

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

Generated on Fri May 29 2020 16:17:18 GMT-0400 (Eastern Daylight Time)

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	0.0928	46,181.19	0.1107	203,749.59	0.2963	28,015.48	0.0914
Virtu Americas, LLC	30.16	30.04	29.27	27.58	40.13	135,819.24	0.0826	35,677.64	0.0702	136,477.89	0.2898	37,249.34	0.0852
G1 Execution Services, LLC	22.47	22.90	23.88	24.23	13.24	114,788.46	0.0900	26,263.34	0.0900	149,516.39	0.3000		
UBS Securities, LLC	14.45	14.06	14.66	16.82	8.45	48,399.09	0.0900	23,714.14	0.0576	77,206.21	0.2547	1,212.79	0.0900
Two Sigma Securities, LLC	1.08	1.04	1.12	1.26	0.64	6,555.82	0.0947	1,590.19	0.0948	6,125.30	0.2627	484.06	0.0949
Bats Trading Inc.	0.62	0.08	0.02	1.70	0.34	-2,831.93	-0.2638	-4,091.06	-0.2933	4,990.82	0.1260		
Nasdaq OMX	0.46	0.00	0.01	1.39	0.15	0.00	0.0000	-8.54	-0.2306	85.54	0.0065	-0.20	-0.0003

### 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 \$0.0030 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 \$0.0030 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.

**Bats Trading Inc.:**

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.

**Nasdaq OMX:**

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.

## 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	0.0847	244,467.51	0.0838	561,750.26	0.2381	59,066.74	0.0513
Virtu Americas, LLC	30.14	29.94	29.51	27.63	40.34	499,260.70	0.0818	185,455.86	0.0752	503,521.45	0.2584	136,699.40	0.0804
G1 Execution Services, LLC	22.64	23.43	23.35	24.13	12.68	391,457.59	0.0900	150,121.03	0.0900	541,130.48	0.3000		
UBS Securities, LLC	14.54	14.34	14.27	16.77	8.17	126,143.61	0.0806	140,679.10	0.0650	289,870.86	0.2120	5,878.25	0.0790
Two Sigma Securities, LLC	1.08	1.06	1.09	1.25	0.61	20,169.38	0.0837	8,760.06	0.0770	22,485.07	0.2220	1,964.53	0.0849
Bats Trading Inc.	0.61	0.04	0.39	1.64	0.25	-4,434.32	-0.2638	-12,729.85	-0.2819	22,824.95	0.2174		
Nasdaq OMX	0.48	0.00	0.43	1.34	0.14	0.00	0.0000	-3,150.50	-0.2305	31,570.29	0.3413	-9.10	-0.0003

**Material Aspects:**

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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 \$0.0030 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.

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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 OMX:**

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

### 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	0.3432	538,903.10	0.3436	688,743.80	0.3618	546,847.20	0.3029
Wolverine Execution Services, LLC	22.15	18.14	17.75	18.07	31.86	491,761.90	0.3588	450,841.39	0.3591	1,044,108.09	0.4016	59,267.23	0.3724
Morgan Stanley & Co., LLC	21.13	22.71	22.28	21.36	19.69	521,685.00	0.3451	523,778.00	0.3680	543,470.00	0.3544	443,004.00	0.3566
Global Execution Brokers LP	18.62	21.61	21.89	23.00	9.22	63,746.58	0.3235	134,221.03	0.3322	750,094.30	0.3570	805,340.67	0.3526
Citigroup	4.83	6.85	6.84	6.68	0.31	87,954.52	0.3587	162,141.86	0.3345	168,401.40	0.3610	7,383.20	0.3700
Dash Financial Technologies, LLC	1.17	1.87	1.64	1.44	0.27	42,986.70	0.3290	28,197.10	0.3381	44,316.50	0.3421	5,618.60	0.3145

#### 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:**

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.

**Citigroup:**

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.

## 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	0.0929	46,441.00	0.1021	242,438.97	0.2946	26,946.77	0.0692
Virtu Americas, LLC	29.34	29.77	28.91	26.18	39.63	150,348.88	0.0833	36,751.55	0.0772	135,392.43	0.2938	40,562.79	0.0876
G1 Execution Services, LLC	22.85	23.14	23.81	24.66	12.93	129,443.09	0.0900	29,014.67	0.0900	154,279.92	0.3000		
UBS Securities, LLC	14.94	14.45	14.86	17.36	8.47	56,432.21	0.0871	21,265.82	0.0432	85,839.54	0.2508	1,490.98	0.0900
Two Sigma Securities, LLC	1.11	1.07	1.06	1.30	0.62	6,426.20	0.0900	1,497.00	0.0900	6,477.97	0.2579	895.91	0.0900
Nasdaq OMX	0.55	0.00	0.02	1.63	0.17	0.00	0.0000	-7.52	-0.0313	7,780.50	0.3126	-4.92	-0.0043
Bats Trading Inc.	0.54	0.06	0.03	1.46	0.33	-3,461.18	-0.2631	-4,751.01	-0.2940	6,404.38	0.1907		

## 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.

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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 OMX:

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.

### Bats Trading Inc.:

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.

