

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

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4th Quarter, 2021

October 2021

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
99.75	56.43	4.63	30.37	8.57

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	34.74	37.67	34.41	27.40	41.69	246,878.09	10.0000	43,833.54	10.0032	182,736.09	32.9973	35,908.22	9.8398
Virtu Americas, LLC	25.81	27.01	27.01	20.40	36.50	209,841.33	9.9917	38,946.78	10.0000	131,667.17	32.9953	22,293.80	8.4137
G1 Execution Services, LLC	16.32	13.95	15.57	22.45	10.58	104,830.72	10.0000	20,119.46	10.0000	160,579.71	32.8365	18,361.83	15.1841
UBS Securities, LLC	12.12	7.47	9.52	22.27	8.18	51,904.87	9.9993	30,159.48	10.0836	129,220.21	30.8154	22,018.26	17.2517
JANEST	7.45	12.00	10.58	0.19	1.50	84,657.63	10.0073	12,144.49	10.0000	1,996.92	28.7770	3,984.69	10.1787
Two Sigma Securities, LLC	2.92	1.89	2.34	5.39	1.31	17,866.86	9.9996	4,646.53	10.0000	33,156.66	30.6814	3,073.11	15.7019
Cboe EDGX Exchange, Inc.	0.33	0.02	0.50	0.94	0.13	-0.00	-0.0001	-638.85	-20.2386	4,900.31	30.1390	0.00	0.0000
The Nasdaq Stock Market	0.26	0.00	0.06	0.81	0.09	0.00	0.0000	-38.30	-30.0000	4,092.18	33.0000	-35.95	-6.2648
Members Exchange (MEMX)	0.05	0.00	0.01	0.15	0.02	0.00	0.0000	-7.17	-27.9969	698.99	36.9998	-94.95	-60.6864

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.

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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.

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.

October 2021

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
99.41	51.12	6.64	32.38	9.85

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CITADEL SECURITIES LLC	33.49	35.07	34.27	27.90	43.15	957,508.37	10.0000	311,325.14	10.0083	789,537.21	29.4735	149,960.96	7.6363
Virtu Americas, LLC	26.29	26.86	27.25	21.25	39.24	818,813.06	9.9928	263,937.26	9.9999	549,322.80	29.4241	107,819.13	6.8943
G1 Execution Services, LLC	17.15	15.44	16.18	22.57	8.83	453,582.74	10.0000	157,838.10	10.0000	718,246.53	29.6733	64,020.19	14.2095
UBS Securities, LLC	12.38	8.13	9.69	21.35	6.80	234,668.12	9.9996	170,987.53	10.0787	562,920.25	27.3335	79,467.47	15.9221
JANEST	7.17	12.44	9.99	0.19	0.85	297,437.95	10.0092	72,411.68	10.0000	8,364.29	27.2535	7,306.89	10.2076

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Two Sigma Securities, LLC	2.89	2.00	2.36	4.97	0.99	80,587.53	9.9997	34,571.95	9.9982	131,429.81	27.9905	9,256.11	14.7170
Cboe EDGX Exchange, Inc.	0.34	0.05	0.18	0.91	0.08	-0.10	-0.0019	-2,655.17	-21.1249	17,757.80	26.6063	0.00	0.0000
The Nasdaq Stock Market	0.25	0.00	0.06	0.74	0.06	0.00	0.0000	-314.32	-29.8862	15,088.95	31.2746	-315.36	-10.8850
Members Exchange (MEMX)	0.04	0.00	0.01	0.13	0.01	-0.01	-25.0000	-69.74	-28.0013	3,227.31	37.0000	-85.21	-60.6909

Material Aspects:

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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.

October 2021

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	13.80	6.69	50.00	29.51

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 LLC	29.59	30.49	31.18	28.86	30.06	1,555,637.01	59.8851	1,594,478.83	63.2466	1,606,204.89	57.4313	456,729.97	19.5582
Global Execution Brokers LP	25.17	27.14	27.15	26.45	21.65	565,033.52	61.2004	1,086,869.80	69.6938	1,619,087.61	61.1840	2,156,477.48	53.4426
Wolverine Execution Services, LLC	22.54	18.10	18.51	21.29	27.65	958,417.89	61.9511	946,399.27	66.6921	1,359,540.75	61.5234	1,377,427.46	49.9626
DASH/IMC	21.64	23.14	21.97	22.64	19.14	1,339,633.58	60.5453	1,069,726.52	65.1091	1,422,948.57	60.7641	1,075,302.05	47.9802
Morgan Stanley & Co., LLC	1.05	1.14	1.19	0.75	1.50	68,699.54	66.3187	70,241.81	64.0431	49,685.00	64.6949	75,847.87	54.0231

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:
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:
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November 2021

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
99.76	56.87	4.58	30.35	8.21

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	34.51	37.56	34.16	26.99	41.38	296,405.08	10.0000	48,065.27	10.0017	226,096.51	32.9998	38,723.30	9.3976
Virtu Americas, LLC	25.65	27.05	26.56	19.96	36.47	250,091.63	9.9910	40,797.06	10.0000	156,585.88	32.9938	26,099.46	8.3785
G1 Execution Services, LLC	17.12	13.99	16.66	24.53	11.64	123,817.00	10.0000	23,507.75	10.0000	200,381.86	32.7873	21,856.68	14.9292
UBS Securities, LLC	11.94	7.48	9.99	21.70	7.81	68,355.12	9.9600	30,328.69	10.0788	144,036.17	29.8583	23,771.40	16.4362
JANEST	7.52	12.01	9.93	0.37	1.55	101,777.17	10.0068	12,288.69	10.0000	3,743.38	29.7465	4,288.27	10.2144
Two Sigma Securities, LLC	2.78	1.90	2.43	4.97	1.00	21,553.04	9.9995	4,621.44	10.1772	38,026.99	31.2783	2,518.05	14.5590
The Nasdaq Stock Market	0.21	0.00	0.09	0.65	0.07	0.00	0.0000	-68.12	-30.0000	3,723.84	33.0000	-63.94	-9.8703
Members Exchange (MEMX)	0.15	0.00	0.07	0.47	0.05	0.00	0.0000	-70.33	-29.0009	3,197.31	37.0000	-83.51	-26.5280
Cboe EDGX Exchange, Inc.	0.12	0.01	0.11	0.37	0.04	0.00	0.0000	-1,717.98	-27.6849	2,176.35	24.3454	0.00	0.0000

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November 2021

Non-S&P 500 Stocks

Summary

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99.47	51.35	6.60	32.59	9.45

Venues

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CITADEL SECURITIES LLC	33.29	35.25	33.60	27.25	43.22	1,036,655.52	10.0000	330,895.05	10.0137	897,890.13	30.1316	151,226.63	7.6815
Virtu Americas, LLC	26.04	26.97	26.43	20.55	39.63	882,294.85	9.9901	285,263.36	9.9996	606,811.91	30.0806	109,192.31	6.7218
G1 Execution Services, LLC	17.45	14.86	16.24	24.17	9.22	483,540.61	10.0000	171,504.32	10.0000	846,866.57	30.1286	69,394.09	14.0097
UBS Securities, LLC	12.33	8.05	10.06	21.29	6.29	253,841.31	9.9541	189,669.88	10.0772	602,624.00	27.5086	88,179.32	15.9942
JANEST	7.38	12.78	9.66	0.33	0.79	333,027.16	10.0096	75,860.61	10.0000	14,269.53	28.6540	8,248.80	10.5438
Two Sigma Securities, LLC	2.82	2.03	2.43	4.76	0.74	84,689.21	9.9999	39,276.40	10.0013	141,048.40	28.8432	7,377.39	13.9419
Cboe EDGX Exchange, Inc.	0.31	0.07	1.43	0.55	0.03	0.00	0.0000	-10,655.86	-22.9731	8,001.53	19.8386	0.00	0.0000
The Nasdaq Stock Market	0.22	0.00	0.08	0.63	0.05	0.00	0.0000	-445.21	-29.4834	14,437.71	31.2653	-301.74	-8.7016
Members Exchange (MEMX)	0.16	0.00	0.05	0.46	0.03	0.00	0.0000	-485.16	-29.0003	12,806.90	37.0000	-239.80	-26.5268

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:
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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.

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.

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.

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.

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.

November 2021

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	14.34	6.32	51.34	28.01

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	30.11	30.86	31.82	29.90	29.73	1,917,194.81	62.8756	1,838,662.85	67.0252	2,060,147.97	60.1677	548,778.20	23.1881
Global Execution Brokers LP	26.17	28.03	28.35	27.80	21.75	655,173.27	64.2082	1,258,913.04	72.7371	1,944,645.85	62.5199	2,619,215.81	55.3678
Wolverine Execution Services, LLC	22.81	18.55	19.28	21.68	27.86	1,200,304.04	65.8369	1,105,539.93	70.8745	1,601,636.60	63.8604	1,469,265.69	49.9668

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	19.48	21.04	18.80	19.30	19.16	1,063,314.20	56.2574	676,335.41	54.9716	1,056,993.93	55.1443	961,017.08	48.0733
Morgan Stanley & Co., LLC	1.43	1.53	1.74	1.32	1.51	117,952.22	75.6807	157,835.13	81.1846	102,805.88	70.2711	66,485.73	53.6309

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.

