

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

Generated on Fri Jul 08 2022 01:59:11 GMT-0700 (Pacific Daylight Time)

2nd Quarter, 2022

April 2022

## 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	82.33	3.41	13.25	1.00

### 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)
NASDAQ Execution Services, LLC (NSDQ)	29.05	0.00	0.00	75.27	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities LLC (CDRG)	22.68	37.80	23.53	0.72	17.65	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	13.14	21.22	41.18	0.36	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	12.03	20.24	17.65	0.36	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	11.48	19.27	11.76	0.00	11.76	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	4.01	0.00	0.00	10.39	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	3.73	0.00	0.00	9.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	1.66	0.00	0.00	0.00	70.59	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Members Exchange (MEMX)	1.24	0.00	0.00	3.23	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities,	0.55	0.73	5.88	0.00	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)
LLC (UBSS)													

**Material Aspects:**

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

Citadel Securities LLC (CDRG):  
N/A

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

Jane Street Capital, LLC (JNST):  
N/A

VIRTU Americas, LLC (NITE):  
N/A

New York Stock Exchange (NYSE):  
N/A

Cboe EDGX US Equities Exchange (EDGX):  
N/A

Instinet BlockCross (BLKX):  
N/A

Members Exchange (MEMX):  
N/A

UBS Securities, LLC (UBSS):  
N/A

-----

**April 2022**

**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	80.82	4.08	11.97	3.13

**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)	26.91	33.67	36.67	7.22	14.75	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU	19.14	23.86	33.33	0.56	21.31	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)
Americas, LLC (NITE)													
Jane Street Capital, LLC (JNST)	16.47	23.18	6.67	1.67	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	12.88	16.92	16.67	3.33	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	6.26	0.00	0.00	30.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	5.34	0.00	0.00	25.56	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	4.41	0.00	0.00	0.00	62.30	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	2.90	0.00	0.00	13.89	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	1.97	0.00	0.00	9.44	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.51	1.69	3.33	1.11	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

Jane Street Capital, LLC (JNST):

N/A

G1 Execution Services, LLC (ETMM):

N/A

NYSE Arca (ARCA):

N/A

Cboe EDGX US Equities Exchange (EDGX):

N/A

Instinet BlockCross (BLKX):

N/A

NASDAQ Execution Services, LLC (NSDQ):

N/A

New York Stock Exchange (NYSE):

N/A

Two Sigma Securities, LLC (SOHO):

N/A

---

## April 2022

---

### 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	36.45	8.41	55.14	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)	47.31	48.72	55.56	46.38	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Services LLC (WEXX)	22.58	2.56	0.00	29.71	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	15.05	17.95	33.33	13.04	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	10.75	23.08	11.11	7.25	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Morgan Stanley & Company LLC (MSCO)	4.30	7.69	0.00	3.62	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

#### Material Aspects:

Citadel Securities LLC (CDRG):  
N/A

Wolverine Execution Services LLC (WEXX):  
N/A

Dash Financial Technologies LLC (DASH):  
N/A

Susquehanna Capital Group (SUSQ):  
N/A

Morgan Stanley & Company LLC (MSCO):  
N/A

---

## May 2022

---

### 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	86.04	4.87	8.93	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)	27.25	34.72	18.75	5.39	20.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	18.26	23.58	15.63	2.40	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	16.76	21.70	12.50	2.40	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	13.62	17.17	18.75	1.80	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	12.53	0.00	21.88	50.90	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	4.90	0.00	12.50	19.16	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	2.72	0.00	0.00	11.98	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.50	2.08	0.00	0.00	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.36	0.75	0.00	3.59	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	0.54	0.00	0.00	0.00	80.00	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

Jane Street Capital, LLC (JNST):

N/A

NASDAQ Execution Services, LLC (NSDQ):

N/A

New York Stock Exchange (NYSE):  
N/A

Cboe EDGX US Equities Exchange (EDGX):  
N/A

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

UBS Securities, LLC (UBSS):  
N/A

Instinet BlockCross (BLKX):  
N/A

## May 2022

### 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	76.52	4.74	16.30	2.43

#### 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)	28.12	40.03	35.00	6.03	11.83	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	16.03	22.65	27.50	1.77	9.68	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	11.71	17.54	10.00	2.84	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	11.61	17.86	10.00	1.77	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	7.87	0.00	2.50	28.72	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	7.01	0.00	0.00	0.00	78.49	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	6.72	0.00	7.50	23.76	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities	5.76	0.00	0.00	21.28	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)
Exchange (EDGX)													
Members Exchange (MEMX)	2.11	0.00	0.00	7.80	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities, LLC (SOHO)	1.15	1.75	0.00	0.35	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

Jane Street Capital, LLC (JNST):  
N/A

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

New York Stock Exchange (NYSE):  
N/A

Instinet BlockCross (BLKX):  
N/A

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

Cboe EDGX US Equities Exchange (EDGX):  
N/A

Members Exchange (MEMX):  
N/A

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

-----  
**May 2022**

**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	30.70	2.63	66.67	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)
Wolverine Execution Services LLC (WEXX)	38.42	5.56	33.33	47.10	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities LLC (CDRG)	31.64	44.44	33.33	28.26	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	19.21	16.67	33.33	19.57	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	6.78	30.56	0.00	0.72	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Morgan Stanley & Company LLC (MSCO)	3.95	2.78	0.00	4.35	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

#### Material Aspects:

Wolverine Execution Services LLC (WEXX):  
N/A

Citadel Securities LLC (CDRG):  
N/A

Dash Financial Technologies LLC (DASH):  
N/A

Susquehanna Capital Group (SUSQ):  
N/A

Morgan Stanley & Company LLC (MSCO):  
N/A

## June 2022

---

### 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	83.50	1.50	14.50	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)	23.70	35.63	66.67	2.11	10.00	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)
NASDAQ Execution Services, LLC (NSDQ)	23.15	0.00	0.00	65.79	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	15.19	23.95	0.00	0.53	10.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	13.52	20.36	33.33	1.58	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	11.48	18.26	0.00	0.53	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	4.81	0.00	0.00	13.68	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	2.78	0.00	0.00	7.89	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Members Exchange (MEMX)	1.67	0.00	0.00	4.74	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities, LLC (UBSS)	1.67	0.90	0.00	3.16	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	1.48	0.00	0.00	0.00	80.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

**Material Aspects:**

Citadel Securities LLC (CDRG):  
N/A

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

VIRTU Americas, LLC (NITE):  
N/A

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

Jane Street Capital, LLC (JNST):  
N/A

Cboe EDGX US Equities Exchange (EDGX):  
N/A

New York Stock Exchange (NYSE):  
N/A

Members Exchange (MEMX):  
N/A

UBS Securities, LLC (UBSS):  
N/A

Instinet BlockCross (BLKX):

N/A

June 2022

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	73.14	3.89	16.39	6.59

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)	30.03	37.27	30.77	10.60	45.07	0	0.0000	0	0.0000	0	0.0000	0	0.0000
VIRTU Americas, LLC (NITE)	15.01	21.99	23.08	2.30	8.45	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	13.00	20.60	15.38	1.38	1.41	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	12.60	18.75	15.38	4.15	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NASDAQ Execution Services, LLC (NSDQ)	6.97	0.23	0.00	23.50	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
New York Stock Exchange (NYSE)	6.03	0.00	0.00	20.74	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
NYSE Arca (ARCA)	4.96	0.00	11.54	15.67	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Instinet BlockCross (BLKX)	4.29	0.00	0.00	0.00	45.07	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Cboe EDGX US Equities Exchange (EDGX)	3.75	0.00	0.00	12.90	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Members Exchange (MEMX)	2.28	0.00	0.00	7.83	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

Jane Street Capital, LLC (JNST):  
N/A

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

New York Stock Exchange (NYSE):  
N/A

NYSE Arca (ARCA):  
N/A

Instinet BlockCross (BLXX):  
N/A

Cboe EDGX US Equities Exchange (EDGX):  
N/A

Members Exchange (MEMX):  
N/A

---

## June 2022

---

### 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	15.70	9.09	75.21	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)
Wolverine Execution Services LLC (WEXX)	37.79	0.00	0.00	43.85	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities LLC (CDRG)	37.33	52.63	63.64	34.22	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Dash Financial Technologies LLC (DASH)	16.59	31.58	18.18	14.97	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Morgan Stanley & Company LLC (MSCO)	5.07	0.00	0.00	5.88	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna Capital Group (SUSQ)	3.23	15.79	18.18	1.07	0.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000

**Material Aspects:**

Wolverine Execution Services LLC (WEXX):  
N/A

Citadel Securities LLC (CDRG):  
N/A

Dash Financial Technologies LLC (DASH):  
N/A

Morgan Stanley & Company LLC (MSCO):  
N/A

Susquehanna Capital Group (SUSQ):  
N/A