

JP Morgan Securities LLC - Held NMS Stocks and Options Order Routing Public Report

Generated on Tue Oct 31 2023 13:18:43 GMT-0400 (Eastern Daylight Time)

3rd Quarter, 2023

July 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
99.99	65.85	4.89	22.81	6.45

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)
TWO SIGMA SECURITIES, LLC (SOHO)	27.99	40.08	30.91	0.23	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	20.49	24.72	27.69	7.70	16.97	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	19.24	22.89	24.91	8.05	17.28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas, LLC (NITE)	11.78	12.26	16.40	7.79	17.45	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.04	0.00	0.00	32.36	25.91	-0.1506	-35.0233	1.3522	20.3952	4,743.6748	27.9900	96.4945	2.1411
New York Stock Exchange LLC (NYSE)	6.39	0.05	0.09	21.53	22.39	-40.2480	-4.8087	0.0734	0.3520	2,484.2479	21.5162	278.2354	3.7374
NYSE Arca, Inc. (ARCA)	1.62	0.00	0.00	7.13	0.00	0.0000	0.0000	0.0000	0.0000	971.8675	21.8979	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.34	0.00	0.00	5.89	0.00	-0.0099	-33.0000	-0.0107	-35.6667	586.7232	13.8444	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.18	0.00	0.00	5.21	0.00	-0.0637	-31.8500	0.0000	0.0000	1,000.6277	25.4227	0.0000	0.0000
Investors Exchange LLC (IEXG)	0.93	0.00	0.00	4.11	0.00	-0.2262	-58.0000	0.0000	0.0000	-1.4450	-0.0556	0.0000	0.0000

Material Aspects:

TWO SIGMA SECURITIES, LLC (SOHO):
Firm not charged.

JANE STREET CAPITAL, LLC (JNST):
Firm not charged.

Citadel Securities LLC (CDRG):
Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0005 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

Virtu Americas, LLC (NITE):
Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0010 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

The Nasdaq Stock Market (NSDQ):
Firm qualified for (1) the rebate provided for adding over 0.60% of the total consolidated volume and removing over 0.80% of the total consolidated volume and executing ADV of 350,000 or more shares through Midpoint Extended Life Orders during the month (\$0.0029 per share) for adding displayed liquidity, (2) Closing Cross Tier B (a fee of \$0.0011 per share for orders participating in the Closing Cross), (3) the rebate provided for adding over 0.03% of the total consolidated volume of non-displayed liquidity, including midpoint orders, for Tape A/B securities (\$0.0010 per share) and Tape C securities (\$0.0005 per share) for adding non-displayed liquidity, (4) the rebate provided for executing ADV of at least 3 million shares through midpoint and Midpoint Extended Life Orders and increasing the executed volume of such orders by 100% or more versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding displayed liquidity, (5) the rebate provided for adding greater than 5 million shares of midpoint liquidity and 8 million shares of non-displayed liquidity (\$0.0025 per share for adding midpoint non-displayed liquidity), (6) the rebate for achieving QMM Tier 1 incentive (\$0.0001 per share for adding displayed liquidity) and (7) a cap of \$35,000 for opening cross charges from Market-On-Open and Limit-On-Open orders. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

New York Stock Exchange LLC (NYSE):
Firm qualified for Providing Tier 2 (a rebate of \$0.0020 per share for adding displayed liquidity in Tape A securities), MOC/LOC Tier 1 (a fee of \$0.0007 per share for Market-On-Close and Limit-On-Close orders), NYSE d-Order Tier 1 charges applicable for Executions at the Close after the first 750,000 ADV of aggregate executions at the close (a reduced fee of \$0.0008 per share for d-Orders last modified in the last 3 minutes before the scheduled close of trading), Remove Tier 1 for Tape A securities (a fee of \$0.0028 per share for removing liquidity) and Tape B and Tape C securities (a fee of \$0.00285 per share for removing liquidity), , and Routing Tier 1 for adding average daily volume in Tapes A, B and C combined that is at least 0.20% of Tapes A, B and C consolidated average daily volume combined (a fee of \$0.0030 per share for orders routed). The venue provided a fee cap of \$35,000 for the month for opening executions. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/nyse/trading-info/fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca, Inc. (ARCA):
Firm qualified for Tier 4 for adding .20% of consolidated ADV (a rebate of \$0.0025 for Tape A and Tape C securities and \$0.0022 for Tape B securities for adding displayed liquidity) and Limit Non-Display Order Step Up Tier 4 for increasing ADV by .02% of limit non-displayed and mid-point liquidity orders combined over July 2020 (a rebate of \$0.0004 per share for adding non-displayed liquidity). The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf . Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe EDGX Exchange, Inc. (EDGX):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/edgx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATS):
Firm qualified for Add/Remove Volume Tier 3 for having average daily added volume as a percentage of total consolidated volume of at least 0.25% or average added daily volume of at least 25,000,000 (an incremental rebate of \$0.0011 per share for adding displayed liquidity). The Firm achieved the aforementioned tier based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Investors Exchange LLC (IEXG):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.iexexchange.io/resources/trading/fee-schedule>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

July 2023

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	62.48	7.09	23.03	7.40

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)
JANE STREET CAPITAL, LLC (JNST)	30.87	39.86	38.40	8.31	17.73	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas, LLC (NITE)	27.87	35.46	32.98	8.63	18.76	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	15.69	17.17	23.05	8.50	18.50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.15	0.10	0.22	32.43	21.82	-203.6145	-11.7098	-20.8814	-11.0018	24,668.2848	20.6279	1,469.8286	3.6697
TWO SIGMA SECURITIES, LLC (SOHO)	4.96	7.34	5.13	0.03	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange LLC (NYSE)	4.81	0.05	0.18	16.66	12.58	-79.2040	-4.7247	-19.8736	-3.8425	9,470.9493	18.7421	696.0172	5.6983
NYSE Arca, Inc. (ARCA)	3.02	0.02	0.04	9.95	9.60	-22.6990	-30.6371	-5.4209	-30.0161	7,085.8190	16.9645	-620.1333	-11.4654
Cboe BZX Exchange, Inc. (BATS)	1.40	0.00	0.00	5.78	1.01	-86.4743	-21.3480	-0.2320	-16.3380	5,421.4122	22.9046	-43.3727	-6.5961
Cboe EDGX Exchange, Inc. (EDGX)	1.38	0.00	0.00	6.00	0.00	-0.0721	-30.0417	0.0000	0.0000	3,240.9827	9.8783	0.0000	0.0000
Investors Exchange LLC (IEXG)	0.85	0.00	0.00	3.71	0.00	-7.0595	-7.0581	0.0000	0.0000	-8.2093	-0.0415	0.0000	0.0000

Material Aspects:

JANE STREET CAPITAL, LLC (JNST):
Firm not charged.

Virtu Americas, LLC (NITE):
Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0010 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

Citadel Securities LLC (CDRG):
Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0005 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

The Nasdaq Stock Market (NSDQ):
Firm qualified for (1) the rebate provided for adding over 0.60% of the total consolidated volume and removing over 0.80% of the total consolidated volume and executing ADV of 350,000 or more shares through Midpoint Extended Life Orders during the month (\$0.0029 per share) for adding displayed liquidity, (2) Closing Cross Tier B (a fee of \$0.0011 per share for orders participating in the Closing Cross), (3) the rebate provided for adding over 0.03% of the total consolidated volume of non-displayed liquidity, including midpoint orders, for Tape A/B securities (\$0.0010 per share) and Tape C securities (\$0.0005 per share) for adding non-displayed liquidity, (4) the rebate provided for executing ADV of at least 3 million shares through midpoint and Midpoint Extended Life Orders and increasing the executed volume of such orders by 100% or more versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding displayed liquidity, (5) the rebate provided for adding greater than 5 million shares of midpoint liquidity and 8 million shares of non-displayed liquidity (\$0.0025 per share for adding midpoint non-displayed liquidity), (6) the rebate for achieving QMM Tier 1 incentive (\$0.0001 per share for adding displayed liquidity) and (7) a cap of \$35,000 for opening cross charges from Market-On-Open and Limit-On-Open orders. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

TWO SIGMA SECURITIES, LLC (SOHO):
Firm not charged.

New York Stock Exchange LLC (NYSE):

Firm qualified for Providing Tier 2 (a rebate of \$0.0020 per share for adding displayed liquidity in Tape A securities), MOC/LOC Tier 1 (a fee of \$0.0007 per share for Market-On-Close and Limit-On-Close orders), NYSE d-Order Tier 1 charges applicable for Executions at the Close after the first 750,000 ADV of aggregate executions at the close (a reduced fee of \$0.0008 per share for d-Orders last modified in the last 3 minutes before the scheduled close of trading), Remove Tier 1 for Tape A securities (a fee of \$0.0028 per share for removing liquidity) and Tape B and Tape C securities (a fee of \$0.00285 per share for removing liquidity), , and Routing Tier 1 for adding average daily volume in Tapes A, B and C combined that is at least 0.20% of Tapes A, B and C consolidated average daily volume combined (a fee of \$0.0030 per share for orders routed). The venue provided a fee cap of \$35,000 for the month for opening executions. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/nyse/trading-info/fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca, Inc. (ARCA):
Firm qualified for Tier 4 for adding .20% of consolidated ADV (a rebate of \$0.0025 for Tape A and Tape C securities and \$0.0022 for Tape B securities for adding displayed liquidity) and Limit Non-Display Order Step Up Tier 4 for increasing ADV by .02% of limit non-displayed and mid-point liquidity orders combined over July 2020 (a rebate of \$0.0004 per share for adding non-displayed liquidity). The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf . Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATS):
Firm qualified for Add/Remove Volume Tier 3 for having average daily added volume as a percentage of total consolidated volume of at least 0.25% or average added daily volume of at least 25,000,000 (an incremental rebate of \$0.0011 per share for adding displayed liquidity). The Firm achieved the aforementioned tier based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe EDGX Exchange, Inc. (EDGX):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/edgx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Investors Exchange LLC (IEXG):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.iexexchange.io/resources/trading/fee-schedule>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

July 2023

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
97.55	13.71	15.52	40.25	30.52

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 Financial Technologies LLC (DFIN)	24.41	23.60	20.66	21.48	30.35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4,438.0200	1.0995
GLOBAL EXECUTION BROKERS, LP (GEBB)	22.79	30.00	30.54	31.88	3.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	17.34	21.23	24.18	24.21	3.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wolverine Execution Services, LLC (WEXX)	16.91	25.17	24.62	22.43	2.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq PHLX LLC (XPHO)	12.06	0.00	0.00	0.00	39.58	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-86,442.4194	-27.4219
Cboe Exchange, Inc. (CBOE)	2.01	0.00	0.00	0.00	6.59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-106,783.3717	-50.1465

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 Options Market (XNDQ)	1.78	0.00	0.00	0.00	5.84	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-40,206.0445	-80.4690
NYSE Arca Options (ARCO)	1.10	0.00	0.00	0.00	3.61	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-16,017.1073	-27.8379
Cboe BZX Exchange, Inc. (BATO)	0.87	0.00	0.00	0.00	2.86	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-21,509.8900	-50.4063
BOX OPTIONS EXCHANGE (XBOX)	0.73	0.00	0.00	0.00	2.39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7,369.5859	16.5449

Material Aspects:

Dash Financial Technologies LLC (DFIN):

Firm not charged for orders routed by the Wealth Management or Corporate and Investment Bank division and cleared by Dash Financial Technologies LLC. However, Firm charged commission plus exchange, regulatory, market data, and clearing fees, less exchange rebates where applicable, for orders routed by the Corporate and Investment Bank and cleared by the Firm following execution, Firm is charged \$.05/contract for 0-500,000 contracts, \$.04/contract for 500,001-1 million contracts, and \$.03/contract for greater than 1 million contracts. Firm qualified for the \$.03/contract discounted tier. Dash Financial Technologies LLC's most recent report pursuant to SEC Rule 606(a) is available at: <http://dash-website-static.s3-website-us-east-1.amazonaws.com/static/606.html>

GLOBAL EXECUTION BROKERS, LP (GEBB):

Firm not charged.

Citadel Securities LLC (CDRG):

Firm not charged. Citadel Securities LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.citadelsecurities.com/rule-605-606-statements/>

Wolverine Execution Services, LLC (WEXX):

Firm not charged. Wolverine Execution Services, LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.tradewex.com/Home/Rule606>.

Nasdaq PHLX LLC (XPHO):

Firm did not qualify for tiered pricing. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules/phlx-options-7>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe Exchange, Inc. (CBOE):

Firm did not qualify for tiered pricing with respect to customer order flow. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://cdn.cboe.com/resources/membership/Cboe_FeeSchedule.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Nasdaq Options Market (XNDQ):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-options-7>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca Options (ARCO):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/arca-options/trading-info#fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATO):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/options/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

BOX OPTIONS EXCHANGE (XBOX):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://boxexchange.com/assets/BOX-Fee-Schedule-as-of-July-3-2023.pdf>.

August 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
99.29	65.52	4.78	23.43	6.26

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)
TWO SIGMA SECURITIES, LLC (SOHO)	27.71	39.85	31.79	0.24	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	19.33	23.29	26.01	7.68	16.29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	18.98	22.83	24.70	7.80	16.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas, LLC (NITE)	12.86	13.97	17.41	7.77	16.72	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.57	0.00	0.00	33.31	28.50	-0.2006	-34.0000	0.0000	0.0000	5,085.1994	27.6310	21.6881	0.3354
New York Stock Exchange LLC (NYSE)	5.91	0.06	0.09	19.06	22.31	-8.5428	-2.4645	-2.2368	-1.6647	2,296.1204	19.2724	66.9549	0.9206
NYSE Arca, Inc. (ARCA)	1.78	0.00	0.00	7.62	0.00	-1.1236	-32.1029	0.0000	0.0000	1,096.1699	22.0859	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.51	0.00	0.00	6.45	0.00	0.0000	0.0000	0.0000	0.0000	585.4071	13.6292	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.31	0.00	0.00	5.61	0.00	0.0000	0.0000	0.0000	0.0000	790.6921	25.2021	-0.0898	-8.9800
Investors Exchange LLC (IEXG)	1.04	0.00	0.00	4.46	0.00	0.0000	0.0000	0.0000	0.0000	-2.5134	-0.0852	0.0000	0.0000

Material Aspects:

TWO SIGMA SECURITIES, LLC (SOHO):

Firm not charged.

JANE STREET CAPITAL, LLC (JNST):

Firm not charged.

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0005 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

Virtu Americas, LLC (NITE):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0010 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

The Nasdaq Stock Market (NSDQ):

Firm qualified for (1) the rebate provided for adding over 0.60% of the total consolidated volume and removing over 0.80% of the total consolidated volume and executing ADV of 350,000 or more shares through Midpoint Extended Life Orders during the month (\$0.0029 per share) for adding displayed liquidity, (2) Closing Cross Tier B (a fee of \$0.0011 per share for orders participating in the Closing Cross), (3) the rebate provided for adding over 0.03% of the total consolidated volume of non-displayed liquidity, including midpoint orders, for Tape A/B securities (\$0.0010 per share) and Tape C securities (\$0.0005 per share) for adding non-displayed liquidity, (4) the rebate provided for executing ADV of at least 3 million shares through midpoint and Midpoint Extended Life Orders and increasing the executed volume of such orders by 100% or more versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding displayed liquidity, (5) the rebate for achieving QMM Tier 1 incentive (\$0.0001 per share for adding displayed liquidity), (6) the rebate provided for adding greater than 5 million shares of midpoint liquidity and 8 million shares of non-displayed liquidity (\$0.0025 per share for adding midpoint non-displayed liquidity), and (7) a cap of \$35,000 for opening cross charges from Market-On-Open and Limit-On-Open orders. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

New York Stock Exchange LLC (NYSE):
Firm qualified for Providing Tier 2 (a rebate of \$0.0020 per share for adding displayed liquidity in Tape A securities), MOC/LOC Tier 1 (a fee of \$0.0007 per share for Market-On-Close and Limit-On-close orders), NYSE d-Order Tier 1 charges applicable for Executions at the Close after the first 750,000 ADV of aggregate executions at the close (a reduced fee of \$0.0008 per share for d-Orders last modified in the last 3 minutes before the scheduled close of trading), Remove Tier 1 for Tape A securities (a fee of \$0.0028 per share for removing liquidity) and Tape B and Tape C securities (a fee of \$0.00285 per share for removing liquidity), and Routing Tier 1 for adding average daily volume in Tapes A, B and C combined that is at least 0.20% of Tapes A, B and C consolidated average daily volume combined (a fee of \$0.0030 per share for orders routed). The venue provided a fee cap of \$35,000 for the month for opening executions. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/nyse/trading-info/fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca, Inc. (ARCA):
Firm qualified for Tier 4 for adding .20% of consolidated ADV (a rebate of \$0.0025 for Tape A and Tape C securities and \$0.0022 for Tape B securities for adding displayed liquidity) and Limit Non-Display Order Step Up Tier 4 for increasing ADV by .02% of limit non-displayed and mid-point liquidity orders combined over July 2020 (a rebate of \$0.0004 per share for adding non-displayed liquidity). The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe EDGX Exchange, Inc. (EDGX):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/edgx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATS):
Firm qualified for Add/Remove Volume Tier 3 for having average daily added volume as a percentage of total consolidated volume of at least 0.25% or average added daily volume of at least 25,000,000 (an incremental rebate of \$0.0011 per share for adding displayed liquidity). The Firm achieved the aforementioned tier based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Investors Exchange LLC (IEXG):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.iexexchange.io/resources/trading/fee-schedule>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

August 2023

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
99.98	62.24	7.07	23.48	7.20

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)
JANE STREET CAPITAL, LLC (JNST)	32.21	41.97	40.20	8.48	17.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas, LLC (NITE)	27.40	35.20	32.39	8.39	17.06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	16.48	18.60	24.10	8.31	17.30	0.0000	0.0000	-0.2785	-0.0001	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	8.86	0.20	0.24	30.41	22.09	-239.7325	-11.5778	-32.4064	-7.4506	32,200.8278	18.6661	1,653.4159	3.1813

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 LLC (NYSE)	5.35	0.08	0.12	17.79	15.44	-74.2666	-4.2565	4.6930	0.7698	11,767.7715	16.5658	668.2349	2.6459
NYSE Arca, Inc. (ARCA)	3.12	0.03	0.04	10.21	9.72	-53.9302	-7.3601	-8.5905	-20.5514	8,265.3515	15.4686	-709.7599	-8.0645
TWO SIGMA SECURITIES, LLC (SOHO)	2.65	3.92	2.91	0.02	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.52	0.00	0.00	6.08	1.29	-8.7287	-21.8874	0.0000	0.0000	6,550.5790	17.7624	-50.1360	-5.1340
Cboe EDGX Exchange, Inc. (EDGX)	1.47	0.00	0.00	6.27	0.00	-0.7485	-11.3927	-4.2469	-10.8644	4,795.4065	10.3421	0.0000	0.0000
Investors Exchange LLC (IEXG)	0.94	0.00	0.00	4.04	0.00	-0.0086	-10.7500	-0.3902	-9.0115	-20.5711	-0.0688	0.0000	0.0000

Material Aspects:

JANE STREET CAPITAL, LLC (JNST):
Firm not charged.

Virtu Americas, LLC (NITE):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0010 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0005 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

The Nasdaq Stock Market (NSDQ):

Firm qualified for (1) the rebate provided for adding over 0.60% of the total consolidated volume and removing over 0.80% of the total consolidated volume and executing ADV of 350,000 or more shares through Midpoint Extended Life Orders during the month (\$0.0029 per share) for adding displayed liquidity, (2) Closing Cross Tier B (a fee of \$0.0011 per share for orders participating in the Closing Cross), (3) the rebate provided for adding over 0.03% of the total consolidated volume of non-displayed liquidity, including midpoint orders, for Tape A/B securities (\$0.0010 per share) and Tape C securities (\$0.0005 per share) for adding non-displayed liquidity, (4) the rebate provided for executing ADV of at least 3 million shares through midpoint and Midpoint Extended Life Orders and increasing the executed volume of such orders by 100% or more versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding displayed liquidity, (5) the rebate for achieving QMM Tier 1 incentive (\$0.0001 per share for adding displayed liquidity), (6) the rebate provided for adding greater than 5 million shares of midpoint liquidity and 8 million shares of non-displayed liquidity (\$0.0025 per share for adding midpoint non-displayed liquidity), and (7) a cap of \$35,000 for opening cross charges from Market-On-Open and Limit-On-Open orders. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

New York Stock Exchange LLC (NYSE):

Firm qualified for Providing Tier 2 (a rebate of \$0.0020 per share for adding displayed liquidity in Tape A securities), MOC/LOC Tier 1 (a fee of \$0.0007 per share for Market-On-Close and Limit-On-close orders), NYSE d-Order Tier 1 charges applicable for Executions at the Close after the first 750,000 ADV of aggregate executions at the close (a reduced fee of \$0.0008 per share for d-Orders last modified in the last 3 minutes before the scheduled close of trading), Remove Tier 1 for Tape A securities (a fee of \$0.0028 per share for removing liquidity) and Tape B and Tape C securities (a fee of \$0.00285 per share for removing liquidity), , and Routing Tier 1 for adding average daily volume in Tapes A, B and C combined that is at least 0.20% of Tapes A, B and C consolidated average daily volume combined (a fee of \$0.0030 per share for orders routed). The venue provided a fee cap of \$35,000 for the month for opening executions. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/nyse/trading-info/fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca, Inc. (ARCA):

Firm qualified for Tier 4 for adding .20% of consolidated ADV (a rebate of \$0.0025 for Tape A and Tape C securities and \$0.0022 for Tape B securities for adding displayed liquidity) and Limit Non-Display Order Step Up Tier 4 for increasing ADV by .02% of limit non-displayed and mid-point liquidity orders combined over July 2020 (a rebate of \$0.0004 per share for adding non-displayed liquidity). The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

TWO SIGMA SECURITIES, LLC (SOHO):

Firm not charged.

Cboe BZX Exchange, Inc. (BATS):

Firm qualified for Add/Remove Volume Tier 3 for having average daily added volume as a percentage of total consolidated volume of at least 0.25% or average added daily volume of at least 25,000,000 (an incremental rebate of \$0.0011 per share for adding displayed liquidity). The Firm achieved the aforementioned tier based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe EDGX Exchange, Inc. (EDGX):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/edgx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Investors Exchange LLC (IEXG):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.iexexchange.io/resources/trading/fee-schedule>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

August 2023

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
97.09	14.66	16.21	40.19	28.94

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)
GLOBAL EXECUTION BROKERS, LP (GEBB)	26.51	33.00	34.72	36.74	4.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DFIN)	23.20	22.22	20.89	21.15	27.83	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-1,015.6000	-0.1298
Citadel Securities LLC (CDRG)	20.58	26.85	27.73	27.63	3.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq PHLX LLC (XPHO)	11.70	0.00	0.00	0.00	40.47	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-121,382.2888	-28.5685
Wolverine Execution Services, LLC (WEXX)	11.13	15.14	16.65	14.48	1.35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe Exchange, Inc. (CBOE)	2.31	0.00	0.00	0.00	7.99	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-149,350.5325	-51.5907
Nasdaq Options Market (XNDQ)	1.66	0.00	0.00	0.00	5.76	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-66,564.7553	-84.3732
NYSE Arca Options (ARCO)	1.15	0.00	0.00	0.00	3.98	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-21,196.9573	-22.7574
MATRIX EXECUTIONS, LLC (RSKY)	0.94	2.79	0.01	0.00	1.83	-2,127.5200	-6.8499	-27.4600	-0.9258	0.0000	0.0000	-29,199.2300	-10.0521
Cboe BZX Exchange, Inc. (BATO)	0.82	0.00	0.00	0.00	2.86	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-38,035.7600	-49.5509

Material Aspects:

GLOBAL EXECUTION BROKERS, LP (GEBB):
Firm not charged.

Firm not charged for orders routed by the Wealth Management or Corporate and Investment Bank division and cleared by Dash Financial Technologies LLC. However, Firm charged commission plus exchange, regulatory, market data, and clearing fees, less exchange rebates where applicable, for orders routed by the Corporate and Investment Bank and cleared by the Firm following execution, Firm is charged \$.05/contract for 0-500,000 contracts, \$.04/contract for 500,001-1 million contracts, and \$.03/contract for greater than 1 million contracts. Firm qualified for the \$.03/contract discounted tier. Dash Financial Technologies LLC's most recent report pursuant to SEC Rule 606(a) is available at: <http://dash-website-static.s3-website-us-east-1.amazonaws.com/static/606.html>

Firm not charged. Citadel Securities LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.citadelsecurities.com/rule-605-606-statements/>

Firm did not qualify for tiered pricing. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules/phlx-options-7>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Firm not charged. Wolverine Execution Services, LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.tradewex.com/Home/Rule606>.

Firm did not qualify for tiered pricing with respect to customer order flow. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://cdn.cboe.com/resources/membership/Cboe_FeeSchedule.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-options-7>. Please note the exchange's publicly available Fees Schedule (URL link and applicable rates may change without notice).

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/arca-options/trading-info#fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Firm not charged for Wealth Management division executions cleared by Matrix Executions, LLC; however, Firm pays exchange and regulatory fees, less exchange rebates where applicable, for any orders that are routed by the Wealth Management division and cleared by the Firm following execution. Rebates received by Firm may exceed fees paid by Firm. Matrix Executions, LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.matrixexecutions.com/606>

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/options/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

S&P 500 Stocks

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
98.01	66.79	4.81	22.70	5.70

[illegible]

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)
The Nasdaq Stock Market (NSDQ)	9.10	0.00	0.00	33.10	28.00	-0.3350	-34.8958	0.0000	0.0000	4,020.4142	26.4061	17.0062	0.3857
New York Stock Exchange LLC (NYSE)	5.80	0.05	0.06	19.59	23.06	-32.9807	-9.4941	-1.2876	-1.9064	1,715.8097	19.7211	82.8703	1.4145
NYSE Arca, Inc. (ARCA)	1.62	0.00	0.00	7.16	0.00	-0.1950	-34.2105	0.0000	0.0000	1,108.2131	22.6362	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.32	0.00	0.00	5.85	0.00	0.0000	0.0000	0.0000	0.0000	491.5169	13.8938	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.19	0.00	0.00	5.26	0.00	0.0000	0.0000	0.0000	0.0000	891.2372	25.5464	-0.0009	-9.0000
Investors Exchange LLC (IEXG)	0.89	0.00	0.00	3.95	0.00	0.0000	0.0000	0.0000	0.0000	97.6733	3.8805	0.0000	0.0000

Material Aspects:

TWO SIGMA SECURITIES, LLC (SOHO):

Firm not charged.

JANE STREET CAPITAL, LLC (JNST):

Firm not charged.

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0005 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

Virtu Americas, LLC (NITE):

Firm not charged for orders routed by the Wealth Management division or the Corporate and Investment Bank division, except as noted below. Firm charged a fee of \$0.0010 per share executed for any orders routed by the Wealth Management division on behalf of its clients for handling by the broker's algorithms.

The Nasdaq Stock Market (NSDQ):

Firm qualified for (1) the rebate provided for adding over 0.60% of the total consolidated volume and removing over 0.80% of the total consolidated volume and executing ADV of 350,000 or more shares through Midpoint Extended Life Orders during the month (\$0.0029 per share) for adding displayed liquidity, (2) Closing Cross Tier B (a fee of \$0.0011 per share) for orders executing in the Closing Cross, (3) the rebate provided for adding over 0.03% of the total consolidated volume of non-displayed liquidity, including midpoint orders, for Tape A/B securities (\$0.0010 per share) and Tape C securities (\$0.0005 per share) for adding non-displayed liquidity, (4) the rebate provided for executing ADV of at least 3 million shares through midpoint and Midpoint Extended Life Orders and increasing the executed volume of such orders by 100% or more versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding displayed liquidity, (5) the rebate provided for adding greater than 5 million shares of midpoint liquidity and 8 million shares of non-displayed liquidity (\$0.0025 per share for adding midpoint non-displayed liquidity), and (6) a cap of \$35,000 for opening cross charges from Market-On-Open and Limit-On-Open orders. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

New York Stock Exchange LLC (NYSE):

Firm qualified for Providing Tier 2 (a rebate of \$0.0020 per share for adding displayed liquidity in Tape A securities), MOC/LOC Tier 1 (a fee of \$0.0007 per share for Market-On-Close and Limit-On-Close orders), NYSE d-Order Tier 1 charges applicable for Executions at the Close after the first 750,000 ADV of aggregate executions at the close (a reduced fee of \$0.0008 per share for d-Orders last modified in the last 3 minutes before the scheduled close of trading), Remove Tier 3 for Tape A securities (a fee of \$0.0029 per share for removing liquidity) and Tape B and Tape C securities (a fee of \$0.00285 per share for removing liquidity), and Routing Tier 1 for adding average daily volume in Tapes A, B and C combined that is at least 0.20% of Tapes A, B and C consolidated average daily volume combined (a fee of \$0.0030 per share for orders routed). The venue provided a fee cap of \$35,000 for the month for opening executions. The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/nyse/trading-info/fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca, Inc. (ARCA):

Firm qualified for Tier 4 for adding .20% of consolidated ADV (a rebate of \$0.0025 for Tape A and Tape C securities and \$0.0022 for Tape B securities for adding displayed liquidity) and Limit Non-Display Order Step Up Tier 4 for increasing ADV by .02% of limit non-displayed and mid-point liquidity orders combined over July 2020 (a rebate of \$0.0004 per share for adding non-displayed liquidity). The Firm achieved the aforementioned tiers based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe EDGX Exchange, Inc. (EDGX):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/edgx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATS):

Firm qualified for Add/Remove Volume Tier 3 for having average daily added volume as a percentage of total consolidated volume of at least 0.25% or average added daily volume of at least 25,000,000 (an incremental rebate of \$0.0011 per share for adding displayed liquidity). The Firm achieved the aforementioned tier based on its aggregated order flow for the month, i.e., not limited to the held, non-directed order flow that is the subject of this report. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Investors Exchange LLC (IEXG):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.iexexchange.io/resources/trading/fee-schedule>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

September 2023

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
99.91	65.06	7.02	21.02	6.89

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)
JANE STREET CAPITAL, LLC (JNST)	33.18	42.08	39.93	8.80	16.37	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas, LLC (NITE)	28.27	35.34	32.55	8.73	16.75	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	16.63	18.37	24.03	8.66	16.93	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	8.51	0.28	0.35	31.72	24.05	-350.3834	-11.0623	-8.5418	-1.3996	25,672.7897	17.7261	293.9226	0.7309
New York Stock Exchange LLC (NYSE)	4.36	0.02	0.05	16.04	14.01	-16.7131	-4.6201	-1.3286	-8.7523	7,317.3891	17.7501	631.4544	3.9760
NYSE Arca, Inc. (ARCA)	2.97	0.03	0.07	10.51	10.70	-32.2484	-29.1051	-29.5792	-29.7997	7,470.6674	14.6269	-561.7230	-6.6473
TWO SIGMA SECURITIES, LLC (SOHO)	2.74	3.88	3.02	0.02	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.33	0.00	0.00	5.93	1.19	-0.1921	-23.1446	-0.7102	-30.0932	4,854.6647	18.0729	-56.7456	-5.6954
Cboe EDGX Exchange, Inc. (EDGX)	1.26	0.00	0.00	6.00	0.00	-23.5845	-6.9112	-0.0607	-30.3500	3,623.0612	11.1426	0.0000	0.0000
Investors Exchange LLC (IEXG)	0.75	0.00	0.00	3.59	0.00	-0.0074	-8.2222	0.0000	0.0000	511.3693	2.2801	0.0000	0.0000

Material Aspects:
JANE STREET CAPITAL, LLC (JNST):

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)
GLOBAL EXECUTION BROKERS, LP (GEBB)	25.88	37.78	38.16	39.78	3.39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	20.96	32.05	31.59	31.16	3.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DFIN)	20.80	22.50	20.77	21.08	19.95	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4,044.0700	0.6689
Nasdaq PHLX LLC (XPHO)	16.27	0.00	0.00	0.00	44.12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-110,758.0942	-26.2583
Wolverine Execution Services, LLC (WEXX)	5.42	7.67	9.48	7.98	0.55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe Exchange, Inc. (CBOE)	5.22	0.00	0.00	0.00	14.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-128,590.5625	-48.9192
Nasdaq Options Market (XNDQ)	2.13	0.00	0.00	0.00	5.78	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-59,578.8690	-87.4263
NYSE Arca Options (ARCO)	1.30	0.00	0.00	0.00	3.53	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-32,499.7529	-36.6013
Cboe BZX Exchange, Inc. (BATO)	1.07	0.00	0.00	0.00	2.90	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-35,933.5700	-50.4027
BOX OPTIONS EXCHANGE (XBOX)	0.95	0.00	0.00	0.00	2.59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	12,173.5491	20.1113

Material Aspects:

GLOBAL EXECUTION BROKERS, LP (GEBB):
Firm not charged.

Citadel Securities LLC (CDRG):
Firm not charged. Citadel Securities LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.citadelsecurities.com/rule-605-606-statements/>

Dash Financial Technologies LLC (DFIN):
Firm not charged for orders routed by the Wealth Management or Corporate and Investment Bank division and cleared by Dash Financial Technologies LLC. However, Firm charged commission plus exchange, regulatory, market data, and clearing fees, less exchange rebates where applicable, for orders routed by the Corporate and Investment Bank and cleared by the Firm following execution, Firm is charged \$.05/contract for 0-500,000 contracts, \$.04/contract for 500,001-1 million contracts, and \$.03/contract for greater than 1 million contracts. Firm qualified for the \$.03/contract discounted tier. Dash Financial Technologies LLC's most recent report pursuant to SEC Rule 606(a) is available at: <http://dash-website-static.s3-website-us-east-1.amazonaws.com/static/606.html>

Nasdaq PHLX LLC (XPHO):
Firm did not qualify for tiered pricing. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules/phlx-options-7>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Wolverine Execution Services, LLC (WEXX):
Firm not charged. Wolverine Execution Services, LLC's recent reports pursuant to SEC Rule 606(a) are available at: <https://www.tradewex.com/Home/Rule606>.

Cboe Exchange, Inc. (CBOE):
Firm did not qualify for tiered pricing with respect to customer order flow. Firm received marketing fees from preferred market makers pursuant to marketing fee program sponsored by exchange. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://cdn.cboe.com/resources/membership/Cboe_FeeSchedule.pdf. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Nasdaq Options Market (XNDQ):
Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-options-7>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

NYSE Arca Options (ARCO):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: <https://www.nyse.com/markets/arca-options/trading-info#fees>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

Cboe BZX Exchange, Inc. (BATO):

Firm did not qualify for tiered pricing. A description of the current fees and rebates offered by this venue, including the pricing tiers offered and the pricing for each tier, is available at: https://markets.cboe.com/us/options/membership/fee_schedule/bzx/. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

BOX OPTIONS EXCHANGE (XBOX):

Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.