

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

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1st Quarter, 2020

January 2020

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	53.25	5.64	31.76	9.34

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 Execution Services	30.76	31.87	31.05	27.01	37.04	153,528.70	9.2765	46,181.19	11.0745	203,749.59	29.6318	28,015.48	9.1368
Virtu Americas, LLC	30.16	30.04	29.27	27.58	40.13	135,819.24	8.2557	35,677.64	7.0207	136,477.89	28.9771	37,249.34	8.5240
G1 Execution Services, LLC	22.47	22.90	23.88	24.23	13.24	114,788.46	9.0000	26,263.34	9.0000	149,516.39	30.0000		
UBS Securities, LLC	14.45	14.06	14.66	16.82	8.45	48,399.09	8.9975	23,714.14	5.7597	77,206.21	25.4743	1,212.79	9.0000
Two Sigma Securities, LLC	1.08	1.04	1.12	1.26	0.64	6,555.82	9.4734	1,590.19	9.4753	6,125.30	26.2687	484.06	9.4851
CBOE BZX Exchange	0.62	0.08	0.02	1.70	0.34	-2,831.93	-26.3829	-4,091.06	-29.3301	4,990.82	12.6035		
Nasdaq Execution Services, LLC	0.46	0.00	0.01	1.39	0.15	0.00	0.0000	-8.54	-23.0562	85.54	0.6518	-0.20	-0.0320

Material Aspects:

Citadel Execution Services:

Citadel is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Virtu Americas, LLC:

VIRTU is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

G1 Execution Services, LLC:

G1X is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

UBS Securities, LLC:
UBS is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Two Sigma Securities, LLC:
Two Sigma is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for orders executed through the firm, which average \$.0009 per share.

CBOE BZX Exchange:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0032 per share. Schwab is charged for removing liquidity from this venue up to \$.00265.

Nasdaq Execution Services, LLC:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0033 per share. Schwab is charged for removing liquidity from this venue up to \$.0030.

January 2020

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	50.44	7.83	32.31	9.42

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 Execution Services	30.51	31.18	30.96	27.23	37.82	539,428.27	8.4707	244,467.51	8.3802	561,750.26	23.8131	59,066.74	5.1299
Virtu Americas, LLC	30.14	29.94	29.51	27.63	40.34	499,260.70	8.1756	185,455.86	7.5215	503,521.45	25.8399	136,699.40	8.0446
G1 Execution Services, LLC	22.64	23.43	23.35	24.13	12.68	391,457.59	9.0000	150,121.03	9.0000	541,130.48	30.0000		
UBS Securities, LLC	14.54	14.34	14.27	16.77	8.17	126,143.61	8.0579	140,679.10	6.4965	289,870.86	21.1983	5,878.25	7.9020
Two Sigma Securities, LLC	1.08	1.06	1.09	1.25	0.61	20,169.38	8.3703	8,760.06	7.7012	22,485.07	22.2021	1,964.53	8.4886
CBOE BZX Exchange	0.61	0.04	0.39	1.64	0.25	-4,434.32	-26.3791	-12,729.85	-28.1879	22,824.95	21.7401		
Nasdaq Execution Services, LLC	0.48	0.00	0.43	1.34	0.14	0.00	0.0000	-3,150.50	-23.0453	31,570.29	34.1276	-9.10	-0.0321

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January 2020

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
99.99	14.84	7.46	48.02	29.67

