

# Ally Invest Securities LLC - 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	25.80	6.28	51.97	15.94

### 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	48.06	49.15	46.37	47.08	50.18	10,922.38	22.0000	2,691.81	22.4850	5,261.11	29.9763	3,826.80	20.4649
Virtu Americas, LLC	39.80	39.07	41.34	40.66	37.54	7,995.10	21.8308	3,968.38	21.4564	5,670.86	28.5970	2,970.54	24.1306
Wolverine Securities LLC	11.97	11.78	12.29	12.26	11.21	2,754.32	20.0000	919.80	20.1423	1,445.00	29.4869	222.76	20.0000
NYSE Arca, Inc.	0.12	0.00	0.00	0.00	0.75	0.00	0.0000	0.00	0.0000	0.00	0.0000	11.43	10.4603
Nasdaq Execution Services, LLC	0.05	0.00	0.00	0.00	0.31	0.00	0.0000	0.00	0.0000	0.00	0.0000	12.36	15.4461

### Material Aspects:

#### Citadel Execution Services:

Ally Invest Securities LLC received payment for certain equity orders routed to Citadel in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0021 per executed share.

#### Virtu Americas, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

#### Wolverine Securities LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Wolverine in Q1 2020. Payment was based on order type and size. Payments received averaged less than \$0.0024 per executed share.

#### NYSE Arca, Inc.:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Arca in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged less than \$0.0029 per share and payments averaged less than \$0.0020 per share.

#### Nasdaq Execution Services, LLC:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Nasdaq in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged \$0.0030 per share and payments averaged less than \$0.0020 per share.

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	22.54	8.69	54.82	13.95

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	47.82	48.88	45.93	46.72	51.60	51,149.57	21.9603	23,451.61	14.5922	33,984.09	24.0851	13,596.06	16.3798
Virtu Americas, LLC	39.97	39.47	41.09	40.89	36.49	43,940.76	22.1385	30,262.99	21.3895	40,395.91	28.3319	16,028.11	25.3685
Wolverine Securities LLC	12.03	11.65	12.98	12.40	10.63	12,042.94	20.0000	10,311.96	20.1333	15,448.70	29.2898	1,130.38	20.0000
NYSE Arca, Inc.	0.13	0.00	0.00	0.00	0.96	0.00	0.0000	0.00	0.0000	0.00	0.0000	49.80	10.4549
Nasdaq Execution Services, LLC	0.04	0.00	0.00	0.00	0.32	0.00	0.0000	0.00	0.0000	0.00	0.0000	60.81	15.4407
Apex Clearing Corporation	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Citadel Execution Services:  
Ally Invest Securities LLC received payment for certain equity orders routed to Citadel in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0021 per executed share.

Virtu Americas, LLC:  
Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

Wolverine Securities LLC:  
Ally Invest Securities LLC received payment for certain equity orders routed to Wolverine in Q1 2020. Payment was based on order type and size. Payments received averaged less than \$0.0024 per executed share.

NYSE Arca, Inc.:  
Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Arca in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged less than \$0.0029 per share and payments averaged less than \$0.0020 per share.

Nasdaq Execution Services, LLC:  
Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Nasdaq in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged \$0.0030 per share and payments averaged less than \$0.0020 per share.

Apex Clearing Corporation:  
Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to its clearing firm, Apex Clearing Corp., pursuant to an agreement between the parties. Fees averaged less than \$0.0003 per share and payment averaged less than \$0.0007 per share in Q1 2020.

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
100.00	4.96	7.79	45.70	41.55

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	41.31	34.14	36.30	40.77	43.70	26,038.00	49.4474	69,373.00	49.5706	73,018.00	49.2699	52,203.50	46.9993
Wolverine Execution Services, LLC	31.68	32.40	28.41	33.37	30.35	21,507.50	43.1843	42,716.95	45.8051	64,983.65	50.2157	35,059.22	49.4140
Global Execution Brokers LP	27.01	33.46	35.29	25.85	25.95	68,287.79	52.6802	26,104.51	48.0755	77,520.61	54.4444	39,071.00	48.8400

Material Aspects:

Citadel Execution Services:  
Ally Invest Securities LLC received payment for certain option orders routed to Citadel in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.49 per executed contract.

Wolverine Execution Services, LLC:  
Ally Invest Securities LLC received payment for certain option orders routed to Wolverine in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.48 per executed contract.

Global Execution Brokers LP:  
Ally Invest Securities LLC received payment for certain option orders routed to Global Execution Brokers in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.50 per executed contract.