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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.

December 2021

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
99.75	58.63	4.43	29.35	7.59

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	34.55	37.70	33.88	26.75	40.77	308,230.32	10.0000	49,301.86	10.0004	218,239.65	33.0000	38,665.15	10.0929
Virtu Americas, LLC	25.33	27.00	26.05	19.45	34.72	263,135.08	9.9922	42,126.76	10.0000	143,093.66	32.9998	26,097.85	9.0428
G1 Execution Services, LLC	17.04	13.88	16.58	24.58	12.52	132,683.61	10.0000	24,982.90	10.0000	200,190.13	32.8051	23,333.66	15.5378
UBS Securities, LLC	11.93	7.45	10.25	21.97	8.65	72,452.51	9.9926	31,239.60	10.1263	149,484.65	30.5902	24,216.51	16.9050
JANEST	7.74	12.00	9.83	0.43	1.88	107,101.30	10.0067	12,256.59	10.0000	4,398.13	30.6312	5,423.37	10.2513
Two Sigma Securities, LLC	2.82	1.88	2.50	5.15	1.23	22,682.87	9.9998	5,205.23	10.4622	42,126.14	31.7587	3,334.82	15.0165
Cboe EDGX Exchange, Inc.	0.24	0.09	0.72	0.51	0.08	-6.40	-0.0173	-7,353.11	-26.9871	3,563.73	16.8910	0.00	0.0000
Members Exchange (MEMX)	0.19	0.00	0.10	0.61	0.08	0.00	0.0000	0.00	0.0000	4,013.50	37.0000	7.24	1.4344
The Nasdaq Stock Market	0.17	0.00	0.09	0.55	0.07	0.00	0.0000	-52.08	-30.0000	3,091.02	33.0000	-55.15	-6.1801

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.

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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.

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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.

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.

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.

December 2021

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
99.43	53.20	6.60	31.87	8.33

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	33.15	35.36	33.93	26.76	42.92	1,055,437.53	10.0000	346,217.75	10.0109	788,270.37	29.7725	129,368.46	8.3597
Virtu Americas, LLC	25.37	26.85	26.43	19.51	37.55	893,453.61	9.9992	283,171.84	9.9996	524,072.34	30.2608	89,041.76	7.2714
G1 Execution Services, LLC	17.64	14.90	16.50	24.38	10.25	496,623.07	10.0000	173,908.22	10.0000	746,857.43	29.8236	70,589.82	14.6888
UBS Securities, LLC	12.53	8.02	10.29	21.95	7.02	257,715.64	9.9810	200,298.00	10.0596	570,128.20	27.6695	82,807.76	16.0781
JANEST	7.68	12.82	9.72	0.39	1.17	333,101.27	10.0094	73,544.73	10.0000	14,544.25	29.7676	8,963.16	10.4128
Two Sigma Securities, LLC	2.97	2.03	2.54	5.15	0.92	87,278.06	9.9993	41,846.98	10.0401	143,659.97	28.5007	8,719.25	13.8539
Cboe EDGX Exchange, Inc.	0.27	0.03	0.43	0.68	0.05	-1.00	-0.0142	-7,345.00	-19.9411	11,492.65	20.2210	0.00	0.0000
Members Exchange (MEMX)	0.21	0.00	0.08	0.62	0.06	0.00	0.0000	0.00	0.0000	15,657.04	37.0000	26.76	1.4333
The Nasdaq Stock Market	0.19	0.00	0.08	0.55	0.05	0.00	0.0000	-492.34	-29.5423	11,365.75	31.6960	-225.50	-6.4487

Material Aspects:

CITADEL SECURITIES LLC:

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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.

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.

December 2021

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	13.72	5.81	51.62	28.86

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	30.33	31.09	31.95	29.99	30.24	1,655,267.84	58.4984	1,592,145.33	63.4048	1,745,847.51	56.7776	513,608.73	24.1520
Global Execution Brokers LP	26.13	27.88	28.06	27.84	21.85	571,818.31	57.9117	942,240.41	61.4434	1,728,585.75	60.9897	2,348,385.36	56.3108
Wolverine Execution Services, LLC	22.23	18.02	18.62	21.04	27.10	999,372.83	61.3735	935,497.76	67.0176	1,472,133.67	61.1988	1,344,379.99	51.6925
DASH/IMC	19.85	21.53	19.68	19.80	19.17	1,256,457.79	55.2415	708,208.37	56.0408	1,316,757.41	54.8823	1,077,394.84	49.0350
Morgan Stanley & Co., LLC	1.46	1.49	1.69	1.33	1.64	109,857.12	72.9071	111,350.27	81.2367	88,942.14	68.6303	61,930.25	53.4130

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:

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.