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 Execution Services	32.10	28.82	29.60	29.46	38.65	605,158.00	34.3214	538,903.10	34.3571	688,743.80	36.1817	546,847.20	30.2888
Wolverine Execution Services, LLC	22.15	18.14	17.75	18.07	31.86	491,761.90	35.8843	450,841.39	35.9110	1,044,108.09	40.1598	59,267.23	37.2410
Morgan Stanley & Co., LLC	21.13	22.71	22.28	21.36	19.69	521,685.00	34.5088	523,778.00	36.8021	543,470.00	35.4380	443,004.00	35.6632
Global Execution Brokers LP	18.62	21.61	21.89	23.00	9.22	63,746.58	32.3475	134,221.03	33.2225	750,094.30	35.6964	805,340.67	35.2551
Citigroup Global Markets Inc.	4.83	6.85	6.84	6.68	0.31	87,954.52	35.8734	162,141.86	33.4482	168,401.40	36.0991	7,383.20	37.0011
Dash Financial Technologies, LLC	1.17	1.87	1.64	1.44	0.27	42,986.70	32.8974	28,197.10	33.8139	44,316.50	34.2057	5,618.60	31.4486

Material Aspects:

Citadel Execution Services:
As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Wolverine Execution Services, LLC:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Morgan Stanley & Co., LLC:

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Global Execution Brokers LP:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Citigroup Global Markets Inc.:

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Dash Financial Technologies, LLC:

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February 2020

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	53.69	5.55	32.69	8.07

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 Execution Services	30.68	31.52	31.31	27.42	37.85	175,402.87	9.2883	46,441.00	10.2127	242,438.97	29.4574	26,946.77	6.9248
Virtu Americas, LLC	29.34	29.77	28.91	26.18	39.63	150,348.88	8.3323	36,751.55	7.7180	135,392.43	29.3837	40,562.79	8.7642
G1 Execution Services, LLC	22.85	23.14	23.81	24.66	12.93	129,443.09	9.0000	29,014.67	9.0000	154,279.92	30.0000		
UBS Securities, LLC	14.94	14.45	14.86	17.36	8.47	56,432.21	8.7091	21,265.82	4.3159	85,839.54	25.0785	1,490.98	9.0000
Two Sigma Securities, LLC	1.11	1.07	1.06	1.30	0.62	6,426.20	9.0000	1,497.00	9.0000	6,477.97	25.7871	895.91	9.0000
Nasdaq Execution Services, LLC	0.55	0.00	0.02	1.63	0.17	0.00	0.0000	-7.52	-3.1297	7,780.50	31.2599	-4.92	-0.4344
CBOE BZX Exchange	0.54	0.06	0.03	1.46	0.33	-3,461.18	-26.3104	-4,751.01	-29.3996	6,404.38	19.0667		

Material Aspects:

Citadel Execution Services:
Citadel is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

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VIRTU is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

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G1X is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

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Two Sigma Securities, LLC:
Two Sigma is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for orders executed through the firm, which average \$.0009 per share.

Nasdaq Execution Services, LLC:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0033 per share. Schwab is charged for removing liquidity from this venue up to \$.0030.

CBOE BZX Exchange:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0032 per share. Schwab is charged for removing liquidity from this venue up to \$.00265.

February 2020

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
100.00	50.47	7.24	32.54	9.75

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 Execution Services	30.61	31.04	31.20	27.51	38.31	622,899.33	8.6510	230,962.80	8.0143	645,746.21	24.8482	64,780.72	4.6102
Virtu Americas, LLC	29.73	29.75	29.41	26.37	41.12	572,272.51	8.3700	190,254.73	7.5840	518,471.16	26.2531	138,090.12	7.4478
G1 Execution Services, LLC	22.70	23.45	23.63	24.57	11.96	446,538.92	9.0000	146,690.60	9.0000	568,628.97	30.0000		
UBS Securities, LLC	14.80	14.62	14.64	17.23	7.75	150,255.70	8.2570	148,882.97	6.2295	317,390.12	21.0567	6,522.94	8.4114
Two Sigma Securities, LLC	1.09	1.09	1.08	1.26	0.55	23,944.30	8.4429	7,991.41	7.1802	25,080.70	22.5657	2,342.32	8.4823
Nasdaq Execution Services, LLC	0.54	0.00	0.03	1.62	0.12	0.00	0.0000	-4.00	-3.1326	28,708.77	31.2599	-5.47	-0.4346

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)
CBOE BZX Exchange	0.52	0.05	0.03	1.44	0.18	-3,722.72	-26.4982	-14,120.16	-29.3877	18,839.48	20.3367		

Material Aspects:

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

CBOE BZX Exchange:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$0.0032 per share. Schwab is charged for removing liquidity from this venue up to \$0.00265.

