

Material Aspects:

August 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	20.21	0.11	0.27	79.40

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)	52.25	53.99	71.43	0.00	51.96	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	35.58	34.96	14.29	0.00	35.89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	4.63	4.26	14.29	0.00	4.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	3.96	4.10	0.00	0.00	3.94	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	2.35	1.74	0.00	0.00	2.51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.81	0.87	0.00	0.00	0.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Stock Exchange (NSDQ)	0.19	0.00	0.00	64.71	0.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	0.10	0.00	0.00	0.00	0.12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	0.10	0.00	0.00	35.29	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.03	0.00	0.00	0.00	0.04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET, LLC (INCA)	0.02	0.08	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

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)
New York Stock Exchange (NYSE)													

Material Aspects:

August 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	81.25	0.00	18.75	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)
CES (CES)	27.08	25.64	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities, LLC (CDRG)	18.75	17.95	0.00	22.22	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB)	16.67	20.51	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	16.67	20.51	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LL (DFIN)	8.33	10.26	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	6.25	5.13	0.00	11.11	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WOLVERINE EXECUTION SERVICES, (WEXX)	6.25	0.00	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

September 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	22.18	0.13	0.89	76.80

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)	53.98	52.11	33.33	7.50	55.09	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	32.28	33.99	41.67	3.75	32.11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	5.11	5.22	8.33	0.00	5.13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	4.99	5.22	16.67	0.00	4.96	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	2.12	2.81	0.00	0.00	1.94	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.49	0.35	0.00	0.00	0.54	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	41.25	0.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.23	0.00	0.00	18.75	0.09	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Stock Exchange (NSDQ)	0.17	0.00	0.00	16.25	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	0.11	0.00	0.00	12.50	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.09	0.30	0.00	0.00	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET, LLC (INCA)	0.01	0.00	0.00	0.00	0.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

September 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	28.96	1.01	1.32	68.71

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)	52.89	53.76	56.13	2.89	53.43	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	32.36	33.24	9.43	1.81	32.91	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	5.00	4.67	3.77	0.00	5.25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	4.74	4.95	2.83	0.72	4.75	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.90	2.20	2.83	0.00	1.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	0.76	0.00	12.26	45.13	0.06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Arca (ARCA)	0.74	0.00	0.00	18.41	0.73	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.65	0.67	0.00	0.00	0.67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.28	0.00	0.00	15.88	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Stock Exchange (NSDQ)	0.25	0.00	12.74	6.86	0.04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.22	0.00	0.00	8.30	0.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.18	0.46	0.00	0.00	0.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET, LLC (INCA)	0.02	0.05	0.00	0.00	0.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OUT (OUT)	0.01	0.00	0.00	0.00	0.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

September 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
98.59	71.43	0.00	28.57	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)
CES (CES)	31.43	36.00	0.00	20.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities, LLC (CDRG)	22.86	26.00	0.00	15.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WOLVERINE EXECUTION SERVICES, (WEXX)	14.29	2.00	0.00	45.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB)	10.00	14.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	8.57	10.00	0.00	5.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	7.14	6.00	0.00	10.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LL (DFIN)	5.71	6.00	0.00	5.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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