.10	25.37	33.33	2.86	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citigroup Global Markets, Inc. (CITI)	13.33	13.43	0.00	14.29	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	9.52	0.00	33.33	25.71	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)
DASH FINANCIAL TECHNOLOGIES LLC (DASH)	5.71	4.48	33.33	5.71	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):

N/A

MORGAN STANLEY & CO. LLC (MSCO):

N/A

Susquehanna Capital Group (SUSQ):

N/A

Citigroup Global Markets, Inc. (CITI):

N/A

Wolverine Execution Services LLC (WEXX):

N/A

DASH FINANCIAL TECHNOLOGIES LLC (DASH):

N/A

March 2020

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	86.27	2.98	10.59	0.16

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)	53.90	60.07	53.66	18.46	100.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	15.32	15.36	19.51	14.36	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	8.92	10.39	2.44	2.05	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	6.10	6.96	4.88	1.54	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ	5.43	0.00	0.00	37.44	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)
Execution Services, LLC (NSDQ)													
New York Stock Exchange (NYSE)	2.90	0.00	4.88	18.97	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	2.83	3.25	2.44	0.51	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.16	2.35	2.44	1.03	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
State Street Global Markets, LLC (SSBS)	1.64	1.63	9.76	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	0.74	0.00	0.00	5.13	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

VIRTU Americas LLC (NITE):
N/A

G1 Execution Services, LLC (ETMM):
N/A

UBS Securities, LLC (UBSS):
N/A

NASDAQ Execution Services, LLC (NSDQ):
N/A

New York Stock Exchange (NYSE):
N/A

JANE STREET CAPITAL, LLC (JNST):
N/A

Two Sigma Securities, LLC (SOHO):
N/A

State Street Global Markets, LLC (SSBS):
N/A

Cboe EDGX U.S (EDGX):
N/A

March 2020

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	82.55	4.18	12.74	0.54

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)	49.66	58.18	41.77	12.04	62.50	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas LLC (NITE)	15.37	16.51	21.52	8.03	25.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	7.53	8.96	7.59	1.09	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	6.43	0.00	5.06	36.86	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
State Street Global Markets, LLC (SSBS)	4.78	5.03	17.72	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	4.41	5.42	1.27	0.73	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX U.S (EDGX)	3.55	0.00	0.00	21.17	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	2.69	3.14	3.80	0.00	12.50	0	0.0000	0	0.0000	0	0.0000	0	0.0000
JANE STREET CAPITAL, LLC (JNST)	2.27	2.75	1.27	0.36	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.96	0.00	0.00	11.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

VIRTU Americas LLC (NITE):
N/A

G1 Execution Services, LLC (ETMM):
N/A

NASDAQ Execution Services, LLC (NSDQ):
N/A

State Street Global Markets, LLC (SSBS):
N/A

UBS Securities, LLC (UBSS):
N/A

Cboe EDGX U.S (EDGX):
N/A

Two Sigma Securities, LLC (SOHO):
N/A

JANE STREET CAPITAL, LLC (JNST):
N/A

New York Stock Exchange (NYSE):
N/A

March 2020

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	52.70	5.08	42.22	0.00

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)	29.50	20.22	47.37	38.73	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	23.30	32.02	21.05	12.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	21.24	37.08	26.32	0.70	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	12.09	1.12	0.00	27.46	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citigroup Global Markets, Inc. (CITI)	8.55	7.30	0.00	11.27	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
DASH FINANCIAL TECHNOLOGIES LLC (DASH)	5.31	2.25	5.26	9.15	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):
N/A

MORGAN STANLEY & CO. LLC (MSCO):
N/A

Susquehanna Capital Group (SUSQ):
N/A

Wolverine Execution Services LLC (WEXX):
N/A

Citigroup Global Markets, Inc. (CITI):
N/A

DASH FINANCIAL TECHNOLOGIES LLC (DASH):
N/A