

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

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4th Quarter, 2024

October 2024

## 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
97.76	66.55	4.75	22.48	6.22

### 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)
VIRTU Americas LLC (NITE)	21.05	25.34	26.09	8.70	15.67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities LLC (CDRG)	20.49	24.49	26.58	8.71	15.66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-4.3235	-0.0438
JANE STREET CAPITAL, LLC (JNST)	13.69	14.90	17.84	8.61	15.97	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TWO SIGMA SECURITIES, LLC (SOHO)	13.01	18.46	14.53	0.16	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	11.87	16.73	14.80	0.14	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.72	0.02	0.06	35.00	29.55	-74.8042	-23.4621	-55.8742	-31.8662	14,209.2857	26.3401	437.1471	3.8045
New York Stock Exchange LLC (NYSE)	5.28	0.06	0.10	16.90	23.15	-56.4141	-7.9625	-1.2523	-2.4232	4,487.0756	18.6325	258.0969	2.0942
NYSE Arca, Inc. (ARCA)	1.93	0.00	0.00	8.57	0.00	-20.0882	-33.5250	-0.7538	-33.5022	3,421.9701	19.8957	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.58	0.00	0.00	7.05	0.00	-2.8700	-31.9244	-1.5697	-31.3313	1,950.0603	14.3585	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.38	0.00	0.00	6.16	0.00	-10.3168	-31.2063	-0.6441	-30.5261	2,203.9534	18.8644	-0.0963	-9.6300

Material Aspects:

VIRTU Americas LLC (NITE):  
Firm not charged.

Citadel Securities LLC (CDRG):  
Firm not charged for orders routed by the Wealth Management division or the Commercial 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.

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

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

G1 Execution Services, LLC (ETMM):  
Firm not charged.

The Nasdaq Stock Market (NSDQ):  
Firm qualified for (1) the rebate provided for adding over 0.35% of the total consolidated volume and removing over 0.75% of the total consolidated volume (\$0.0028 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), 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), Step-up Tier 3 (a rebate of \$0.0005 per share for adding ADV in Non-Displayed Limit Orders and Midpoint Limit Orders in Tapes A, B and C securities consolidated average daily volume combined, excluding any liquidity added by a DMM, that is at least 0.02% and less than 0.04% of NYSE consolidated average daily volume over the firm's May 2020 adding liquidity in Non-Displayed Limit Orders and MPL Orders taken as a percentage of NYSE CADV), 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 \$0.0011 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](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/](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 1 for having average daily added volume as a percentage of total consolidated volume of at least 0.05% or average daily added volume of at least 6,000,000 (an incremental rebate of \$0.0004 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/](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.

October 2024

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
99.82	67.57	10.34	16.66	5.43

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	27.33	32.15	32.70	8.88	13.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	22.32	29.42	23.12	0.31	0.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas LLC (NITE)	20.24	22.96	24.70	8.76	13.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	14.02	14.71	18.63	8.70	13.04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	7.93	0.57	0.57	33.16	36.38	-686.4890	-14.6078	-87.4967	-6.6165	67,561.5896	21.5046	4,385.8869	5.6978
New York Stock Exchange LLC (NYSE)	2.61	0.05	0.05	11.94	10.71	-166.7615	-3.9457	-45.3736	-6.0915	15,998.9550	17.5271	1,745.7054	5.2544
NYSE Arca, Inc. (ARCA)	2.53	0.06	0.10	11.49	10.50	-58.3412	-8.9315	-13.5553	-12.6827	16,500.4239	16.6417	-1,678.9324	-11.3093
Cboe BZX Exchange, Inc. (BATS)	1.31	0.03	0.04	6.73	2.96	-34.4801	-22.7411	-43.3904	-14.6475	8,559.1274	15.9491	-93.8406	-3.4804
Cboe EDGX Exchange, Inc. (EDGX)	1.17	0.04	0.06	6.82	0.00	-47.7912	-29.5427	-1.4114	-19.7123	8,573.9014	12.4492	0.0000	0.0000
MEMX LLC EQUITIES (MEMX)	0.54	0.01	0.03	3.21	0.00	-7.8056	-18.8632	-2.6599	-29.1656	4,107.5025	12.2527	0.0000	0.0000

#### Material Aspects:

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Commercial 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.

G1 Execution Services, LLC (ETMM):

Firm not charged.

VIRTU Americas LLC (NITE):

Firm not charged.

JANE STREET CAPITAL, LLC (JNST):

Firm not charged.

The Nasdaq Stock Market (NSDQ):

Firm qualified for (1) the rebate provided for adding over 0.35% of the total consolidated volume and removing over 0.75% of the total consolidated volume (\$0.0028 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), 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):

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](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/](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.

October 2024

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
98.45	9.08	9.10	25.68	56.13

[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)
Cboe Exchange, Inc. (CBOE)	2.12	0.00	0.00	0.00	3.78	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-100,998.0720	-40.9971
Nasdaq Options Market (XNDQ)	1.41	0.00	0.00	0.00	2.51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-80,081.3328	-83.6747
BOX OPTIONS EXCHANGE (XBOX)	1.04	0.00	0.00	0.00	1.85	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8,609.7382	9.4697
Cboe BZX Exchange, Inc. (BATO)	0.86	0.00	0.00	0.00	1.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-42,876.1251	-46.4309
Nasdaq ISE, LLC (XISX)	0.84	0.00	0.00	0.00	1.50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-9,855.2102	-13.0023

Material Aspects:

Dash Financial Technologies LLC (DFIN):  
Firm not charged for orders routed by the Wealth Management or Commercial 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 Commercial 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 preferenced 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.

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/>

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

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 preferenced 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](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.

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>. 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/](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.

Nasdaq ISE, LLC (XISX):  
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/ise/rules/ISE%20Options%207>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

November 2024

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
97.58	66.65	4.94	21.99	6.42

## Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	22.17	26.56	28.60	9.17	15.76	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	18.78	21.89	23.03	9.22	15.92	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas LLC (NITE)	17.01	19.41	21.32	9.02	16.17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	14.05	19.74	17.35	0.18	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.50	0.00	0.00	34.50	30.00	6.5595	8.9513	0.0000	0.0000	13,533.1845	26.4892	361.8319	2.3622
TWO SIGMA SECURITIES, LLC (SOHO)	8.71	12.33	9.56	0.11	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange LLC (NYSE)	5.10	0.07	0.14	16.48	22.15	-42.7394	-4.6430	2.6766	1.7346	5,032.9814	19.6139	225.5844	1.7597
NYSE Arca, Inc. (ARCA)	1.85	0.00	0.00	8.42	0.00	-0.1144	-33.6471	0.0000	0.0000	3,000.9400	18.8511	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.51	0.00	0.00	6.88	0.00	0.0000	0.0000	0.0000	0.0000	2,050.7226	14.4419	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.32	0.00	0.00	6.02	0.00	0.0000	0.0000	0.0000	0.0000	2,054.5682	18.6433	0.0000	0.0000

## Material Aspects:

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Commercial 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.

JANE STREET CAPITAL, LLC (JNST):

Firm not charged.

VIRTU Americas LLC (NITE):

Firm not charged.

G1 Execution Services, LLC (ETMM):

Firm not charged.

The Nasdaq Stock Market (NSDQ):

[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)	8.02	0.16	0.18	32.92	27.52	-260.1997	-11.6558	-66.5342	-3.2231	71,059.1104	20.4645	3,502.4282	5.2447
New York Stock Exchange LLC (NYSE)	2.95	0.08	0.05	11.77	10.86	-106.6143	-3.2252	-58.2226	-9.3681	18,529.6632	18.1719	1,275.7732	3.8706
NYSE Arca, Inc. (ARCA)	2.80	0.02	0.02	11.43	10.17	-40.6549	-26.1530	-6.8689	-29.3167	17,221.5669	15.6674	-1,929.8828	-12.3040
Cboe BZX Exchange, Inc. (BATS)	1.49	0.00	0.01	6.94	2.94	-0.4502	-24.2043	-0.6729	-3.3295	10,450.6443	15.2450	-173.0407	-5.3468
Cboe EDGX Exchange, Inc. (EDGX)	1.34	0.01	0.01	7.06	0.00	-0.5115	-22.8348	-0.0432	-12.3429	9,140.3042	11.0953	0.0000	0.0000
American Stock Exchange (AMEX)	0.81	0.31	0.22	1.57	4.85	-7.7916	-5.4354	-0.4296	-1.5234	2,708.8050	14.6144	-1.7426	-0.0481

## Material Aspects:

Citadel Securities LLC (CDRG):

Firm not charged for orders routed by the Wealth Management division or the Commercial 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.

G1 Execution Services, LLC (ETMM):

Firm not charged.

VIRTU Americas LLC (NITE):

Firm not charged.

JANE STREET CAPITAL, LLC (JNST):

Firm not charged.