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## 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	0.0865	230,962.80	0.0801	645,746.21	0.2485	64,780.72	0.0461
Virtu Americas, LLC	29.73	29.75	29.41	26.37	41.12	572,272.51	0.0837	190,254.73	0.0758	518,471.16	0.2625	138,090.12	0.0745
G1 Execution Services, LLC	22.70	23.45	23.63	24.57	11.96	446,538.92	0.0900	146,690.60	0.0900	568,628.97	0.3000		
UBS Securities, LLC	14.80	14.62	14.64	17.23	7.75	150,255.70	0.0826	148,882.97	0.0623	317,390.12	0.2106	6,522.94	0.0841
Two Sigma Securities, LLC	1.09	1.09	1.08	1.26	0.55	23,944.30	0.0844	7,991.41	0.0718	25,080.70	0.2257	2,342.32	0.0848

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)
Nasdaq OMX	0.54	0.00	0.03	1.62	0.12	0.00	0.0000	-4.00	-0.0313	28,708.77	0.3126	-5.47	-0.0043
Bats Trading Inc.	0.52	0.05	0.03	1.44	0.18	-3,722.72	-0.2650	-14,120.16	-0.2939	18,839.48	0.2034		

### 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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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.

#### Bats Trading Inc.:

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

### 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	0.3479	539,003.20	0.3566	752,079.70	0.3661	547,055.60	0.3136
Wolverine Execution Services, LLC	22.53	18.67	18.36	18.69	32.37	550,778.93	0.3669	475,097.57	0.3746	1,169,710.16	0.4079	59,641.79	0.3769

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)
Morgan Stanley & Co., LLC	19.47	20.74	20.43	19.52	18.47	518,134.10	0.3499	480,550.60	0.3672	549,581.60	0.3587	415,530.60	0.3627
Global Execution Brokers LP	19.20	22.15	22.33	23.30	9.65	75,306.00	0.3394	147,489.52	0.3345	856,715.10	0.3595	861,483.47	0.3591
Citigroup	5.13	7.14	6.99	7.01	0.28	94,256.10	0.3609	168,041.69	0.3464	190,955.43	0.3682	6,491.20	0.3709
Dash Financial Technologies, LLC	1.41	2.17	1.96	1.72	0.32	52,734.30	0.3278	34,973.00	0.3297	52,789.40	0.3492	6,468.20	0.3109

### 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:

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:

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#### Citigroup:

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#### 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.

## 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

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	30.97	31.52	31.64	28.60	38.65	464,127.33	0.0907	90,638.79	0.0946	547,382.45	0.2961	71,581.37	0.0687

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)
Services													
Virtu Americas, LLC	27.38	28.10	26.33	24.25	39.06	400,077.62	0.0860	76,344.00	0.0839	304,960.29	0.2968	84,385.93	0.0863
G1 Execution Services, LLC	23.46	24.11	24.71	24.48	12.55	356,811.55	0.0900	68,911.30	0.0900	356,453.06	0.3000		
UBS Securities, LLC	15.49	14.73	15.56	17.94	8.38	182,912.32	0.0942	51,870.45	0.0494	246,447.50	0.2533	3,699.11	0.0900
Two Sigma Securities, LLC	1.66	1.50	1.70	2.03	0.90	23,275.63	0.0900	4,768.35	0.0900	23,147.58	0.2562	2,105.31	0.0900
Nasdaq OMX	0.57	0.00	0.03	1.52	0.21	0.00	0.0000	-10.60	-0.0212	20,279.31	0.3119	-28.17	-0.0093
Bats Trading Inc.	0.47	0.04	0.03	1.18	0.25	-3,751.26	-0.2697	-8,518.46	-0.2951	11,240.03	0.1587		

#### 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 OMX:

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.

##### Bats Trading Inc.:

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.

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## 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
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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	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	0.0834	386,909.47	0.0714	1,263,822.15	0.2367	117,979.41	0.0431
Virtu Americas, LLC	27.89	28.07	26.85	24.76	39.88	1,227,788.00	0.0818	324,203.51	0.0723	943,788.29	0.2545	205,639.97	0.0622
G1 Execution Services, LLC	23.15	24.22	24.42	24.25	11.14	1,011,244.69	0.0900	261,825.88	0.0900	1,042,159.68	0.3000		
UBS Securities, LLC	15.17	14.85	15.34	17.62	7.44	380,178.71	0.0803	332,869.74	0.0619	678,401.15	0.2123	11,691.89	0.0819
Two Sigma Securities, LLC	1.62	1.53	1.69	1.96	0.82	65,458.27	0.0784	19,744.94	0.0712	65,189.54	0.2105	6,279.32	0.0819
Nasdaq OMX	0.53	0.00	0.03	1.56	0.12	0.00	0.0000	-13.15	-0.0212	51,270.90	0.3119	-22.11	-0.0093
Bats Trading Inc.	0.41	0.03	0.03	1.18	0.11	-3,206.58	-0.2682	-16,707.21	-0.2919	29,045.87	0.1865		

## 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 OMX:

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.

### Bats Trading Inc.:

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.

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## 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	0.3414	453,785.30	0.3553	1,152,478.30	0.3545	479,140.80	0.3253
Global Execution Brokers LP	23.17	22.98	23.26	24.08	20.75	78,724.55	0.3277	162,587.99	0.3212	1,446,451.18	0.3412	878,810.85	0.3435
Wolverine Execution Services, LLC	19.62	18.44	18.24	18.70	23.01	521,618.27	0.3607	382,426.82	0.3669	1,396,554.34	0.3863	48,724.38	0.3762
Morgan Stanley & Co., LLC	17.53	18.62	18.36	17.63	16.51	454,510.60	0.3432	331,098.30	0.3470	902,690.10	0.3537	357,417.80	0.3585
Citigroup	5.05	6.57	6.46	6.33	0.46	73,872.72	0.3482	136,149.52	0.3260	258,426.46	0.3555	5,720.10	0.3570
Dash Financial Technologies, LLC	3.01	4.36	4.03	3.60	0.50	100,777.00	0.3290	67,557.10	0.3346	180,027.00	0.3400	10,630.90	0.3118

### 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:

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.