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

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4th Quarter, 2024

October 2024

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
99.96	31.32	9.60	46.57	12.51

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	29.46	34.71	37.00	27.37	18.28	920,475.64	9.9764	325,563.38	9.1079	678,115.36	26.3120	250,219.32	11.3679
JANEST	21.28	12.57	16.23	30.66	12.05	339,564.16	9.9861	107,521.78	9.4066	1,095,198.18	29.4178	173,012.18	16.1251
Virtu Americas, LLC	19.54	26.70	25.50	12.65	22.69	700,541.52	9.9948	238,108.32	9.1544	382,785.35	28.5237	214,869.73	10.5432
G1 Execution Services, LLC	12.34	17.38	12.78	6.98	19.32	469,790.63	9.9765	124,329.58	9.9878	365,842.62	32.8266	182,722.62	11.9666
Two Sigma Securities, LLC	7.89	2.90	3.03	9.70	17.36	79,382.71	10.0000	26,780.65	10.0049	494,688.46	31.8359	125,647.63	13.3897
UBS Securities, LLC	5.84	1.91	2.26	8.97	6.76	47,387.88	9.9765	40,576.37	8.0434	307,764.17	24.6238	53,228.13	15.3040

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.0006 per share or less, for non-marketable orders the rate is \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

JANEST:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.000 per share or less, for non-marketable orders the rate is \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Virtu Americas, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.000 per share or less, for non-marketable orders the rate is \$0.003 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 a payment as a condition for sending more order flow to a market maker nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

G1 Execution Services, LLC:

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Two Sigma Securities, LLC:

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UBS Securities. LLC:

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October 2024

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
99.92	30.86	14.04	46.68	8.43

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	30.60	34.08	37.78	28.73	16.27	5,107,329.20	8.1529	2,497,593.20	7.8725	2,105,335.86	17.5715	462,129.32	9.6272
JANEST	21.50	13.09	15.92	30.63	11.01	2,386,143.00	9.9955	911,122.29	9.1271	2,983,566.92	20.6870	242,006.97	12.0697
Virtu Americas, LLC	20.03	26.07	26.51	13.53	23.14	4,754,018.28	9.9999	1,993,595.48	8.7521	1,128,204.23	19.2829	466,404.04	9.8189
G1 Execution Services, LLC	11.93	17.98	12.08	6.47	19.85	3,291,824.78	9.9929	1,015,588.44	9.9981	1,029,625.49	25.8033	405,964.39	11.0889
Two Sigma Securities, LLC	7.20	3.03	2.81	9.06	19.55	553,468.29	10.0000	198,603.19	10.0014	1,291,140.33	24.7323	262,386.40	11.0207
UBS Securities, LLC	5.41	2.01	2.06	8.38	7.04	344,184.64	9.9931	184,929.77	8.8261	846,496.80	18.9015	75,949.76	12.1004

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.0006 per share or less, for non-marketable orders the rate is \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

JANES¹

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Virtu Americas, LLC:

G1 Execution Services, LLC:

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Two Sigma Securities, 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. 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

October 2024

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
99.84	6.75	9.28	46.38	37.59

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)
CITADEL SECURITIES LLC	41.12	43.17	43.08	38.40	43.63	4,437,144.96	38.5908	8,103,428.35	36.6624	8,633,643.35	48.0219	4,145,809.57	24.5347
Dash/IMC Financial Markets	27.86	25.49	26.17	37.06	17.35	2,651,407.24	38.6132	4,545,014.99	35.5948	9,367,134.77	49.4862	1,585,838.80	24.1077
Wolverine Execution Services, LLC	18.18	5.09	5.13	10.56	33.16	504,453.42	38.5779	881,665.93	35.7399	2,563,097.73	50.0779	3,564,268.54	21.2505
Global Execution Brokers LP	6.71	12.11	11.85	6.50	4.72	1,228,752.37	38.4903	2,164,702.73	35.5025	1,715,528.77	47.0508	436,028.79	24.5576
Morgan Stanley & Co., LLC	6.13	14.14	13.77	7.48	1.14	1,628,081.70	41.0008	3,067,363.09	40.7835	1,786,034.20	52.1871	194,061.61	40.6639

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For non-marketable orders the payment rate is \$0.61 per contract or less. For 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Dash/IMC Financial Markets:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Wolverine Execution Services, LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For non-marketable orders the payment rate is \$0.61 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Global Execution Brokers LF

