













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 FX NDFS (CBOE)	17.54	21.42	0.00	2.43	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX PEARL EQUITIES (EPRL)	15.35	18.13	0.00	4.87	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
DASH FINANCIAL TECHNOLOGIES LLC (DFIN)	12.28	9.34	0.00	26.89	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
BOX OPTIONS EXCHANGE (XBOX)	7.01	7.14	33.33	4.87	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
American Stock Exchange (AMEX)	6.57	7.69	33.34	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NOMISMA (LIECHTENSTEIN) AG (XNOM)	4.82	0.54	0.00	24.39	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Archipelago Trading Services, Inc. (ARCA)	3.07	0.00	0.00	17.07	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE BZX U.S. EQUITIES EXCHANGE (BATS)	2.19	0.54	0.00	9.75	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX U.S. EQUITIES EXCHANGE (EDGX)	1.75	2.19	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX PEARL, LLC (MPRL)	1.75	2.19	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	1.31	0.54	0.00	0.00	100.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
International Securities Exchange (ISEG)	1.31	0.54	0.00	4.87	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ OMX BX OPTIONS (XBXO)	1.31	1.64	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GLOBAL EXECUTION BROKERS, LP (GEBB)	0.43	0.00	0.00	2.43	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ISE MERCURY, LLC (MCRY)	0.43	0.54	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

June 2023

### 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	90.05	1.84	4.62	3.49

## 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)	38.82	39.61	35.66	25.13	37.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas LLC (NITE)	24.32	24.60	30.13	11.47	31.15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	16.03	16.83	13.69	7.10	8.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	11.84	12.20	10.95	6.55	10.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FIDELITY CROSSSTREAM ATS (XSTM)	4.72	5.07	8.21	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX U.S. EQUITIES EXCHANGE (EDGX)	1.64	0.00	0.00	32.84	3.62	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TWO SIGMA SECURITIES, LLC (SOHO)	1.38	1.48	0.00	0.54	0.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX LLC EQUITIES (MEMX)	0.42	0.00	0.00	9.28	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ EXECUTION SERVICES, LLC (INET)	0.42	0.00	0.00	6.55	3.62	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS SECURITIES LLC (UBSS)	0.22	0.19	1.36	0.00	0.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.15	0.00	0.00	0.00	4.34	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET BLOCKCROSS ATS (BLKX)	0.02	0.02	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC. (NSDQ)	0.02	0.00	0.00	0.54	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## Material Aspects:

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## June 2023

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## 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	90.15	1.93	1.73	6.19

**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)	39.00	39.89	39.00	13.33	33.57	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas LLC (NITE)	24.97	25.47	23.43	7.69	22.34	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	16.71	16.72	16.97	2.05	20.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	14.25	14.47	11.92	2.56	14.89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FIDELITY CROSSSTREAM ATS (XSTM)	1.54	1.60	5.04	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TWO SIGMA SECURITIES, LLC (SOHO)	1.38	1.38	2.29	0.00	1.43	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX U.S. EQUITIES EXCHANGE (EDGX)	0.90	0.00	0.45	48.23	1.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS SECURITIES LLC (UBSS)	0.50	0.47	0.45	0.00	1.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ EXECUTION SERVICES, LLC (INET)	0.39	0.00	0.00	12.30	2.86	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX LLC EQUITIES (MEMX)	0.21	0.00	0.00	11.79	0.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.15	0.00	0.00	2.05	2.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET BLOCKCROSS ATS (BLKX)	0.00	0.00	0.45	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**Material Aspects:**

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**June 2023**

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**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	76.09	1.01	22.22	0.67

**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)
Philadelphia Stock Exchange (PHLX)	27.98	36.79	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE FX NDFS (CBOE)	17.17	22.12	0.00	1.51	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
DASH FINANCIAL TECHNOLOGIES LLC (DFIN)	11.78	7.07	0.00	27.27	50.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX PEARL EQUITIES (EPRL)	11.11	13.71	66.67	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
American Stock Exchange (AMEX)	7.74	9.73	0.00	1.51	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Archipelago Trading Services, Inc. (ARCA)	6.06	0.00	0.00	27.31	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE BZX U.S. EQUITIES EXCHANGE (BATS)	4.71	0.44	0.00	19.69	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
BOX OPTIONS EXCHANGE (XBOX)	4.04	4.86	0.00	1.51	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NOMISMA (LIECHTENSTEIN) AG (XNOM)	3.70	0.88	0.00	12.12	50.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
International Securities Exchange (ISEG)	1.68	0.44	0.00	6.06	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX PEARL, LLC (MPRL)	1.68	1.76	0.00	1.51	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX U.S. EQUITIES EXCHANGE (EDGX)	1.34	1.32	0.00	1.51	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ OMX BX OPTIONS (XBXO)	1.01	0.88	33.33	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects: