

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)	0.77	1.01	1.71	0.00	0.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe EDGX US Equities Exchange (EDGX)	0.67	0.00	0.00	22.44	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

October 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	53.25	3.90	41.40	1.46

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)	53.11	44.37	43.77	64.73	66.68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	28.00	41.92	39.58	9.01	27.77	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wolverine Execution Services LLC (WEXX)	7.46	2.74	2.08	14.31	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DASH)	5.92	4.42	4.16	8.23	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Morgan Stanley & Company LLC (MSCO)	5.43	6.55	10.41	3.72	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Interactive Brokers LLC (IBKR)	0.08	0.00	0.00	0.00	5.55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

November 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	72.60	0.24	5.31	21.86

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)	37.28	49.97	38.22	10.95	1.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
National Financial Services LLC (XSTM)	21.41	0.00	0.00	0.00	98.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas, LLC (NITE)	19.52	26.26	12.72	5.15	0.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	13.03	17.67	20.00	2.94	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	2.20	2.99	0.00	0.65	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ Execution Services, LLC (NSDQ)	2.02	0.00	12.72	37.65	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	1.79	0.00	12.72	33.27	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.58	2.14	1.81	0.57	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities, LLC (UBSS)	0.73	0.97	1.81	0.40	0.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe EDGX US Equities Exchange (EDGX)	0.44	0.00	0.00	8.42	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

November 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	63.23	0.45	3.93	32.40

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)	32.71	49.93	43.00	9.30	1.70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
National Financial Services LLC (XSTM)	31.56	0.00	0.00	0.00	97.46	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas, LLC (NITE)	16.96	26.08	25.23	2.89	0.75	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	11.48	17.92	16.61	1.85	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	1.95	3.05	1.71	0.39	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NASDAQ Execution Services, LLC (NSDQ)	1.66	0.00	5.44	41.86	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.29	2.00	3.43	0.26	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe EDGX US Equities Exchange (EDGX)	0.86	0.00	0.00	21.99	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.84	0.00	3.15	21.24	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities, LLC (UBSS)	0.69	1.02	1.43	0.22	0.09	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

November 2021

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Citadel Securities LLC (CDRG)	49.31	48.83	43.35	50.15	80.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	31.49	40.64	36.66	9.77	20.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wolverine Execution Services LLC (WEXX)	8.05	1.75	3.33	23.47	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DASH)	6.49	4.44	10.00	11.24	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Morgan Stanley & Company LLC (MSCO)	4.66	4.34	6.66	5.37	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects: