

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

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4th Quarter, 2022

October 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
99.64	58.16	4.42	27.28	10.14

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	29.94	29.35	27.27	28.01	39.68	259,151.37	10.0000	39,525.39	10.0014	205,281.37	33.0000	55,894.75	10.4215
Virtu Americas, LLC	24.23	25.49	25.18	17.52	34.67	276,230.33	9.9926	35,457.86	10.0000	108,664.79	32.9807	39,468.16	8.8611
G1 Execution Services, LLC	19.99	17.68	18.98	27.75	12.74	166,948.99	10.0000	22,865.98	10.0000	231,707.00	32.8130	39,092.10	15.1713
JANEST	13.02	19.25	19.14	2.05	4.15	210,760.37	10.0066	30,080.27	10.0000	25,401.17	31.8711	18,640.42	10.6081
UBS Securities, LLC	8.81	5.51	6.46	16.95	6.83	45,452.64	9.9740	18,648.85	10.2461	131,384.14	31.6190	23,987.02	17.2946

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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October 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
99.46	55.47	6.56	27.87	10.11

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	29.14	27.72	26.96	27.96	41.62	918,339.71	10.0000	259,834.93	10.0050	672,287.91	27.7981	151,552.20	8.1949
Virtu Americas, LLC	23.80	24.72	24.81	17.44	35.67	860,058.11	9.9961	214,005.62	9.9993	326,721.04	28.2527	97,086.72	7.0834
G1 Execution Services, LLC	20.60	18.72	18.89	27.95	11.72	584,988.95	10.0000	151,767.38	10.0000	720,566.56	27.7133	87,251.32	13.5402
JANEST	13.41	20.37	19.48	2.01	2.73	734,816.88	10.0056	198,383.77	10.0000	75,897.43	26.6072	28,089.79	10.5523
UBS Securities, LLC	8.94	5.70	5.94	16.88	6.75	173,982.95	9.9660	107,176.75	10.1380	422,684.67	27.6015	69,749.58	15.2499

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.

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October 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	11.78	5.57	47.91	34.74

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	32.13	31.37	31.97	31.19	33.70	1,357,670.36	51.2182	1,325,853.74	53.5272	1,234,768.58	47.2054	23,685.80	0.8810
Wolverine Execution Services, LLC	24.79	23.48	23.88	24.64	25.60	1,255,758.97	57.8827	1,006,259.86	62.0686	1,518,325.35	59.5526	1,029,655.63	50.1195
Global Execution Brokers LP	23.14	25.32	25.52	24.98	19.47	1,297,772.44	55.5172	934,960.10	54.5253	1,450,119.06	60.3895	695,472.09	48.4562
Dash/IMC Financial Markets	18.68	17.73	16.29	17.33	21.23	1,062,402.88	53.6955	534,441.06	49.8987	1,001,904.98	53.5975	931,373.54	47.6801

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.

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.

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.

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.

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	59.19	4.34	27.26	9.21

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	29.58	29.15	27.11	27.79	38.81	239,255.18	10.0000	36,031.31	10.0032	194,495.26	32.9993	47,541.48	10.2992
Virtu Americas, LLC	24.05	25.56	25.16	17.52	33.19	243,483.47	9.9925	33,095.90	10.0000	100,268.04	32.9973	32,116.68	9.1422
G1 Execution Services, LLC	20.27	17.77	19.24	27.99	13.98	154,385.33	10.0000	22,389.07	10.0000	207,754.12	32.7589	36,546.54	14.8548
JANEST	13.06	19.10	18.95	1.97	4.35	190,846.08	10.0075	29,047.04	10.0000	23,037.08	31.9525	16,667.24	10.6085
UBS Securities, LLC	8.91	5.64	6.44	16.85	7.56	39,954.74	10.0004	18,556.14	10.2040	118,777.72	31.8240	20,024.44	16.5388

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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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	55.03	6.65	28.35	9.97

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	27.46	27.20	27.89	41.41	861,416.11	10.0000	277,328.82	10.0246	679,799.84	26.7647	149,337.19	8.0695
Virtu Americas, LLC	23.88	24.78	25.05	17.55	36.14	818,086.53	9.9563	231,670.72	9.9981	342,677.81	27.4268	97,668.40	6.9897
G1 Execution Services, LLC	20.67	18.78	18.94	27.95	11.60	555,676.82	10.0000	156,004.58	10.0000	735,605.00	27.3626	91,357.12	14.1914
JANEST	13.25	20.23	19.55	1.93	2.68	690,461.89	10.0054	210,473.14	10.0000	79,737.19	25.1806	29,378.42	10.7168
UBS Securities, LLC	9.08	5.88	6.13	16.84	6.65	155,894.14	10.0000	108,644.96	10.0620	423,983.24	27.0239	72,929.10	15.7576

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November 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	11.56	5.61	47.92	34.91

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	32.17	31.65	32.27	31.56	33.16	1,296,077.38	50.9839	1,410,277.30	54.4786	1,287,744.46	48.4173	64,549.60	2.5232
Wolverine Execution Services, LLC	24.93	23.69	23.99	24.73	25.77	1,180,724.38	58.3746	1,070,215.09	62.9638	1,562,316.43	60.4330	1,039,966.58	50.7226
Global Execution Brokers LP	23.18	25.34	25.59	24.96	19.64	1,225,053.49	55.9352	972,551.17	54.5986	1,461,691.27	61.5848	693,417.97	49.2596
Dash/IMC Financial Markets	18.34	17.09	15.63	16.72	21.42	901,915.64	54.1197	538,407.48	49.6881	970,576.97	53.7966	916,946.71	48.3553

Material Aspects:

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Global Execution Brokers LP:
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December 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
99.72	61.67	4.28	26.18	7.87

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 LLC	29.72	29.49	27.30	27.91	38.82	233,938.66	10.0000	35,763.61	10.0006	173,545.65	33.0000	36,815.67	10.1747
Virtu Americas, LLC	23.95	25.52	25.21	17.43	32.68	240,675.85	9.9918	34,050.79	10.0000	88,458.90	32.9927	24,590.41	8.9056
G1 Execution Services, LLC	20.11	17.63	18.94	27.92	14.20	151,156.32	10.0000	22,031.94	10.0000	180,898.63	32.7405	27,911.79	14.5394
JANEST	13.23	18.77	18.77	1.92	4.48	181,386.33	10.0102	27,563.49	10.0000	18,252.93	31.6510	12,003.18	10.4394
UBS Securities, LLC	8.84	5.76	6.69	16.80	7.68	42,886.04	10.0001	19,927.72	10.0980	103,094.86	31.4985	18,820.20	16.7215

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.

December 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
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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
99.41	57.73	6.79	27.05	8.44

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	28.81	27.55	26.83	27.93	41.80	937,961.45	10.0000	291,369.71	10.0016	624,272.40	25.5154	133,566.25	7.6004
Virtu Americas, LLC	23.69	24.75	24.64	17.44	35.74	881,664.48	9.9645	239,965.70	9.9976	322,328.09	25.7076	86,331.57	6.5454
G1 Execution Services, LLC	20.63	18.77	18.63	27.93	11.59	604,978.85	10.0000	166,935.97	10.0000	678,430.75	25.3602	77,438.82	13.8363
JANEST	13.47	19.88	18.73	1.92	2.49	734,364.09	10.0037	212,487.58	10.0000	73,550.61	24.1885	22,881.73	10.6564
UBS Securities, LLC	9.05	6.08	6.33	16.79	6.72	181,880.43	9.9999	119,668.68	10.0974	405,888.31	25.8852	64,941.36	15.0907

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.

December 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	11.68	5.65	45.85	36.82

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	32.21	32.12	32.33	31.78	32.75	1,275,048.37	51.2539	1,313,899.21	52.9115	1,081,722.87	45.6188	46,169.99	1.9488
Wolverine Execution Services, LLC	24.75	23.39	23.80	24.41	25.74	1,139,702.50	57.7742	1,026,713.27	62.7207	1,386,920.62	60.0289	944,271.00	49.9441
Global Execution Brokers LP	23.21	25.22	25.73	24.95	20.00	1,197,185.40	55.5980	940,298.76	54.2699	1,298,133.72	61.1825	675,251.03	49.4208
Dash/IMC Financial Markets	18.54	17.09	15.67	16.90	21.48	925,356.87	53.7606	533,474.48	50.2938	874,942.11	53.7763	867,918.58	48.1663

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.

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.

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.

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.