

Charles Schwab - Held NMS Stocks and Options Order Routing Public Report

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2nd Quarter, 2022

April 2022

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
99.66	57.58	4.45	29.34	8.63

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	31.08	31.67	28.89	27.49	40.56	247,019.90	10.0000	37,818.53	10.0021	189,697.57	32.9990	44,004.34	10.1743
Virtu Americas, LLC	23.00	24.17	23.69	16.97	35.32	224,873.33	9.9893	33,983.92	10.0000	110,343.29	32.9963	28,535.13	8.9666
G1 Execution Services, LLC	20.10	17.41	20.42	27.65	12.24	151,548.77	10.0000	23,222.14	10.0000	206,575.77	32.8083	30,990.69	14.9633
JANEST	11.14	17.65	15.90	0.08	2.86	158,316.07	10.0056	20,855.04	10.0000	1,284.05	22.1044	9,218.05	10.0643
UBS Securities, LLC	10.69	6.30	7.48	20.74	7.45	55,213.28	9.9959	20,197.78	10.4383	138,104.16	31.5850	24,150.46	17.5929
Two Sigma Securities, LLC	2.92	1.99	2.21	5.36	1.19	19,380.08	10.0000	3,153.44	10.0016	37,531.89	31.4795	3,663.01	16.9888
The Nasdaq Stock Market	0.65	0.78	1.35	0.42	0.20	0.00	0.0000	-6,744.93	-29.8940	3,346.29	32.4801	-6,602.74	-10.3411
Members Exchange (MEMX)	0.23	0.00	0.02	0.74	0.09	0.00	0.0000	0.00	0.0000	4,083.66	35.0000	326.57	34.9999
Cboe EDGX Exchange, Inc.	0.19	0.04	0.03	0.55	0.10	-19.55	-0.6761	-1,435.13	-29.1498	3,032.78	30.8181	0.00	0.0000

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Virtu Americas, LLC:

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The Nasdaq Stock Market:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

Members Exchange (MEMX):

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0037 per share. Schwab is charged for removing liquidity from this venue up to \$0.0029. Schwab has an ownership interest in the Members Exchange.

Cboe EDGX Exchange, Inc.:

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April 2022

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
99.40	54.90	6.50	30.13	8.47

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	29.82	29.35	29.01	27.45	41.96	884,965.53	10.0000	274,694.27	10.0003	702,680.96	28.7179	135,254.97	8.1725
Virtu Americas, LLC	22.56	23.28	23.76	17.06	36.46	786,227.17	9.9964	235,477.78	9.9986	389,601.43	28.8189	86,719.92	6.9421
G1 Execution Services, LLC	20.94	18.78	20.14	27.74	11.34	549,118.43	10.0000	161,013.94	10.0000	755,775.64	28.5248	78,920.08	14.1664
JANEST	11.58	18.85	15.99	0.07	1.99	538,210.47	10.0078	138,594.90	10.0000	4,691.33	20.8149	18,493.18	10.0483
UBS Securities, LLC	11.03	6.80	7.40	20.63	6.99	199,970.36	9.9793	134,012.54	10.0919	488,052.91	27.9420	78,481.20	16.1629

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Two Sigma Securities, LLC	2.98	2.13	2.17	5.27	0.98	66,297.97	9.9997	21,534.60	10.0131	123,073.57	27.3512	8,163.75	13.9002
The Nasdaq Stock Market	0.65	0.78	1.27	0.42	0.15	0.00	0.0000	-23,187.61	-28.4391	10,616.19	29.4628	-22,247.84	-9.3221
Cboe EDGX Exchange, Inc.	0.23	0.02	0.25	0.63	0.07	-87.96	-0.7125	-7,929.39	-19.0330	10,322.21	21.7810	0.00	0.0000
Members Exchange (MEMX)	0.22	0.00	0.01	0.72	0.06	0.00	0.0000	0.00	0.0000	14,751.06	32.7000	495.08	32.6999

Material Aspects:

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April 2022

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
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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	13.54	5.97	51.21	29.28

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	28.96	26.64	28.13	28.07	31.76	1,127,588.48	57.3810	1,148,810.98	61.0071	1,346,628.42	53.5009	386,118.36	18.9126
Global Execution Brokers LP	24.77	26.44	26.83	26.72	20.18	1,153,692.19	57.3726	968,696.68	60.8927	1,571,724.18	61.5509	704,473.39	49.9178
Wolverine Execution Services, LLC	24.27	21.46	21.77	23.20	27.95	992,767.77	60.3885	893,627.95	65.4673	1,461,134.86	60.9736	1,079,927.21	51.3159
Dash/IMC Financial Markets	20.88	23.93	21.40	20.45	20.11	1,139,420.17	54.2978	691,593.48	54.5544	1,176,848.57	54.3502	893,416.04	48.6522
Morgan Stanley & Co., LLC	1.12	1.53	1.87	1.55	0.01	89,076.03	75.1373	104,624.56	83.6742	96,633.57	69.5876	1,110.61	106.6868

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Global Execution Brokers LP:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Wolverine Execution Services, LLC:

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Dash/IMC Financial Markets:

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Morgan Stanley & Co., LLC:

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May 2022

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
99.74	58.49	4.19	29.37	7.96

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	30.55	30.69	28.68	28.11	39.50	260,812.41	10.0000	38,886.82	10.0013	216,162.74	32.9999	43,325.23	10.6407
Virtu Americas, LLC	23.23	24.85	24.39	16.98	33.75	250,322.90	9.9887	37,909.16	10.0000	119,961.17	32.9957	28,237.25	9.1880
G1 Execution Services, LLC	20.45	17.58	20.11	28.09	13.55	164,744.89	10.0000	25,247.65	10.0000	227,959.17	32.8513	31,986.72	15.1780
JANEST	11.58	18.09	16.32	0.11	3.53	175,208.75	10.0092	23,148.97	10.0000	2,050.76	25.9705	10,976.99	10.1362
UBS Securities, LLC	9.88	5.61	6.90	19.42	7.63	48,076.16	9.9914	22,699.41	10.0532	146,692.89	31.5399	23,128.44	17.9324
Two Sigma Securities, LLC	2.97	1.99	2.25	5.44	1.43	20,552.95	10.0000	3,317.12	10.0063	43,167.54	31.2311	4,174.18	16.9575
The Nasdaq Stock Market	0.88	1.15	1.27	0.45	0.30	0.00	0.0000	-52.61	-0.1241	3,725.87	32.4999	0.00	0.0000
Members Exchange (MEMX)	0.25	0.00	0.03	0.80	0.14	0.00	0.0000	0.00	0.0000	5,082.90	35.0000	355.40	35.0003
Cboe EDGX Exchange, Inc.	0.22	0.05	0.04	0.61	0.17	-30.40	-0.3131	-4,749.21	-29.4502	5,244.61	30.6949	0.00	0.0000

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May 2022

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Venues

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CITADEL SECURITIES LLC	29.67	28.70	28.39	28.19	41.65	1,059,350.33	10.0000	322,711.49	10.0039	754,289.26	29.3069	160,344.80	8.5153
Virtu Americas, LLC	22.95	23.91	24.51	16.99	35.72	952,865.12	9.9975	271,563.34	9.9990	422,378.88	29.2009	101,473.30	7.2427
G1 Execution Services, LLC	20.92	18.70	19.99	28.01	11.80	665,415.91	10.0000	183,363.73	10.0000	815,709.73	29.2798	93,400.54	13.8498
JANEST	11.93	19.23	16.36	0.10	2.47	683,056.71	10.0068	169,360.64	10.0000	6,548.76	20.9135	24,391.43	10.0692
UBS Securities, LLC	10.02	5.99	6.82	19.24	6.82	212,182.64	9.9839	153,596.04	10.0654	508,374.02	28.2288	83,351.71	16.1303
Two Sigma Securities, LLC	3.00	2.11	2.32	5.40	1.12	81,093.05	9.9998	25,856.01	9.9976	139,817.57	28.2710	11,764.61	14.7661
The Nasdaq Stock Market	0.92	1.24	1.18	0.47	0.23	0.00	0.0000	-1,245.75	-0.8467	14,067.68	29.7427	-3,271.50	-0.8753
Cboe EDGX Exchange, Inc.	0.34	0.12	0.43	0.79	0.11	-338.57	-1.8965	-14,846.29	-15.2298	9,951.68	12.4478	0.00	0.0000
Members Exchange (MEMX)	0.25	0.00	0.02	0.81	0.09	0.00	0.0000	0.00	0.0000	17,844.88	32.8000	765.96	32.8002

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Virtu Americas, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

G1 Execution Services, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

JANEST:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

UBS Securities, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Two Sigma Securities, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

The Nasdaq Stock Market:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

Cboe EDGX Exchange, Inc.:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

Members Exchange (MEMX):

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0037 per share. Schwab is charged for removing liquidity from this venue up to \$0.0029. Schwab has an ownership interest in the Members Exchange.

May 2022

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	14.59	5.89	51.31	28.21

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	29.27	26.91	28.51	28.35	32.32	1,222,506.46	55.0674	1,145,944.22	58.8161	1,414,550.69	51.5823	329,313.79	15.5395
Global Execution Brokers LP	24.15	25.66	25.54	25.88	19.92	1,225,084.06	56.3526	935,176.12	60.6165	1,683,846.41	61.8896	728,177.18	49.8318
Wolverine Execution Services, LLC	24.12	21.58	22.05	23.53	26.94	1,100,421.71	59.2623	943,469.73	65.1826	1,598,996.86	60.7050	1,044,050.33	51.0321

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Dash/IMC Financial Markets	21.41	24.43	22.14	20.80	20.81	1,334,183.72	54.0272	753,371.75	55.0672	1,273,718.24	54.8491	934,379.26	48.5283
Morgan Stanley & Co., LLC	1.05	1.42	1.75	1.43	0.01	89,937.27	69.8884	122,215.58	79.1050	96,413.19	68.0308	1,115.10	73.7013

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Global Execution Brokers LP:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Wolverine Execution Services, LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Dash/IMC Financial Markets:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker. In connection with Dash's handling of Charles Schwab's retail equity option orders, Dash has arrangements with multiple unaffiliated liquidity providers, including IMC, designed to facilitate liquidity provision and price improvement opportunities. Pursuant to these arrangements, Dash routes Charles Schwab's retail equity option orders to exchanges and preferences the liquidity providers consistent with exchange sponsored programs which are described in the fee schedules of the options exchanges. It is noted that these liquidity providers provide Dash with remuneration in connection with Schwab's retail equity options orders, including reciprocal order flow consideration or payment per contract in return for Schwab retail equity options orders that Dash routes or directs.

Morgan Stanley & Co., LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

June 2022

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
99.74	60.00	4.24	28.05	7.71

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
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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	30.37	30.47	28.36	28.01	39.30	240,579.56	10.0000	35,341.77	10.0009	183,603.81	32.9999	38,432.37	10.4982
Virtu Americas, LLC	23.11	24.74	24.33	16.81	32.59	237,289.88	9.9903	34,130.26	9.9996	99,700.19	32.9858	24,315.01	9.3065
G1 Execution Services, LLC	20.25	17.52	19.25	27.94	14.05	151,743.02	10.0000	21,513.97	10.0000	189,651.44	32.7606	27,568.69	14.5019
JANEST	12.76	19.43	18.18	0.10	3.94	176,100.48	10.0077	22,318.13	10.0000	1,618.47	24.1935	10,417.08	10.0528
UBS Securities, LLC	10.01	5.72	7.01	20.11	8.28	39,838.71	9.9998	22,862.95	10.1221	123,559.39	31.4026	19,435.82	17.1786
Two Sigma Securities, LLC	2.81	1.86	2.05	5.32	1.43	17,885.92	9.9998	3,187.68	10.3750	33,458.96	31.5266	3,208.61	17.4286
The Nasdaq Stock Market	0.31	0.26	0.59	0.43	0.15	0.00	0.0000	-18.94	-0.1685	2,220.55	32.5000	0.00	0.0000
Members Exchange (MEMX)	0.22	0.00	0.02	0.73	0.13	0.00	0.0000	0.00	0.0000	3,589.44	35.0000	180.88	35.0000
Cboe EDGX Exchange, Inc.	0.18	0.01	0.21	0.54	0.13	-13.02	-0.5204	-1,327.81	-27.2384	3,712.97	30.6520	0.00	0.0000

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Virtu Americas, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

G1 Execution Services, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

JANEST:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

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Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Two Sigma Securities, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

The Nasdaq Stock Market:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

Members Exchange (MEMX):

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0037 per share. Schwab is charged for removing liquidity from this venue up to \$0.0029. Schwab has an ownership interest in the Members Exchange.

Cboe EDGX Exchange, Inc.:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

June 2022

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
99.39	55.37	6.39	29.25	8.98

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	29.50	28.52	27.77	27.95	41.77	954,824.81	10.0000	276,736.65	10.0101	669,505.79	28.3275	142,441.69	8.1353
Virtu Americas, LLC	22.75	23.80	23.93	16.69	35.16	879,153.28	9.9958	237,693.86	9.9998	363,397.05	28.4707	90,289.92	7.0316
G1 Execution Services, LLC	20.80	18.67	18.89	27.97	11.92	599,169.11	10.0000	157,247.84	10.0000	724,300.45	28.2820	84,247.22	13.4095
JANEST	12.86	20.66	18.28	0.09	2.53	672,392.66	10.0059	169,759.05	10.0000	5,321.48	15.5466	23,268.00	10.0580
UBS Securities, LLC	10.33	6.09	6.68	20.12	7.20	193,404.51	9.9889	131,514.01	10.1104	445,425.35	27.8509	73,285.73	15.5822
Two Sigma Securities, LLC	2.86	1.97	2.03	5.30	1.04	68,473.74	9.9989	20,893.82	10.0027	117,475.31	26.7425	8,889.19	13.2813
The Nasdaq Stock Market	0.38	0.27	1.19	0.48	0.15	0.00	0.0000	-9,236.44	-9.1271	9,057.22	24.3131	-12,989.22	-7.7987
Cboe EDGX Exchange, Inc.	0.30	0.03	1.21	0.66	0.16	-51.98	-0.8983	-25,071.84	-13.3074	-483.29	-0.4015	0.00	0.0000
Members Exchange (MEMX)	0.23	0.00	0.01	0.75	0.07	0.00	0.0000	0.00	0.0000	13,947.35	32.3000	486.53	32.2999

Material Aspects:

CITADEL SECURITIES LLC:

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G1 Execution Services, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

JANEST:

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Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.001 per share or less, for non-marketable orders the rate is \$0.0033 per share or less, and for extended hours orders the rate is \$0.0006 per share or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

The Nasdaq Stock Market:

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Cboe EDGX Exchange, Inc.:

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0033 per share. Schwab is charged for removing liquidity from this venue up to \$0.0030.

Members Exchange (MEMX):

For Non-Marketable Limit orders that added liquidity, and which subsequently executed, Schwab receives a credit up to \$0.0037 per share. Schwab is charged for removing liquidity from this venue up to \$0.0029. Schwab has an ownership interest in the Members Exchange.

June 2022

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	13.38	5.96	50.78	29.88

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	29.88	27.13	28.54	28.58	33.61	1,070,852.91	53.6368	1,067,239.11	58.7275	1,238,193.12	50.6566	198,303.36	9.1664
Global Execution Brokers LP	24.05	25.74	25.88	25.92	19.73	1,104,979.80	56.7868	910,764.77	61.1020	1,495,443.85	61.7683	657,389.06	49.7624
Wolverine Execution Services, LLC	23.97	21.91	22.16	23.55	25.97	986,705.83	58.9494	842,882.08	64.3333	1,450,283.79	60.6499	983,972.12	50.9165
Dash/IMC Financial Markets	21.00	23.79	21.59	20.38	20.69	1,222,076.66	54.4174	680,707.21	54.8424	1,114,179.19	54.7473	837,738.68	48.4384
Morgan Stanley & Co., LLC	1.10	1.43	1.84	1.57	0.00	81,903.88	72.0452	114,286.13	81.9543	82,161.99	70.3701	1,340.72	89.3218

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Global Execution Brokers LP:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Wolverine Execution Services, LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.

Dash/IMC Financial Markets:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker. In connection with Dash's handling of Charles Schwab's retail equity option orders, Dash has arrangements with multiple unaffiliated liquidity providers, including IMC, designed to facilitate liquidity provision and price improvement opportunities. Pursuant to these arrangements, Dash routes Charles Schwab's retail equity option orders to exchanges and preferences the liquidity providers consistent with exchange sponsored programs which are described in the fee schedules of the options exchanges. It is noted that these liquidity providers provide Dash with remuneration in connection with Schwab's retail equity options orders, including reciprocal order flow consideration or payment per contract in return for Schwab retail equity options orders that Dash routes or directs.

Morgan Stanley & Co., LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For non-complex marketable orders the payment rate is \$1.49 per contract or less (for classes in the penny interval program the rate is \$0.51 per contract or less). For complex orders the payment rate is \$0.93 per contract or less (for classes in the penny interval program the rate is \$0.43 per contract or less). For non-marketable orders the payment rate is \$0.98 per contract or less. All market makers pay the same rate to Schwab for any given order flow type. Schwab does not negotiate payment as a condition for sending more order flow to a market maker.