CHUB - Held NMS Stocks and Options Order Routing Public Report

Generated on Fri Feb 03 2023 09:34:51 GMT-0500 (Eastern Standard Time)

4th Quarter, 2022

October 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	15.11	0.09	2.25	82.55

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 (CDRG)	34.44	37.39	0.00	0.00	34.87	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas (NITE) (NITE)	23.60	25.53	100.00	0.00	23.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	22.08	19.76	0.00	0.00	23.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	13.96	15.81	0.00	0.00	14.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	1.84	0.00	0.00	42.86	1.06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.61	0.61	0.00	0.00	1.84	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.96	0.00	0.00	16.33	0.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	0.55	0.00	0.00	24.49	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.51	0.91	0.00	0.00	0.44	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX (MEMX)	0.37	0.00	0.00	16.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.09	0.00	0.00	0.00	0.11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
STATE STREET GLOBAL MARKETS, L (PULX)													

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October 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
1	100.00	29.71	0.09	1.09	69.11

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 (CDRG)	34.83	36.04	50.00	0.00	34.85	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas (NITE) (NITE)	24.00	24.32	0.00	0.00	24.27	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	23.22	23.72	25.00	0.00	23.36	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	14.34	14.04	0.00	0.00	14.71	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.14	0.83	0.00	0.00	1.29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.69	0.60	25.00	0.00	0.71	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	0.40	0.00	0.00	32.65	0.06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.38	0.00	0.00	24.49	0.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.36	0.45	0.00	0.00	0.32	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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 (INET)	0.27	0.00	0.00	20.41	0.06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX (MEMX)	0.18	0.00	0.00	16.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

October 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
0.00	0.00	0.00	0.00	0.00

Venues

Venue - Non- directed Order	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	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Flow				. ,		` '	·	` '	hundred shares)	` '	hundred shares)	, ,	·

Material Aspects:

November 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	15.71	0.07	1.46	82.75

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)
	33 97	31 7/	0.00	0.00	35.02	0.000	0.000	0.0000	0.0000	0.000	0.000	0.0000	0.000

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 (CDRG)													
Virtu Americas (NITE) (NITE)	26.13	27.45	100.00	0.00	26.28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	22.80	25.78	0.00	2.56	22.61	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	13.46	13.60	0.00	0.00	13.68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.05	1.19	0.00	0.00	1.04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.86	0.00	0.00	46.15	0.23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.64	0.24	0.00	0.00	0.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	0.52	0.00	0.00	35.90	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.30	0.00	0.00	7.69	0.23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INTL FCSTONE SECURITIES INC. (INTL)	0.11	0.00	0.00	0.00	0.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX (MEMX)	0.11	0.00	0.00	7.69	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

November 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	30.24	0.16	0.68	68.92

	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)
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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 (CDRG)	34.49	34.41	50.00	2.94	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas (NITE) (NITE)	26.90	27.74	25.00	0.00	26.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	22.75	22.26	25.00	0.00	23.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	12.90	13.61	0.00	0.00	12.75	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.02	0.92	0.00	0.00	1.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.56	0.20	0.00	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)	0.30	0.00	0.00	32.35	0.12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.24	0.00	0.00	23.53	0.12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.22	0.73	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	0.16	0.00	0.00	20.59	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INTL FCSTONE SECURITIES INC. (INTL)	0.16	0.13	0.00	0.00	0.17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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November 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	25.00	0.00	75.00	0.00

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)
Dash Financial (DFIN)	25.00	0.00	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB1)	25.00	0.00	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	25.00	100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WOLVERINE EXECUTION SERVICES, (WEXX)	25.00	0.00	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

December 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	18.23	0.00	2.40	79.38

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 (CDRG)	33.53	31.84	0.00	0.00	34.92	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas (NITE) (NITE)	27.53	27.89	0.00	0.00	28.28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	23.21	24.21	0.00	0.00	23.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	10.07	12.37	0.00	0.00	9.85	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	1.97	0.00	0.00	32.00	1.51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	1.06	0.00	0.00	44.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	1.06	0.00	0.00	20.00	0.73	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
Two Sigma Securities, LLC (SOHO)	0.82	1.84	0.00	0.00	0.60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INTL FCSTONE SECURITIES INC. (INTL)	0.29	0.79	0.00	0.00	0.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.29	0.53	0.00	0.00	0.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEMX (MEMX)	0.10	0.00	0.00	4.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

December 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
ĺ	100.00	28.65	0.40	0.98	69.97

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 (CDRG)	34.54	35.67	27.27	0.00	34.60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas (NITE) (NITE)	25.90	27.51	36.36	0.00	25.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	24.27	24.48	18.18	0.00	24.55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	11.29	9.87	18.18	0.00	11.99	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.18	0.57	0.00	0.00	1.45	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.60	0.57	0.00	0.00	0.62	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INTL FCSTONE SECURITIES INC. (INTL)	0.56	0.63	0.00	0.00	0.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.40	0.00	0.00	38.89	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
CBOE EDGX (EDGX)													
New York Stock Exchange (NYSE)	0.33	0.00	0.00	25.93	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.29	0.00	0.00	18.52	0.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.27	0.70	0.00	0.00	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

December 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		
Ì	100.00	77.78	0.00	16.67	5.56		

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 (CES1)	38.89	50.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB1)	27.78	28.57	0.00	0.00	100.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial (DFIN)	11.11	7.14	0.00	33.33	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WOLVERINE EXECUTION SERVICES, (WEXX)	11.11	0.00	0.00	66.67	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MORGAN STANLEY & CO. LLC (MSCO)	5.56	7.14	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)	5.56	7.14	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects: