# CITY NATIONAL SECURITIES, INC. - Held NMS Stocks and Options Order Routing Public Report

Generated on Tue Apr 15 2025 03:17:51 GMT-0700 (Pacific Daylight Time)

# 1st Quarter, 2025

# January 2025

## S&P 500 Stocks

#### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 89.24  | 2.69   | 7.59   | 0.47  |

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Citadel<br>Securities LLC<br>(CDRG)            | 28.21                          | 32.57                   | 23.81                             | 5.26                                      | 100.00                 | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| VIRTU<br>Americas, LLC<br>(NITE)               | 19.04                          | 22.42                   | 19.05                             | 2.63                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 17.77                          | 21.19                   | 9.52                              | 2.63                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Jane Street<br>Capital, LLC<br>(JNST)          | 14.67                          | 17.16                   | 9.52                              | 3.51                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 7.05                           | 0.00                    | 0.00                              | 43.86                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| New York<br>Stock<br>Exchange<br>(NYSE)        | 3.39                           | 0.00                    | 4.76                              | 20.18                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)                  | 2.96                           | 3.33                    | 4.76                              | 0.88                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Cboe EDGX US<br>Equities<br>Exchange<br>(EDGX) | 2.40                           | 0.00                    | 0.00                              | 14.91                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Two Sigma<br>Securities, LLC<br>(SOHO)         | 1.97                           | 2.45                    | 0.00                              | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Instinet                                       | 1.41                           | 0.70                    | 28.57                             | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

| Venue -<br>Non-directed<br>Order Flow | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|---------------------------------------|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| BlockCross<br>(BLKX)                  |                                |                         |                                   |   |                        |   |   |  |  |   |   |  |  |

VIRTU Americas, LLC (NITE): N/A

G1 Execution Services, LLC (ETMM): N/A

Jane Street Capital, LLC (JNST): N/A

NASDAQ Execution Services, LLC (NSDQ): N/A

New York Stock Exchange (NYSE): N/A

HRT FINANCIAL LP (HRTF): N/A

Cboe EDGX US Equities Exchange (EDGX): N/A

Two Sigma Securities, LLC (SOHO): N/A

Instinet BlockCross (BLKX): N/A

# January 2025

## Non-S&P 500 Stocks

### Summary

|   | Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|---|--|--|--|---|
| I | 100.00                                    | 74.00  | 9.88   | 15.63  | 0.50  |

| Venue -<br>Non-directed<br>Order Flow | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|---------------------------------------|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Citadel<br>Securities LLC<br>(CDRG)   | 23.92                          | 29.43                   | 20.54                             | 9.09                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| VIRTU<br>Americas, LLC<br>(NITE)               | 15.09                          | 19.41                   | 14.29                             | 2.39                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 14.17                          | 17.72                   | 18.75                             | 0.96                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Jane Street<br>Capital, LLC<br>(JNST)          | 12.01                          | 16.18                   | 7.14                              | 1.91                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Instinet<br>BlockCross<br>(BLKX)               | 8.32                           | 7.09                    | 31.25                             | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 7.49                           | 0.00                    | 0.00                              | 34.93                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Cboe EDGX US<br>Equities<br>Exchange<br>(EDGX) | 4.83                           | 0.00                    | 0.00                              | 22.49                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)                  | 4.31                           | 6.01                    | 1.79                              | 0.48                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Members<br>Exchange<br>(MEMX)                  | 2.77                           | 0.00                    | 0.00                              | 12.92                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| NYSE Arca<br>(ARCA)                            | 2.36                           | 0.00                    | 0.00                              | 11.00                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

VIRTU Americas, LLC (NITE): N/A

G1 Execution Services, LLC (ETMM): N/A

Jane Street Capital, LLC (JNST): N/A

Instinet BlockCross (BLKX): N/A

NASDAQ Execution Services, LLC (NSDQ): N/A

Cboe EDGX US Equities Exchange (EDGX): N/A

HRT FINANCIAL LP (HRTF): N/A

Members Exchange (MEMX): N/A

NYSE Arca (ARCA): N/A

# January 2025

# Options

### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 7.19   | 4.19   | 88.62  | 0.00  |

#### Venues

| Venue -<br>Non-directed<br>Order Flow            | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received<br>for Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Wolverine<br>Execution<br>Services LLC<br>(WEXX) | 32.76                          | 0.00                    | 0.00                              | 36.77                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Dash Financial<br>Technologies<br>LLC (DASH)     | 30.46                          | 41.67                   | 0.00                              | 30.97                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Citadel Securities<br>LLC (CDRG)                 | 28.16                          | 16.67                   | 57.14                             | 27.74                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Susquehanna<br>Capital Group<br>(SUSQ)           | 5.75                           | 33.33                   | 28.57                             | 2.58                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Morgan Stanley<br>& Company LLC<br>(MSCO)        | 2.87                           | 8.33                    | 14.29                             | 1.94                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

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Material Aspects: Wolverine Execution Services LLC (WEXX): N/A

Dash Financial Technologies LLC (DASH): N/A

Citadel Securities LLC (CDRG): N/A

Susquehanna Capital Group (SUSQ): N/A

Morgan Stanley & Company LLC (MSCO): N/A

# February 2025

#### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 83.79  | 2.93   | 12.70  | 0.59  |

#### Venues

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Citadel<br>Securities LLC<br>(CDRG)            | 17.47                          | 26.39                   | 0.00                              | 1.69                                      | 66.67                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| VIRTU<br>Americas, LLC<br>(NITE)               | 16.59                          | 25.23                   | 13.33                             | 0.84                                      | 33.33                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 16.16                          | 0.00                    | 46.67                             | 43.88                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 15.14                          | 22.22                   | 26.67                             | 1.69                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| New York<br>Stock<br>Exchange<br>(NYSE)        | 12.52                          | 0.00                    | 13.33                             | 35.44                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Jane Street<br>Capital, LLC<br>(JNST)          | 9.90                           | 15.74                   | 0.00                              | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Cboe EDGX US<br>Equities<br>Exchange<br>(EDGX) | 3.93                           | 0.00                    | 0.00                              | 11.39                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)                  | 3.20                           | 4.17                    | 0.00                              | 1.69                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Two Sigma<br>Securities, LLC<br>(SOHO)         | 3.20                           | 5.09                    | 0.00                              | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Members<br>Exchange<br>(MEMX)                  | 1.16                           | 0.00                    | 0.00                              | 3.38                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

Material Aspects: Citadel Securities LLC (CDRG): N/A

VIRTU Americas, LLC (NITE): N/A

NASDAQ Execution Services, LLC (NSDQ): N/A

G1 Execution Services, LLC (ETMM): N/A

New York Stock Exchange (NYSE):

#### N/A

Jane Street Capital, LLC (JNST): N/A

Cboe EDGX US Equities Exchange (EDGX): N/A

HRT FINANCIAL LP (HRTF): N/A

Two Sigma Securities, LLC (SOHO): N/A

Members Exchange (MEMX): N/A

# February 2025

# Non-S&P 500 Stocks

### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 70.20  | 10.94  | 18.53  | 0.33  |

| Venue -  | Non-                   | Market        | Marketable          | Non-                              | Other         | Net Payment                                | Net Payment Paid/  | Net Payment Paid/                               | Net Payment Paid/   | Net Payment Paid/                                    | Net Payment Paid/  | Net Payment                               | Net Payment Paid/   |
|--|------------------------|---------------|---------------------|-----------------------------------|---------------|--|--|---|---|--|--|---|---|
| Non-directed<br>Order Flow                     | Directed<br>Orders (%) | Orders<br>(%) | Limit Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Orders<br>(%) | Paid/Received for<br>Market<br>Orders(USD) | Received for Market<br>Orders(cents per<br>hundred shares) | Received for<br>Marketable Limit<br>Orders(USD) | Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Received for Non-<br>Marketable Limit<br>Orders(USD) | Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Paid/Received for<br>Other<br>Orders(USD) | Received for Other<br>Orders(cents per<br>hundred shares) |
| Citadel<br>Securities LLC<br>(CDRG)            | 15.49                  | 22.50         | 18.52               | 3.07                              | 33.33         | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 15.49                  | 23.70         | 12.96               | 3.55                              | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| VIRTU<br>Americas, LLC<br>(NITE)               | 14.14                  | 21.91         | 15.43               | 0.95                              | 66.67         | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| Jane Street<br>Capital, LLC<br>(JNST)          | 9.21                   | 15.05         | 5.56                | 1.42                              | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| Instinet<br>BlockCross<br>(BLKX)               | 8.66                   | 7.00          | 38.27               | 0.00                              | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| New York<br>Stock<br>Exchange<br>(NYSE)        | 8.58                   | 0.00          | 2.47                | 24.59                             | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 7.63                   | 0.00          | 1.23                | 22.22                             | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |
| Cboe EDGX US                                   | 6.51                   | 0.00          | 0.00                | 19.39                             | 0.00          | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  |

| Venue -<br>Non-directed<br>Order Flow | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|---------------------------------------|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Equities<br>Exchange<br>(EDGX)        |                                |                         |                                   |   |                        |   |   |  |  |   |   |  |  |
| NYSE Arca<br>(ARCA)                   | 5.08                           | 0.00                    | 1.85                              | 14.42                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)         | 3.18                           | 5.37                    | 2.47                              | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

