



Two Sigma Securities, LLC(SOHO)	17	2.7	17	3.66	0	0	0	0	0	0	0	0
UBS Securities, LLC(UBSS)	11	1.75	9	1.94	1	7.69	0	0	1	20	0	0
Cboe EDGX US Equities Exchange(EDGX)	3	0.48	0	0	0	0	3	2.04	0	0	0	0
Instinet BlockCross(BLKX)	1	0.16	0	0	0	0	0	0	1	20	0	0

Material Aspects:

April 2021

## Non S&P 500 Stocks

### Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
2830	100	2710	95.76	15	0.53	101	3.57	4	0.14

### Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	1383	43.22	1348	49.76	12	80	22	4.74	1	8.33	0	0
VIRTU Americas, LLC(NITE)	747	23.34	735	27.13	0	0	11	2.37	1	8.33	0	0
JANE STREET CAPITAL, LLC(JNST)	392	12.25	389	14.36	0	0	3	0.65	0	0	0	0



Citadel Securities LLC(CDRG)	12	57.14	6	50	1	100	5	62.5	0	0	0	0
Susquehanna Capital Group(SUSQ)	6	28.57	5	41.67	0	0	1	12.5	0	0	0	0
Wolverine Execution Services LLC(WEXX)	2	9.52	0	0	0	0	2	25	0	0	0	0
Dash Financial Technologies LLC(DASH)	1	4.76	1	8.33	0	0	0	0	0	0	0	0

Material Aspects:

May 2021

## S&P 500 Stocks

### Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
676	100	541	80.03	18	3	113	16.72	4	0.59

### Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	315	40.13	273	50.46	6	30	35	15.98	1	20	0	0
VIRTU Americas, LLC(NITE)	187	23.82	152	28.1	9	45	23	10.5	3	60	0	0
NASDAQ Execution Services, LLC(NSDQ)	89	11.34	0	0	3	15	86	39.27	0	0	0	0

JANE STREET CAPITAL, LLC(INST)	88	11.21	79	14.6	0	0	9	4.11	0	0	0	0
New York Stock Exchange(NYSE)	57	7.26	0	0	2	10	55	25.11	0	0	0	0
Two Sigma Securities, LLC(SOHO)	17	2.17	17	3.14	0	0	0	0	0	0	0	0
G1 Execution Services, LLC(ETMM)	13	1.66	10	1.85	0	0	3	1.37	0	0	0	0
UBS Securities, LLC(UBSS)	12	1.53	10	1.85	0	0	2	0.91	0	0	0	0
Cboe EDGX US Equities Exchange(EDGX)	6	0.76	0	0	0	0	6	2.74	0	0	0	0
Instinet BlockCross(BLKX)	1	0.13	0	0	0	0	0	0	1	20	0	0

Material Aspects:

May 2021

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**Non S&P 500 Stocks**

Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
3064	100	2820	92.04	16	0.52	227	7.41	1	0.03

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	1445	38.99	1378	48.88	8	34.78	58	6.78	1	12.5	0	0
VIRTU Americas, LLC(NITE)	836	22.56	804	28.52	5	21.74	27	3.15	0	0	0	0
NYSE Arca(ARCA)	414	11.17	0	0	5	21.74	409	47.78	0	0	0	0
JANE STREET CAPITAL, LLC(JNST)	402	10.85	392	13.91	0	0	10	1.17	0	0	0	0
NASDAQ Execution Services, LLC(NSDQ)	195	5.26	0	0	1	4.35	194	22.66	0	0	0	0
Two Sigma Securities, LLC(SOHO)	99	2.67	97	3.44	0	0	2	0.23	0	0	0	0
G1 Execution Services, LLC(ETMM)	84	2.27	80	2.84	1	4.35	3	0.35	0	0	0	0
UBS Securities, LLC(UBSS)	71	1.92	68	2.41	0	0	3	0.35	0	0	0	0
Cboe EDGX US Equities Exchange(EDGX)	58	1.57	0	0	0	0	58	6.78	0	0	0	0
Cboe BZX U.S. Equities Exchange(BATS)	48	1.3	0	0	1	4.35	47	5.49	0	0	0	0