The Nasdaq Stock Market (NSDQ):

Firm qualified for (1) the rebate provided for adding over 0.35% of the total consolidated volume and removing over 0.75% of the total consolidated volume (\$0.0028 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 1 million shares through midpoint and Midpoint Extended Life Orders versus the volume of such executed orders in June 2021 (\$0.00005 per share) for adding non-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 \$0.0011 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 5 for adding .15% of consolidated ADV (a rebate of \$0.0022 for Tape A and Tape C securities and \$0.0020 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](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 1 for having average daily added volume as a percentage of total consolidated volume of at least 0.05% or average daily added volume of at least 6,000,000 (an incremental rebate of \$0.0004 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/](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/](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.

American Stock Exchange (AMEX):  
Firm qualified for Providing Tier 2 (a rebate of \$0.0023 per share for adding displayed liquidity) and Remove Tier 2 (a fee of \$0.0029 for removing liquidity). 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-american/NYSE\\_America\\_Equities\\_Price\\_List.pdf](https://www.nyse.com/publicdocs/nyse/markets/nyse-american/NYSE_America_Equities_Price_List.pdf). Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

November 2024

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
97.31	10.71	10.23	29.89	49.17

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)
Nasdaq PHLX LLC (XPHO)	31.53	0.00	0.00	0.00	64.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-21,384.8278	-2.6608
Citadel Securities LLC (CDRG)	25.96	50.61	49.82	48.25	2.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DFIN)	23.05	31.24	28.68	29.30	16.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,790.5600	0.3265
Wolverine Execution Services, LLC (WEXX)	5.82	11.39	11.14	11.00	0.36	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GLOBAL EXECUTION BROKERS, LP (GEBB)	5.53	6.76	10.36	11.45	0.66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe Exchange, Inc. (CBOE)	3.06	0.00	0.00	0.00	6.22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-83,751.4574	-38.2341
Nasdaq Options Market (XNDQ)	1.91	0.00	0.00	0.00	3.90	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-129,868.6556	-96.8749
BOX OPTIONS EXCHANGE (XBOX)	1.09	0.00	0.00	0.00	2.23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7,678.8966	8.0702
NYSE Arca Options (ARCO)	1.03	0.00	0.00	0.00	2.11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-39,418.7834	-28.2454
CBOE C2 OPTIONS EXCHANGE (C2OX)	1.02	0.00	0.00	0.00	2.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-51,976.9324	-41.7855

Material Aspects:  
Nasdaq PHLX LLC (XPHO):

[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)
VIRTU Americas LLC (NITE)	11.33	11.47	15.36	8.88	15.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.49	0.00	0.00	35.49	32.64	-28.8888	-22.2684	-0.8147	-33.2531	14,348.8839	26.5393	521.8485	3.2149
New York Stock Exchange LLC (NYSE)	4.70	0.03	0.06	15.68	22.05	-26.4236	-7.0949	-0.3956	-1.6813	4,323.8239	19.4103	141.5224	0.9655
TWO SIGMA SECURITIES, LLC (SOHO)	3.38	4.68	4.02	0.04	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Arca, Inc. (ARCA)	1.84	0.00	0.00	8.75	0.00	-0.0504	-33.6000	0.0000	0.0000	2,893.5614	19.7958	0.0000	0.0000
Cboe EDGX Exchange, Inc. (EDGX)	1.47	0.00	0.00	6.98	0.00	-0.0692	-32.9524	0.0000	0.0000	1,735.8086	14.2171	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	1.24	0.00	0.00	5.92	0.00	-0.4300	-32.8244	0.0000	0.0000	1,858.7046	18.4521	-0.5128	-9.4092

#### Material Aspects:

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 Commercial 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.

G1 Execution Services, LLC (ETMM):  
Firm not charged.

VIRTU Americas LLC (NITE):  
Firm not charged.

The Nasdaq Stock Market (NSDQ):  
Firm qualified for (1) the rebate provided for adding over 0.35% of the total consolidated volume and removing over 0.75% of the total consolidated volume (\$0.0028 per share) for adding displayed liquidity, (2) the rebate for achieving QMM Tier 1 Incentive (an incremental rebate of \$0.0001 per share for adding displayed liquidity), (3) Closing Cross Tier A (a fee of \$0.0008 per share for orders participating in the Closing Cross), (4) 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, (5) 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, (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 \$0.0011 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.

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

NYSE Arca, Inc. (ARCA):  
Firm qualified for Tier 5 for adding .15% of consolidated ADV (a rebate of \$0.0022 for Tape A and Tape C securities and \$0.0020 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](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/](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 1 for having average daily added volume as a percentage of total consolidated volume of at least 0.05% or average daily added volume of at least 6,000,000 (an incremental rebate of \$0.0004 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/](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.

December 2024

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
99.55	60.91	9.36	22.87	6.85

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Securities LLC (CDRG)	27.18	33.67	34.70	10.10	15.87	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	26.03	38.00	30.20	0.38	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
VIRTU Americas LLC (NITE)	17.50	19.67	22.98	9.80	16.37	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JANE STREET CAPITAL, LLC (JNST)	9.29	8.51	11.71	8.54	15.36	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
The Nasdaq Stock Market (NSDQ)	9.12	0.11	0.33	31.63	26.21	-743.0871	-15.5974	-70.2052	-4.2276	98,367.7054	26.3750	6,226.3367	6.9125
New York Stock Exchange LLC (NYSE)	3.47	0.04	0.07	11.57	11.45	-124.6886	-3.9659	16.0345	4.7167	23,400.1017	19.4068	1,510.5027	4.3293
NYSE Arca, Inc. (ARCA)	3.37	0.00	0.01	11.37	11.24	-26.8627	-26.8977	-8.6388	-29.3737	24,696.2889	19.8018	-1,964.3850	-11.5069
Cboe BZX Exchange, Inc. (BATS)	1.80	0.00	0.00	6.82	3.50	-44.0824	-27.7737	-0.0151	-30.2000	15,708.4898	17.9646	-103.9945	-2.8813
Cboe EDGX Exchange, Inc. (EDGX)	1.53	0.00	0.00	6.69	0.00	-8.8439	-17.5509	0.1131	15.0800	13,656.2936	14.5886	0.0000	0.0000
MEMX LLC EQUITIES (MEMX)	0.71	0.00	0.00	3.10	0.00	-0.3658	-30.2314	0.0000	0.0000	5,761.6399	14.0501	0.0000	0.0000

Material Aspects:

Citadel Securities LLC (CDRG):  
Firm not charged for orders routed by the Wealth Management division or the Commercial 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.

G1 Execution Services, LLC (ETMM):  
Firm not charged.

VIRTU Americas LLC (NITE):  
Firm not charged.

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

The Nasdaq Stock Market (NSDQ):  
Firm qualified for (1) the rebate provided for adding over 0.35% of the total consolidated volume and removing over 0.75% of the total consolidated volume (\$0.0028 per share) for adding displayed liquidity, (2) the rebate for achieving QMM Tier 1 Incentive (an incremental rebate of \$0.0001 per share for adding displayed liquidity), (3) Closing Cross Tier A (a fee of \$0.0008 per share for orders participating in the Closing Cross), (4) 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, (5) 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, (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 \$0.0011 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 5 for adding .15% of consolidated ADV (a rebate of \$0.0022 for Tape A and Tape C securities and \$0.0020 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](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 1 for having average daily added volume as a percentage of total consolidated volume of at least 0.05% or average daily added volume of at least 6,000,000 (an incremental rebate of \$0.0004 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/](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/](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.

MEMX LLC EQUITIES (MEMX):  
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://info.memxtrading.com/equities-trading-resources/us-equities-fee-schedule/>. Please note the exchange's publicly available Fees Schedule URL link and applicable rates may change without notice.

December 2024

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
96.54	10.88	10.54	30.82	47.76

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)
Nasdaq PHLX LLC (XPHO)	31.71	0.00	0.00	0.00	66.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-20,936.4971	-2.4239
Citadel Securities LLC (CDRG)	23.80	44.53	44.27	43.23	2.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LLC (DFIN)	20.99	34.06	31.10	31.50	9.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-1,801.0800	-0.2781
Wolverine Execution Services, LLC (WEXX)	9.02	17.62	16.83	16.31	0.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe Exchange, Inc. (CBOE)	4.62	0.00	0.00	0.00	9.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-80,330.0830	-38.3778
GLOBAL EXECUTION BROKERS, LP (GEBB)	4.29	3.79	7.80	8.96	0.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Options Market (XNDQ)	1.76	0.00	0.00	0.00	3.69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-141,434.0662	-83.1502
CBOE C2 OPTIONS EXCHANGE (C2OX)	1.55	0.00	0.00	0.00	3.25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-47,320.6519	-41.2201
BOX OPTIONS EXCHANGE (XBOX)	1.18	0.00	0.00	0.00	2.47	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7,399.5788	8.7987
Cboe BZX Exchange, Inc. (BATO)	1.08	0.00	0.00	0.00	2.28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-43,891.4759	-48.5203

#### Material Aspects:

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.

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 Commercial 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 Commercial 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>

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](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.

GLOBAL EXECUTION BROKERS, LP (GEBB):

Firm not charged.

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.

**CBOE C2 OPTIONS EXCHANGE (C2OX):**

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.cboe.com/us/options/membership/fee\\_schedule/ctwo/](https://www.cboe.com/us/options/membership/fee_schedule/ctwo/). Please note the exchange's publicly available Fee 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>. 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/](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.