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Morgan Stanley & Co., LLC:

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November 2024

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
99.97	32.58	10.37	45.10	11.96

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	29.80	34.64	36.99	27.55	18.87	848,745.89	9.9726	309,784.56	9.0143	664,029.59	25.8737	211,888.49	11.3114
JANEST	20.65	12.55	16.11	29.77	12.24	309,306.34	9.9852	101,556.94	9.3299	1,059,910.27	29.1065	141,241.59	15.8031
Virtu Americas, LLC	19.86	26.64	25.57	12.90	22.70	642,079.87	9.9939	226,123.95	9.0646	374,881.80	28.0306	185,001.28	10.4766
G1 Execution Services, LLC	12.44	17.46	12.63	7.05	18.93	434,674.67	9.9709	116,321.09	9.9834	354,892.78	32.8145	154,748.02	11.9353
Two Sigma Securities, LLC	7.70	2.90	3.09	9.77	17.00	73,791.88	10.0000	25,142.89	10.0014	467,217.37	31.7987	105,479.16	13.0103
UBS Securities, LLC	5.82	1.95	2.35	9.17	6.76	43,675.88	9.9722	39,679.74	8.1148	304,360.59	24.7953	43,522.79	15.2240

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.0006 per share or less, for non-marketable orders the rate is \$0.0039 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 a value of the same rate to Schwab negotiate a tradeoff between payment and price improvement/execution quality.

JANEST:

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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

G1 Execution Services, LLC:

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November 2024

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
99.92	31.68	14.75	45.30	8.27

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	30.95	34.09	38.14	28.93	17.17	5,952,341.12	6.2213	2,793,714.75	7.1372	2,136,443.95	16.4217	488,525.20	9.3428
JANEST	20.86	13.03	15.80	29.74	11.21	3,623,681.75	9.9998	1,056,449.80	9.0687	3,080,170.43	19.8885	239,223.97	12.2203
Virtu Americas, LLC	20.31	26.07	26.57	13.72	23.18	7,237,216.68	9.9990	2,404,331.16	8.7171	1,176,415.64	18.1952	480,352.15	9.7962
G1 Execution Services, LLC	12.05	18.02	11.78	6.60	19.50	5,056,533.46	9.9959	1,112,446.89	9.9982	1,078,579.62	25.0857	412,175.80	11.0559
Two Sigma Securities, LLC	7.09	3.03	2.80	9.16	18.96	835,427.58	10.0000	214,928.09	10.0008	1,349,213.75	23.7797	277,726.39	10.8673
UBS Securities, LLC	5.37	2.02	2.08	8.49	6.93	516,218.44	9.9953	222,092.10	9.0304	864,883.34	17.5713	80,174.78	12.0782

Material Aspects:

CITADEL SECURITIES LLC:

JANEST

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Two Sigma Securities, LLC:

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November 2024

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	
99.86	6.67	9.12	46.69	37.53	

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CITADEL SECURITIES LLC	41.02	42.86	42.92	38.37	43.53	4,200,969.42	39.3126	8,029,694.06	37.5792	8,669,770.87	48.5712	4,433,064.34	27.4585
Dash/IMC Financial Markets	28.23	25.91	26.49	37.55	17.46	2,574,744.88	39.4191	4,507,371.66	36.4198	9,531,191.56	49.9834	1,721,488.20	27.3020
Wolverine Execution Services, LLC	18.24	5.09	5.11	10.55	33.33	480,599.86	39.4645	870,387.58	36.7007	2,573,828.43	50.8025	4,393,118.02	26.9645
Global Execution Brokers LP	6.67	12.04	11.76	6.53	4.66	1,170,211.53	39.5306	2,179,400.02	37.4512	1,712,032.47	48.1272	457,913.92	27.5786
Morgan Stanley & Co., LLC	5.85	14.10	13.72	7.01	1.02	1,542,595.86	41.5812	2,974,552.09	41.3508	1,603,686.59	52.4268	185,980.93	41.0353

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

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Wolverine Execution Services, LLC

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Global Execution Brokers LF

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For non-marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. F

Morgan Stanley & Co., LLC:

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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
I	99.97	33.85	10.07	44.47	11.61

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	28.95	38.52	37.48	22.78	17.24	918,156.49	9.9758	314,082.16	9.2428	519,912.04	26.5636	190,942.22	11.0353
JANEST	21.79	7.97	14.28	35.88	14.57	201,315.40	9.9885	83,032.17	9.0645	1,208,770.73	29.8160	136,235.68	16.9323
Virtu Americas, LLC	17.63	22.11	23.05	12.50	19.53	517,248.32	9.9915	193,576.49	9.0553	340,049.75	28.0014	143,995.98	10.3405
G1 Execution Services, LLC	12.47	14.76	11.28	8.65	21.50	369,928.38	9.9762	103,096.58	9.9876	410,651.18	32.7815	146,039.88	11.9878
Two Sigma Securities, LLC	8.24	7.45	5.97	7.23	16.40	188,525.39	10.0000	56,052.24	10.0013	353,830.42	31.9729	102,797.87	11.7651
Hudson River Trading (Hrt)	5.47	7.48	5.62	4.37	3.68	183,235.37	9.8002	51,334.99	9.9800	225,215.24	32.3772	50,678.23	13.8266

Material Aspects:

CITADEL SECURITIES LLC:

JANEST

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.0001 per share or less, for non-marketable orders the rate is \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Virtu Americas, LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.000 per share or less, for non-marketable orders the rate is \$0.003 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 a payment as a condition for sending more order flow to a market maker nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

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 \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Two Sigma Securities, LLC:

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Hudson River Trading (Hrt):

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 \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

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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		
99.93	31.55	15.05	45.57	7.83		

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	30.17	37.94	38.79	24.56	14.95	7,674,445.94	6.9825	3,293,792.47	7.5139	2,255,287.95	17.8805	691,938.27	9.4432
JANEST	22.46	8.33	15.06	36.09	14.30	2,380,843.17	9.9999	1,030,317.18	8.6190	4,230,012.14	20.7334	308,572.58	12.4664
Virtu Americas, LLC	17.64	21.35	23.51	12.75	19.94	5,915,017.49	10.0000	2,395,635.94	8.6778	1,186,480.08	18.7508	520,568.96	9.6978
G1 Execution Services, LLC	11.74	15.29	10.23	7.91	22.63	4,436,248.64	9.9953	1,080,218.93	9.9986	1,426,319.70	25.5851	500,675.99	10.9578
Two Sigma Securities, LLC	7.78	7.81	5.45	6.78	17.92	2,259,276.11	9.9999	563,512.28	9.9980	1,146,825.29	24.4986	345,042.13	10.4497
Hudson River Trading (Hrt)	5.30	7.78	5.14	4.05	2.93	1,577,757.67	6.9778	433,274.57	8.0903	797,529.36	24.8371	146,562.18	11.6328

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for listed equity order flow routed to market makers. For marketable orders the payment rate is \$0.0006 per share or less, for non-marketable orders the rate is \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

JANEST

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Virtu Americas, 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 \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

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 \$0.003 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Hudson River Trading (Hrt):

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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
99.84	6.86	9.18	46.23	37.73

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	39.77	40.08	40.29	39.89	39.45	4,627,792.67	46.0327	8,437,673.00	43.3000	9,904,032.36	50.4572	4,597,781.16	30.2599
Dash/IMC Financial Markets	27.01	25.85	26.33	33.41	19.54	3,026,794.16	46.2108	5,185,092.48	42.6380	9,059,464.91	51.1657	2,120,705.93	29.5795
Wolverine Execution Services, LLC	21.29	6.01	6.08	13.41	37.44	670,368.51	46.0652	1,229,338.40	42.9274	3,424,338.06	52.1761	5,268,730.16	28.4922
Global Execution Brokers LP	8.70	16.87	16.46	11.14	2.33	1,927,338.69	46.1224	3,400,418.92	43.0139	3,044,740.51	50.5917	266,676.37	32.8971

Material Aspects:

CITADEL SECURITIES LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For non-marketable orders the payment rate is \$0.61 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Dash/IMC Financial Markets:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Wolverine Execution Services, LLC:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For non-marketable orders the payment rate is \$0.61 per contract or less. For 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 nor does Schwab negotiate a tradeoff between payment and price improvement/execution quality.

Global Execution Brokers LP:

Schwab receives payment for multi-listed option order flow routed to market makers. For complex orders the payment rate is \$0.60 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.67 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For marketable orders the payment rate is \$0.61 per contract or less. For m