February 2020

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
99.97	14.97	6.88	49.89	28.26

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 Execution Services	32.26	29.13	29.92	29.75	38.91	656,215.10	34.7922	539,003.20	35.6571	752,079.70	36.6129	547,055.60	31.3589
Wolverine Execution Services, LLC	22.53	18.67	18.36	18.69	32.37	550,778.93	36.6919	475,097.57	37.4635	1,169,710.16	40.7882	59,641.79	37.6893
Morgan Stanley & Co., LLC	19.47	20.74	20.43	19.52	18.47	518,134.10	34.9905	480,550.60	36.7211	549,581.60	35.8745	415,530.60	36.2715

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Global Execution Brokers LP	19.20	22.15	22.33	23.30	9.65	75,306.00	33.9384	147,489.52	33.4465	856,715.10	35.9476	861,483.47	35.9139
Citigroup Global Markets Inc.	5.13	7.14	6.99	7.01	0.28	94,256.10	36.0854	168,041.69	34.6374	190,955.43	36.8229	6,491.20	37.0926
Dash Financial Technologies, LLC	1.41	2.17	1.96	1.72	0.32	52,734.30	32.7817	34,973.00	32.9729	52,789.40	34.9242	6,468.20	31.0941

Material Aspects:

Citadel Execution Services:

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Wolverine Execution Services, LLC:

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March 2020

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	51.44	5.27	36.29	7.00

Venues

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Citadel Execution Services	30.97	31.52	31.64	28.60	38.65	464,127.33	9.0729	90,638.79	9.4592	547,382.45	29.6103	71,581.37	6.8715

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Virtu Americas, LLC	27.38	28.10	26.33	24.25	39.06	400,077.62	8.6016	76,344.00	8.3866	304,960.29	29.6780	84,385.93	8.6294
G1 Execution Services, LLC	23.46	24.11	24.71	24.48	12.55	356,811.55	9.0000	68,911.30	9.0000	356,453.06	30.0000		
UBS Securities, LLC	15.49	14.73	15.56	17.94	8.38	182,912.32	9.4174	51,870.45	4.9355	246,447.50	25.3303	3,699.11	8.9986
Two Sigma Securities, LLC	1.66	1.50	1.70	2.03	0.90	23,275.63	9.0000	4,768.35	9.0000	23,147.58	25.6211	2,105.31	9.0000
Nasdaq Execution Services, LLC	0.57	0.00	0.03	1.52	0.21	0.00	0.0000	-10.60	-2.1189	20,279.31	31.1865	-28.17	-0.9342
CBOE BZX Exchange	0.47	0.04	0.03	1.18	0.25	-3,751.26	-26.9715	-8,518.46	-29.5077	11,240.03	15.8735		

Material Aspects:

Citadel Execution Services:
Citadel is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Virtu Americas, LLC:
VIRTU is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

G1 Execution Services, LLC:
G1X is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

UBS Securities, LLC:
UBS is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Two Sigma Securities, LLC:
Two Sigma is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for orders executed through the firm, which average \$.0009 per share.

Nasdaq Execution Services, LLC:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0033 per share. Schwab is charged for removing liquidity from this venue up to \$.0030.

CBOE BZX Exchange:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0032 per share. Schwab is charged for removing liquidity from this venue up to \$.00265.

March 2020

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	51.88	6.85	32.90	8.37

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 Execution Services	31.23	31.31	31.63	28.68	40.48	1,377,124.82	8.3354	386,909.47	7.1449	1,263,822.15	23.6685	117,979.41	4.3146
Virtu Americas, LLC	27.89	28.07	26.85	24.76	39.88	1,227,788.00	8.1832	324,203.51	7.2278	943,788.29	25.4530	205,639.97	6.2210
G1 Execution Services, LLC	23.15	24.22	24.42	24.25	11.14	1,011,244.69	9.0000	261,825.88	9.0000	1,042,159.68	30.0000		
UBS Securities, LLC	15.17	14.85	15.34	17.62	7.44	380,178.71	8.0262	332,869.74	6.1879	678,401.15	21.2331	11,691.89	8.1871
Two Sigma Securities, LLC	1.62	1.53	1.69	1.96	0.82	65,458.27	7.8404	19,744.94	7.1227	65,189.54	21.0464	6,279.32	8.1948
Nasdaq Execution Services, LLC	0.53	0.00	0.03	1.56	0.12	0.00	0.0000	-13.15	-2.1194	51,270.90	31.1865	-22.11	-0.9340
CBOE BZX Exchange	0.41	0.03	0.03	1.18	0.11	-3,206.58	-26.8176	-16,707.21	-29.1895	29,045.87	18.6505		

Material Aspects:

Citadel Execution Services:
Citadel is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Virtu Americas, LLC:
VIRTU is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

G1 Execution Services, LLC:
G1X is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which average \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

UBS Securities, LLC:
UBS is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for marketable orders executed through the firm, which averaged \$.0009 per share. Non-Marketable Limit orders that added liquidity and which subsequently executed received payment up to \$.0030 per share.

Two Sigma Securities, LLC:
Two Sigma is a market maker in certain exchange listed and OTC equity securities. Schwab receives payments for orders executed through the firm, which average \$.0009 per share.

Nasdaq Execution Services, LLC:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0033 per share. Schwab is charged for removing liquidity from this venue up to \$.0030.

CBOE BZX Exchange:
For Non-Marketable Limit orders that added liquidity and which subsequently executed, Schwab received a credit up to \$.0032 per share. Schwab is charged for removing liquidity from this venue up to \$.00265.

March 2020

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	12.00	4.24	61.39	22.37

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 Execution Services	31.62	29.03	29.65	29.67	38.76	612,359.60	34.1372	453,785.30	35.5311	1,152,478.30	35.4494	479,140.80	32.5325
Global Execution Brokers LP	23.17	22.98	23.26	24.08	20.75	78,724.55	32.7704	162,587.99	32.1158	1,446,451.18	34.1168	878,810.85	34.3478
Wolverine Execution Services, LLC	19.62	18.44	18.24	18.70	23.01	521,618.27	36.0667	382,426.82	36.6906	1,396,554.34	38.6333	48,724.38	37.6215
Morgan Stanley & Co., LLC	17.53	18.62	18.36	17.63	16.51	454,510.60	34.3224	331,098.30	34.6982	902,690.10	35.3686	357,417.80	35.8453
Citigroup Global Markets Inc.	5.05	6.57	6.46	6.33	0.46	73,872.72	34.8182	136,149.52	32.6001	258,426.46	35.5545	5,720.10	35.6971
Dash Financial Technologies, LLC	3.01	4.36	4.03	3.60	0.50	100,777.00	32.8987	67,557.10	33.4585	180,027.00	34.0033	10,630.90	31.1766

Material Aspects:

Citadel Execution Services:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Global Execution Brokers LP:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Wolverine Execution Services, LLC:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Morgan Stanley & Co., LLC:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Citigroup Global Markets Inc.:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.

Dash Financial Technologies, LLC:

As detailed above, Charles Schwab receives payment for routing listed option order flow to market makers. The rates paid vary by the characteristics of the order (e.g., size of order, price of security, marketability). Any difference in average net per share payments paid by market makers is due to the various type of orders and respective quantities they handle.