Material Aspects:

May 2021

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Option Contracts

Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
16	100	11	68.75	1	6.25	4	25	0	0

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	8	44.44	5	45.45	0	0	3	60	0	0	0	0
Susquehanna Capital Group(SUSQ)	8	44.44	5	45.45	2	100	1	20	0	0	0	0
Dash Financial Technologies LLC(DASH)	1	5.56	1	9.09	0	0	0	0	0	0	0	0
Wolverine Execution Services LLC(WEXX)	1	5.56	0	0	0	0	1	20	0	0	0	0

Material Aspects:

June 2021

S&P 500 Stocks

Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
602	100	456	75.75	26	4.32	120	20	0	0

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	277	34.07	224	49.12	11	35.48	42	12.88	0	0	0	0
VIRTU Americas, LLC(NITE)	164	20.17	142	31.14	3	9.68	19	5.83	0	0	0	0
New York Stock Exchange(NYSE)	134	16.48	0	0	5	16.13	129	39.57	0	0	0	0
NASDAQ Execution Services, LLC(NSDQ)	118	14.51	0	0	8	25.81	110	33.74	0	0	0	0
JANE STREET CAPITAL, LLC(JNST)	68	8.36	56	12.28	2	6.45	10	3.07	0	0	0	0
Two Sigma Securities, LLC(SOHO)	17	2.09	17	3.73	0	0	0	0	0	0	0	0
UBS Securities, LLC(UBSS)	15	1.85	10	2.19	1	3.23	4	1.23	0	0	0	0
G1 Execution Services, LLC(ETMM)	11	1.35	7	1.54	1	3.23	3	0.92	0	0	0	0
Cboe EDGX US Equities Exchange(EDGX)	9	1.11	0	0	0	0	9	2.76	0	0	0	0

Material Aspects:

June 2021

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Non S&P 500 Stocks

Summary



Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
3101	100	2870	92.55	32	1.03	190	6.13	9	0.29

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	1483	41.55	1418	49.41	12	37.5	52	7.93	1	9.09	0	0
VIRTU Americas, LLC(NITE)	829	23.23	782	27.25	12	37.5	29	4.42	6	54.55	0	0
JANE STREET CAPITAL, LLC(INST)	454	12.72	442	15.4	4	12.5	8	1.22	0	0	0	0
NYSE Arca(ARCA)	230	6.44	0	0	0	0	230	35.06	0	0	0	0
NASDAQ Execution Services, LLC(NSDQ)	143	4.01	0	0	0	0	143	21.8	0	0	0	0
New York Stock Exchange(NYSE)	116	3.25	0	0	2	6.25	114	17.38	0	0	0	0
G1 Execution Services, LLC(ETMM)	93	2.61	90	3.14	0	0	3	0.46	0	0	0	0
Two Sigma Securities, LLC(SOHO)	84	2.35	82	2.86	1	3.13	1	0.15	0	0	0	0
UBS Securities, LLC(UBSS)	59	1.65	56	1.95	1	3.13	0	0	2	18.18	0	0
Cboe EDGX US Equities Exchange(EDGX)	49	1.37	0	0	0	0	49	7.47	0	0	0	0

Material Aspects:

June 2021

## Option Contracts

### Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders	Marketable Limit Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Total Other Orders	Other Orders as % of Non-Directed Orders
75	100	30	40	28	37.33	17	22.67	0	0

### Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	Other Orders	Other Orders(%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)
Citadel Securities LLC(CDRG)	41	50.62	16	53.33	15	51.72	10	45.45	0	0	0	0
Susquehanna Capital Group(SUSQ)	23	28.4	10	33.33	9	31.03	4	18.18	0	0	0	0
Dash Financial Technologies LLC(DASH)	7	8.64	1	3.33	4	13.79	2	9.09	0	0	0	0
Wolverine Execution Services LLC(WEXX)	6	7.41	0	0	1	3.45	5	22.73	0	0	0	0
Morgan Stanley & Company LLC(MSCO)	4	4.94	3	10	0	0	1	4.55	0	0	0	0

Material Aspects:



0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

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)
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(USD)

0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable 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)
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0







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)
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0





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)
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0