

OPAL - Held NMS Stocks and Options Order Routing Public Report

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2nd Quarter, 2025

April 2025

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
93.10	0.18	38.97	16.70	44.08

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)
NYSE Arca, Inc.	23.03	0.00	5.66	21.02	39.27	0.00	0.0000	152.83	3.1014	576.09	29.1807	1,687.90	15.4193
XTX Markets SAS	13.82	0.00	18.37	12.67	10.27	0.00	0.0000	331.56	15.0000	11.13	15.0000	70.67	15.0000
Intelligentcross	13.48	0.00	24.26	2.29	8.22	0.00	0.0000	589.59	15.0000	16.17	15.0000	184.43	15.0000
JLEQ	11.21	0.00	13.63	12.40	8.68	0.00	0.0000	182.57	15.0000	2.64	15.0000	31.07	15.0000
Citadel Securities	10.02	0.00	11.38	12.80	7.81	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Hudson River Trading (Hrt)	8.44	0.00	9.01	12.13	6.59	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Execution Services Llc	8.44	0.00	8.95	12.26	6.59	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
OneChronos Markets LLC	3.60	0.00	6.53	0.81	2.09	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	3.44	50.00	0.00	9.84	3.88	0.00	0.0000	0.00	0.0000	91.01	32.2803	24.02	8.8706
Instinet, CBX	2.09	0.00	2.20	3.77	1.38	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

NYSE Arca, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Citadel Securities:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Jane Street Execution Services Llc:
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The Nasdaq Stock Market LLC:
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Instinet, CBX:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

April 2025

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
88.79	0.44	18.31	10.06	71.19

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)
NYSE Arca, Inc.	26.39	0.34	5.95	24.73	32.05	-5.65	-13.9396	773.13	1.2502	7,508.67	30.9013	104,060.26	11.8673
JLEQ	10.11	0.00	15.79	11.77	8.48	0.00	0.0000	3,581.17	14.0705	60.99	13.8478	3,662.91	13.2803
The Nasdaq Stock Market LLC	9.48	84.93	1.17	11.88	10.82	-47.18	-0.2608	189.63	1.7102	2,162.10	25.0089	9,302.14	3.0610
Citadel Securities	8.71	0.00	11.69	11.85	7.55	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Execution Services Llc	8.07	0.00	10.58	11.33	7.02	0.00	0.0000	-53.30	-5.0000	-3.56	-5.0000	-53.17	-5.0000
Hudson River Trading (Hrt)	8.05	0.00	10.47	11.39	7.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
XTX Markets SAS	7.87	0.00	11.77	8.99	6.75	0.00	0.0000	669.94	15.0000	2.59	15.0000	432.19	15.0000
Intelligentcross	6.85	0.00	17.11	1.02	5.08	0.00	0.0000	741.54	14.9629	12.89	15.0000	729.34	14.9540
OneChronos Markets LLC	3.74	0.00	8.33	0.65	3.02	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Cboe EDGX Exchange, Inc.	2.60	14.38	0.32	1.70	3.24	52.94	13.4173	-29.27	-1.2343	343.04	14.6156	-1,548.04	-1.1944

Material Aspects:

NYSE Arca, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

The Nasdaq Stock Market LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Citadel Securities:
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Jane Street Execution Services Llc:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Intelligentcross:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.11 per 100 shares and \$0.00 per 100 shares on removing liquidity.

OneChronos Markets LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Cboe EDGX Exchange, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.22 per 100 shares and \$0.00 per 100 shares on removing liquidity.

April 2025

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	7.22	22.63	14.19	56.01

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)
Dash/IMC Financial Markets	72.12	100.00	99.46	89.77	52.94	3,838.55	8.4802	7,406.20	15.8043	2,493.40	22.6467	13,126.30	3.2489
Cboe EDGX Exchange, Inc.	8.12	0.00	0.31	0.62	14.24	0.00	0.0000	-1.52	-4.0000	-20.28	-4.0000	22,403.44	33.0020
Miami International Securities Exchange, LLC	5.39	0.00	0.00	0.25	9.56	0.00	0.0000	-0.10	-5.0000	-1.55	-5.0000	2,994.85	14.9481
BOX Exchange LLC	3.27	0.00	0.00	0.37	5.75	0.00	0.0000	0.90	45.0000	11.80	4.6457	2,277.85	38.1613
NYSE ARCA OPTIONS	1.85	0.00	0.15	4.93	2.03	0.00	0.0000	6.10	26.5217	13,167.34	20.0401	-118.80	-54.0000
Nasdaq ISE, LLC	1.42	0.00	0.00	0.25	2.47	0.00	0.0000	0.00	0.0000	-20.24	-44.0000	601.66	18.0408
Cboe Exchange, Inc.	1.29	0.00	0.00	0.12	2.28	0.00	0.0000	0.00	0.0000	-51.63	-5.2684	-950.11	-19.4734
Nasdaq MRX, LLC	1.29	0.00	0.00	0.12	2.28	0.00	0.0000	0.00	0.0000	22.25	17.8000	-0.96	-3.0000
Nasdaq PHLX LLC	1.28	0.00	0.00	0.12	2.25	0.00	0.0000	0.00	0.0000	-0.40	-5.0000	-4.10	-5.0000
NYSE American LLC	1.21	0.00	0.08	0.25	2.09	0.00	0.0000	-0.15	-5.0000	-0.60	-5.0000	-104.70	-5.0000

Material Aspects:

Dash/IMC Financial Markets:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe EDGX Exchange, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$10 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Miami International Securities Exchange, LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

BOX Exchange LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

NYSE ARCA OPTIONS:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$75 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq ISE, LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe Exchange, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq MRX, LLC:
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Nasdaq PHLX LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

NYSE American LLC:
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May 2025

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
87.94	0.12	42.19	10.24	47.45

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)
NYSE Arca, Inc.	17.49	25.00	2.86	5.01	33.16	-17.23	-20.1220	241.41	8.6225	166.52	32.5013	809.82	11.9567
Intelligentcross	15.83	0.00	24.48	2.65	10.95	0.00	0.0000	375.70	15.0000	9.79	15.0000	239.20	15.0000
XTX Markets SAS	15.68	0.00	19.40	14.45	12.67	0.00	0.0000	135.53	15.0000	0.85	15.0000	89.22	15.0000
JLEQ	12.56	0.00	15.03	15.04	9.87	0.00	0.0000	245.46	15.0000	3.58	15.0000	76.74	15.0000
Citadel Securities	9.51	0.00	10.24	15.04	7.70	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Hudson River Trading (Hrt)	7.91	0.00	8.30	13.57	6.30	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	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)
Jane Street Execution Services Llc	7.91	0.00	8.52	12.98	6.30	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	5.04	75.00	2.36	16.52	4.84	0.00	0.0000	42.91	3.0239	128.90	30.1110	124.56	4.5316
OneChronos Markets LLC	4.92	0.00	7.23	1.18	3.69	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Instinet, CBX	1.69	0.00	1.57	3.54	1.46	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

NYSE Arca, Inc.:
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Citadel Securities:
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May 2025

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
88.88	0.64	17.37	8.28	73.71

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)
NYSE Arca, Inc.	24.05	1.45	1.80	8.89	31.19	-18.95	-10.1821	-31.22	-0.1619	1,966.35	32.4686	34,829.61	5.2360
The Nasdaq Stock Market LLC	16.14	97.43	4.01	28.45	16.91	-3,775.18	-6.8873	571.83	1.0450	6,490.75	23.0741	-2,333.04	-0.1708
JLEQ	9.42	0.00	16.26	11.78	7.63	0.00	0.0000	4,804.93	10.5680	61.67	9.6671	5,097.58	7.7729
XTX Markets SAS	8.73	0.00	15.09	10.47	7.12	0.00	0.0000	944.30	15.0000	8.45	15.0000	1,074.17	15.0000

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)
Citadel Securities	7.71	0.00	11.73	11.67	6.39	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Hudson River Trading (Hrt)	7.24	0.00	10.38	11.57	6.07	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Execution Services Llc	7.22	0.00	10.44	11.44	6.05	0.00	0.0000	-1.92	-5.0000	0.00	0.0000	-1.59	-5.0000
Intelligentcross	6.73	0.00	17.50	0.68	4.93	0.00	0.0000	573.93	14.9653	5.83	12.5301	476.56	14.9783
OneChronos Markets LLC	3.91	0.00	9.60	0.40	3.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
MIAX Pearl Equities	3.08	0.00	0.01	0.07	4.17	0.00	0.0000	-0.68	-22.5793	6.93	21.9871	5,571.84	6.8089

Material Aspects:

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OneChronos Markets LLC:
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MIAX Pearl Equities:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.34 per 100 shares and \$0.00 per 100 shares on removing liquidity.

May 2025

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	5.04	19.79	13.00	62.10

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)
Dash/IMC Financial Markets	73.29	100.00	87.44	93.26	62.51	4,511.20	20.3354	7,107.00	17.4641	2,116.80	33.9285	16,049.20	5.1942
Cboe EDGX Exchange, Inc.	12.21	0.00	7.86	0.14	17.13	0.00	0.0000	-23.96	-4.0000	-0.08	-4.0000	20,055.34	32.8179
Miami International Securities Exchange, LLC	3.77	0.00	0.54	0.00	5.87	0.00	0.0000	-1.55	-5.0000	0.00	0.0000	960.75	15.0000
BOX Exchange LLC	2.57	0.00	0.36	0.00	4.03	0.00	0.0000	44.55	15.2048	0.00	0.0000	1,493.10	59.0158
NYSE ARCA OPTIONS	1.63	0.00	0.45	5.91	1.24	0.00	0.0000	-2.38	-17.0000	1,328.46	19.9889	-12.96	-54.0000
Cboe C2 Exchange, Inc.	1.00	0.00	1.17	0.14	1.21	0.00	0.0000	-24.21	-51.5106	-0.90	-45.0000	0.00	0.0000
Nasdaq ISE, LLC	0.97	0.00	0.00	0.00	1.55	0.00	0.0000	0.00	0.0000	0.00	0.0000	101.20	20.0000
Cboe Exchange, Inc.	0.91	0.00	0.54	0.00	1.30	0.00	0.0000	-5.56	-5.2500	0.00	0.0000	-2.10	-5.2500
NYSE American LLC	0.86	0.00	0.27	0.00	1.30	0.00	0.0000	-0.80	-5.0000	0.00	0.0000	-106.00	-5.0000
MIAX Emerald, LLC	0.84	0.00	0.09	0.00	1.30	0.00	0.0000	-1.65	-55.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Dash/IMC Financial Markets:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe EDGX Exchange, Inc.:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$10 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Miami International Securities Exchange, LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

BOX Exchange LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

NYSE ARCA OPTIONS:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$75 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe C2 Exchange, Inc.:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq ISE, LLC:

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Cboe Exchange, Inc.:

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NYSE American LLC:

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MIAX Emerald, LLC:

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S&P 500 Stocks

Summary

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95.13	0.17	43.15	8.59	48.05

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)
XTX Markets SAS	17.45	0.00	21.30	12.18	15.12	0.00	0.0000	117.57	15.0000	2.19	15.0000	71.97	15.0000
Intelligentcross	16.95	0.00	23.60	3.85	13.40	0.00	0.0000	173.31	15.0000	3.04	15.0000	113.91	15.0000
JLEQ	13.21	0.00	15.69	11.54	11.34	0.00	0.0000	128.25	15.0000	1.07	15.0000	72.77	15.0000
NYSE Arca, Inc.	11.94	0.00	0.00	0.00	24.86	0.00	0.0000	0.00	0.0000	0.00	0.0000	206.91	9.1227
Citadel Securities	9.85	0.00	10.33	12.82	8.82	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	7.48	100.00	5.36	18.59	7.10	0.00	0.0000	136.39	5.2555	127.14	29.3110	155.77	8.9105
Hudson River Trading (Hrt)	6.93	0.00	7.14	12.82	5.73	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Execution Services Llc	6.93	0.00	7.40	11.54	5.73	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
OneChronos Markets LLC	4.57	0.00	6.76	1.92	2.98	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Instinet, CBX	1.71	0.00	1.79	3.85	1.26	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

NYSE Arca, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Citadel Securities:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

The Nasdaq Stock Market LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Jane Street Execution Services Llc:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Instinet, CBX:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

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
91.12	0.51	15.77	9.62	74.10

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)
NYSE Arca, Inc.	21.91	0.00	0.03	0.02	29.56	-5.11	-30.7831	-36.31	-13.7335	-0.79	-29.0000	-5,858.51	-1.2697
The Nasdaq Stock Market LLC	18.91	96.27	5.52	30.50	19.72	-285.09	-0.7962	1,105.57	1.7726	8,351.63	24.1218	27,781.58	2.6260
JLEQ	7.98	0.00	15.82	10.23	6.08	0.00	0.0000	3,520.74	12.9780	58.51	11.1723	4,093.24	9.5637
XTX Markets SAS	6.97	0.00	13.94	8.41	5.35	0.00	0.0000	908.51	15.0000	12.36	15.0000	995.61	15.0000
Citadel Securities	6.56	0.00	11.89	10.23	4.99	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Hudson River Trading (Hrt)	6.07	0.00	10.19	10.05	4.72	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Execution Services Llc	6.07	0.00	10.28	9.91	4.71	0.00	0.0000	-1.80	-5.0000	0.00	0.0000	-2.17	-5.0000
Intelligentcross	5.76	0.00	17.47	0.63	3.97	0.00	0.0000	497.41	14.9931	6.33	15.0000	316.38	14.4943
Dash/IMC Financial Markets	5.49	3.34	4.15	17.07	4.29	0.00	0.0000	13.30	4.4889	0.00	0.0000	-580.88	-7.5365
MIAX Pearl Equities	3.37	0.00	0.00	0.03	4.55	0.00	0.0000	0.00	0.0000	1.89	21.0000	6,788.53	7.4241

Material Aspects:

NYSE Arca, Inc.:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

The Nasdaq Stock Market LLC:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.295 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Citadel Securities:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Jane Street Execution Services Llc:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.00 per 100 shares and \$0.00 per 100 shares on removing liquidity.

Intelligentcross:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.11 per 100 shares and \$0.00 per 100 shares on removing liquidity.

MIAX Pearl Equities:
Opal Securities receives rebates when providing liquidity. This includes rebates of \$0.34 per 100 shares and \$0.00 per 100 shares on removing liquidity.

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	9.33	16.49	12.99	61.10

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)
Dash/IMC Financial Markets	68.80	100.00	99.31	98.46	49.60	4,141.00	15.4388	5,065.10	16.8326	1,127.30	30.2144	5,859.00	3.7994
Cboe EDGX Exchange, Inc.	8.76	0.00	0.69	0.00	14.15	0.00	0.0000	-1.68	-4.0000	0.00	0.0000	13,544.76	33.5932
Miami International Securities Exchange, LLC	6.70	0.00	0.00	0.00	10.96	0.00	0.0000	-0.10	-5.0000	0.00	0.0000	384.60	15.0000
BOX Exchange LLC	4.89	0.00	0.00	0.00	8.01	0.00	0.0000	22.05	45.0000	0.00	0.0000	601.00	13.6219
NYSE ARCA OPTIONS	1.49	0.00	0.00	1.32	2.11	0.00	0.0000	151.60	54.9275	2,770.80	67.9284	1,388.12	68.6508
Nasdaq ISE, LLC	1.43	0.00	0.00	0.00	2.30	0.00	0.0000	-1.05	-105.0000	0.00	0.0000	42.00	16.8000
Cboe Exchange, Inc.	1.32	0.00	0.00	0.00	2.15	0.00	0.0000	-0.16	-5.2500	0.00	0.0000	0.00	0.0000
Nasdaq MRX, LLC	1.32	0.00	0.00	0.00	2.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	-0.16	-4.0000
Nasdaq PHLX LLC	1.32	0.00	0.00	0.00	2.15	0.00	0.0000	-0.10	-5.0000	0.00	0.0000	0.00	0.0000
MIAX Emerald, LLC	1.32	0.00	0.00	0.00	2.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	-45.00	-25.0000

Material Aspects:

Dash/IMC Financial Markets:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe EDGX Exchange, Inc.:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$10 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Miami International Securities Exchange, LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

BOX Exchange LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

NYSE ARCA OPTIONS:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$75 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq ISE, LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Cboe Exchange, Inc.:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq MRX, LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

Nasdaq PHLX LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.

MIAX Emerald, LLC:

Opal Securities receives rebates when providing liquidity. This includes rebates of \$80 per 100 contracts and \$0.00 per 100 contract on removing liquidity.