G1 Execution Services, LLC (ETMM): N/A

VIRTU Americas, LLC (NITE): N/A

Jane Street Capital, LLC (JNST): N/A

Instinet BlockCross (BLKX): N/A

New York Stock Exchange (NYSE): N/A

NASDAQ Execution Services, LLC (NSDQ): N/A

Cboe EDGX US Equities Exchange (EDGX): N/A

NYSE Arca (ARCA): N/A

HRT FINANCIAL LP (HRTF): N/A

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# February 2025

# Options

### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 2.82   | 8.92   | 87.79  | 0.47  |

| Venue -<br>Non-directed<br>Order Flow            | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received<br>for Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Dash Financial<br>Technologies<br>LLC (DASH)     | 33.33                          | 33.33                   | 26.32                             | 34.17                                     | 25.00                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Wolverine<br>Execution<br>Services LLC<br>(WEXX) | 30.26                          | 0.00                    | 0.00                              | 34.67                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Citadel Securities<br>LLC (CDRG)                 | 28.07                          | 33.33                   | 42.11                             | 26.13                                     | 50.00                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Susquehanna<br>Capital Group<br>(SUSQ)           | 4.39                           | 33.33                   | 21.05                             | 1.51                                      | 25.00                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Morgan Stanley<br>& Company LLC<br>(MSCO)        | 3.95                           | 0.00                    | 10.53                             | 3.52                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

Material Aspects: Dash Financial Technologies LLC (DASH): N/A

Wolverine Execution Services LLC (WEXX): N/A

Citadel Securities LLC (CDRG): N/A

Susquehanna Capital Group (SUSQ): N/A

Morgan Stanley & Company LLC (MSCO): N/A

# March 2025

# S&P 500 Stocks

### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 80.00  | 3.01   | 16.34  | 0.65  |

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 19.97                          | 0.00                    | 0.00                              | 42.77                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| New York<br>Stock<br>Exchange<br>(NYSE)        | 17.81                          | 0.00                    | 0.00                              | 38.15                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Citadel<br>Securities LLC<br>(CDRG)            | 16.73                          | 27.39                   | 25.00                             | 4.05                                      | 100.00                 | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 13.50                          | 23.94                   | 25.00                             | 1.73                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| VIRTU<br>Americas, LLC<br>(NITE)               | 12.55                          | 21.54                   | 12.50                             | 2.89                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Jane Street<br>Capital, LLC<br>(JNST)          | 8.50                           | 15.16                   | 12.50                             | 1.16                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)                  | 3.64                           | 6.65                    | 6.25                              | 0.29                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Cboe EDGX US<br>Equities<br>Exchange<br>(EDGX) | 3.10                           | 0.00                    | 0.00                              | 6.65                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Two Sigma<br>Securities, LLC<br>(SOHO)         | 2.70                           | 3.99                    | 6.25                              | 1.16                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Instinet<br>BlockCross<br>(BLKX)               | 0.81                           | 1.06                    | 12.50                             | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

Material Aspects: NASDAQ Execution Services, LLC (NSDQ): N/A

New York Stock Exchange (NYSE): N/A

Citadel Securities LLC (CDRG): N/A

G1 Execution Services, LLC (ETMM): N/A

VIRTU Americas, LLC (NITE): N/A

Jane Street Capital, LLC (JNST): N/A

HRT FINANCIAL LP (HRTF): N/A

Cboe EDGX US Equities Exchange (EDGX): N/A

Two Sigma Securities, LLC (SOHO): N/A

Instinet BlockCross (BLKX):

# N/A

# March 2025

# Non-S&P 500 Stocks

### Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 59.42  | 12.33  | 27.67  | 0.58  |

#### Venues

| Venue -<br>Non-directed<br>Order Flow          | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received for<br>Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Citadel<br>Securities LLC<br>(CDRG)            | 16.25                          | 26.88                   | 23.03                             | 4.32                                      | 60.00                  | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| NASDAQ<br>Execution<br>Services, LLC<br>(NSDQ) | 14.58                          | 0.00                    | 0.66                              | 31.73                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| G1 Execution<br>Services, LLC<br>(ETMM)        | 13.97                          | 26.88                   | 13.82                             | 2.16                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| New York<br>Stock<br>Exchange<br>(NYSE)        | 12.07                          | 0.00                    | 0.66                              | 26.25                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| VIRTU<br>Americas, LLC<br>(NITE)               | 9.49                           | 17.56                   | 14.47                             | 0.83                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Cboe EDGX US<br>Equities<br>Exchange<br>(EDGX) | 8.20                           | 0.00                    | 0.00                              | 17.94                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Instinet<br>BlockCross<br>(BLKX)               | 6.99                           | 8.60                    | 28.95                             | 0.00                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Jane Street<br>Capital, LLC<br>(JNST)          | 5.01                           | 8.96                    | 9.87                              | 0.17                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| HRT<br>FINANCIAL LP<br>(HRTF)                  | 3.26                           | 6.09                    | 2.63                              | 0.83                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Members<br>Exchange<br>(MEMX)                  | 3.19                           | 0.00                    | 0.00                              | 6.98                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

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N/A

| NASDAQ Execution Services, LLC (NSDQ):<br>N/A |
|---|
| G1 Execution Services, LLC (ETMM):<br>N/A     |
| New York Stock Exchange (NYSE):<br>N/A        |
| VIRTU Americas, LLC (NITE):<br>N/A            |
| Cboe EDGX US Equities Exchange (EDGX):<br>N/A |
| Instinet BlockCross (BLKX):<br>N/A            |
| Jane Street Capital, LLC (JNST):<br>N/A       |
| HRT FINANCIAL LP (HRTF):<br>N/A               |
| Members Exchange (MEMX):<br>N/A               |
|   |

# March 2025

# Options

## Summary

| Non-Directed Orders<br>as % of All Orders | Market Orders as % of<br>Non-Directed Orders | Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Non-Marketable Limit<br>Orders as % of Non-<br>Directed Orders | Other Orders as % of<br>Non-Directed Orders |
|---|--|--|--|---|
| 100.00                                    | 4.94   | 6.79   | 88.27  | 0.00  |

## Venues

| Venue -<br>Non-directed<br>Order Flow            | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received<br>for Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|--|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| Citadel Securities<br>LLC (CDRG)                 | 33.93                          | 37.50                   | 54.55                             | 32.21                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Dash Financial<br>Technologies<br>LLC (DASH)     | 32.74                          | 25.00                   | 9.09                              | 34.90                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Wolverine<br>Execution<br>Services LLC<br>(WEXX) | 23.21                          | 0.00                    | 9.09                              | 25.50                                     | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Morgan Stanley<br>& Company LLC<br>(MSCO)        | 4.76                           | 25.00                   | 9.09                              | 3.36                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |
| Susquehanna<br>Capital Group                     | 4.76                           | 12.50                   | 18.18                             | 3.36                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

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| Venue -<br>Non-directed<br>Order Flow | Non-<br>Directed<br>Orders (%) | Market<br>Orders<br>(%) | Marketable<br>Limit Orders<br>(%) | Non-<br>Marketable<br>Limit Orders<br>(%) | Other<br>Orders<br>(%) | Net Payment<br>Paid/Received for<br>Market<br>Orders(USD) | Net Payment Paid/<br>Received for Market<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(USD) | Net Payment Paid/<br>Received for Non-<br>Marketable Limit<br>Orders(cents per<br>hundred shares) | Net Payment<br>Paid/Received<br>for Other<br>Orders(USD) | Net Payment Paid/<br>Received for Other<br>Orders(cents per<br>hundred shares) |
|---------------------------------------|--------------------------------|-------------------------|-----------------------------------|---|------------------------|---|---|--|--|---|---|--|--|
| (SUSQ)                                |                                |                         |                                   |   |                        |   |   |  |  |   |   |  |  |
| Jane Street<br>Capital, LLC<br>(JNST) | 0.60                           | 0.00                    | 0.00                              | 0.67                                      | 0.00                   | 0   | 0.0000  | 0  | 0.0000   | 0   | 0.0000  | 0  | 0.0000   |

Dash Financial Technologies LLC (DASH): N/A

Wolverine Execution Services LLC (WEXX): N/A

Morgan Stanley & Company LLC (MSCO): N/A

Susquehanna Capital Group (SUSQ): N/A

Jane Street Capital, LLC (JNST): N/A