

Vanguard Brokerage Services - Held NMS Stocks and Options Order Routing Public Report

Generated on Wed Jan 31 2024 09:48:30 GMT-0600 (Central Standard Time)

4th Quarter, 2023

October 2023

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	53.88	5.37	37.22	3.53

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 (CDRG)	39.30	41.63	40.00	36.72	29.88	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	24.65	27.35	24.40	21.55	16.48	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas, LLC (NITE)	17.42	13.75	17.09	21.08	35.23	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	8.84	9.94	8.77	7.56	5.68	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	8.00	5.06	8.02	11.87	11.99	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	1.80	2.27	1.72	1.22	0.74	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

G1 Execution Services, LLC (ETMM):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Virtu Americas, LLC (NITE):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Jane Street Capital, LLC (JNST):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

UBS Securities LLC (UBSS):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Two Sigma Securities (SOHO):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

October 2023

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	57.54	6.50	32.93	3.04

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)	32.98	33.35	33.29	31.86	37.35	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities (CDRG)	26.13	24.69	27.83	28.28	26.46	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	22.28	24.52	20.92	19.25	15.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	8.90	6.39	8.76	12.84	14.05	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	7.26	7.98	6.88	6.25	5.40	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	2.45	3.07	2.32	1.53	1.06	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Virtu Americas, LLC (NITE):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

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Jane Street Capital, LLC (JNST):

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Two Sigma Securities (SOHO):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

October 2023

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	0.04	26.77	68.68	4.51

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 (CDRG)	60.66	65.85	63.45	59.68	58.88	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna International Group, LLP (SUSQ)	23.32	21.95	21.21	24.04	24.74	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Svc. (WEXX)	16.03	12.20	15.33	16.28	16.38	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Susquehanna International Group, LLP (SUSQ):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Wolverine Execution Svc. (WEXX):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

November 2023

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	55.76	5.13	34.98	4.13

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 (CDRG)	38.99	41.77	39.33	35.78	28.32	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	24.57	27.13	24.83	21.30	17.33	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas, LLC (NITE)	16.72	13.67	16.70	19.91	30.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	8.92	9.94	8.71	7.62	6.29	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	7.98	5.06	7.72	11.98	13.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	2.82	2.42	2.72	3.41	3.34	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

G1 Execution Services, LLC (ETMM):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Virtu Americas, LLC (NITE):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Jane Street Capital, LLC (JNST):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

UBS Securities LLC (UBSS):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Two Sigma Securities (SOHO):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

November 2023

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	59.09	6.29	30.83	3.80

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)	30.50	30.97	31.06	29.09	33.74	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities (CDRG)	26.40	25.38	27.91	28.05	26.37	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	21.96	24.12	20.60	18.88	15.71	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	9.01	9.91	8.89	7.66	6.28	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	8.89	6.54	8.63	12.79	14.17	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	3.23	3.07	2.90	3.54	3.73	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Virtu Americas, LLC (NITE):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Citadel Securities (CDRG):

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Jane Street Capital, LLC (JNST):

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UBS Securities LLC (UBSS):

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Two Sigma Securities (SOHO):

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November 2023

Options Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	0.02	24.94	71.17	3.87

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 (CDRG)	60.48	62.75	63.17	59.57	60.00	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna International Group, LLP (SUSQ)	23.40	25.49	21.45	24.11	22.89	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Svc. (WEXX)	16.12	11.76	15.38	16.32	17.11	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

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December 2023

S&P 500 Stocks Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	56.57	5.14	33.93	4.35

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 (CDRG)	36.40	38.37	37.22	33.97	28.69	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	23.46	25.49	23.43	20.82	17.67	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas, LLC (NITE)	17.44	15.01	17.06	20.13	28.52	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	10.31	11.66	10.16	8.54	6.86	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	8.00	5.13	7.79	12.07	13.73	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	4.39	4.34	4.34	4.47	4.54	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

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Virtu Americas, LLC (NITE):

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December 2023

Non-S&P 500 Stocks Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
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Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	60.25	6.30	29.39	4.05

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Virtu Americas, LLC (NITE)	28.10	28.44	27.80	27.03	31.35	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Citadel Securities (CDRG)	26.77	25.78	29.17	28.31	26.44	0	0.0000	0	0.0000	0	0.0000	0	0.0000
G1 Execution Services, LLC (ETMM)	22.30	24.34	20.77	19.22	16.50	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Jane Street Capital, LLC (JNST)	9.24	10.16	8.91	7.80	6.44	0	0.0000	0	0.0000	0	0.0000	0	0.0000
UBS Securities LLC (UBSS)	8.98	6.67	8.82	12.95	14.62	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Two Sigma Securities (SOHO)	4.62	4.60	4.53	4.69	4.65	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Virtu Americas, LLC (NITE):

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December 2023

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	0.07	23.97	71.83	4.13

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 (CDRG)	60.15	78.75	63.30	59.12	59.58	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Susquehanna International Group, LLP (SUSQ)	23.74	13.13	21.47	24.52	23.55	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wolverine Execution Svc. (WEXX)	16.11	8.13	15.23	16.36	16.87	0	0.0000	0	0.0000	0	0.0000	0	0.0000

Material Aspects:

Citadel Securities (CDRG):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Susquehanna International Group, LLP (SUSQ):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.

Wolverine Execution Svc. (WEXX):

Vanguard Brokerage Services does not receive any payment for order flow. Vanguard Brokerage Services does not receive any monetary payments, services, property, or other direct or indirect benefit that would result in remuneration, compensation, or consideration in return for the routing of customer orders.