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	29.37	7.12	50.40	13.12

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	48.82	49.51	47.51	47.58	52.74	8,522.71	22.0000	2,374.92	22.3353	5,025.93	29.9884	2,954.85	20.0594

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	40.63	39.95	41.61	41.75	37.33	6,889.92	22.0498	3,171.80	20.8705	5,863.08	28.0642	2,419.14	23.6115
Wolverine Securities LLC	9.28	9.05	9.28	9.53	8.82	1,445.72	20.0000	513.20	20.0991	1,286.59	29.5434	168.49	20.0000
G1 Execution Services, LLC	1.21	1.49	1.61	1.13	0.68	383.51	20.0001	269.15	20.0001	257.02	30.0001	39.02	27.3115
NYSE Arca, Inc.	0.05	0.00	0.00	0.00	0.41	0.00	0.0000	0.00	0.0000	0.00	0.0000	9.10	8.2130
Nasdaq Execution Services, LLC	0.00	0.00	0.00	0.00	0.02	0.00	0.0000	0.00	0.0000	0.00	0.0000	1.86	9.8101

### Material Aspects:

Citadel Execution Services:

Ally Invest Securities LLC received payment for certain equity orders routed to Citadel in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0021 per executed share.

Virtu Americas, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

Wolverine Securities LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Wolverine in Q1 2020. Payment was based on order type and size. Payments received averaged less than \$0.0024 per executed share.

G1 Execution Services, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to G1 Execution Services in Q1 2020. Payment was variable based on order type and size. Payments received averaged less than \$0.0021 per executed share.

NYSE Arca, Inc.:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Arca in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged less than \$0.0029 per share and payments averaged less than \$0.0020 per share.

Nasdaq Execution Services, LLC:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Nasdaq in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged \$0.0030 per share and payments averaged less than \$0.0020 per share.

## 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	24.86	8.80	53.49	12.84

#### Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
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Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Citadel Execution Services	49.01	49.77	47.07	47.48	55.20	51,989.95	21.9785	22,343.82	15.0944	37,970.90	25.5172	13,742.38	15.8758
Virtu Americas, LLC	40.74	40.22	42.36	41.98	35.46	45,172.85	22.5314	26,959.59	21.2972	38,674.41	28.6339	13,686.64	24.2935
Wolverine Securities LLC	9.28	9.05	9.54	9.69	7.80	8,774.93	20.0000	6,854.45	20.3589	11,470.93	29.3080	674.46	20.0000
G1 Execution Services, LLC	0.85	0.95	1.03	0.84	0.55	1,191.11	20.0000	607.70	15.5775	780.31	26.8876	312.78	26.3987
NYSE Arca, Inc.	0.11	0.00	0.00	0.00	0.84	0.00	0.0000	0.00	0.0000	0.00	0.0000	47.48	8.2101
Nasdaq Execution Services, LLC	0.02	0.00	0.00	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	26.25	9.7984
Apex Clearing Corporation	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	-0.67	-2.0609	2.98	1.8011	0.00	0.0000

## Material Aspects:

Citadel Execution Services:

Ally Invest Securities LLC received payment for certain equity orders routed to Citadel in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0021 per executed share.

Virtu Americas, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

Wolverine Securities LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Wolverine in Q1 2020. Payment was based on order type and size. Payments received averaged less than \$0.0024 per executed share.

G1 Execution Services, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to G1 Execution Services in Q1 2020. Payment was variable based on order type and size. Payments received averaged less than \$0.0021 per executed share.

NYSE Arca, Inc.:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Arca in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged less than \$0.0029 per share and payments averaged less than \$0.0020 per share.

Nasdaq Execution Services, LLC:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Nasdaq in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged \$0.0030 per share and payments averaged less than \$0.0020 per share.

Apex Clearing Corporation:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to its clearing firm, Apex Clearing Corp., pursuant to an agreement between the parties. Fees averaged less than \$0.0003 per share and payment averaged less than \$0.0007 per share in Q1 2020.

## 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
100.00	5.44	7.90	47.76	38.90

## 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	38.18	30.34	32.93	37.64	41.01	20,580.50	48.5997	62,253.00	49.4676	74,800.50	48.9981	43,679.50	47.2114
Global Execution Brokers LP	32.97	40.87	41.56	32.01	31.30	86,394.81	50.8932	24,161.62	46.4084	98,148.99	52.4569	42,961.56	49.9745
Wolverine Execution Services, LLC	28.85	28.79	25.51	30.34	27.70	19,832.15	45.8240	39,500.35	48.1307	63,204.40	52.7750	32,384.80	50.7742

#### Material Aspects:

Citadel Execution Services:

Ally Invest Securities LLC received payment for certain option orders routed to Citadel in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.49 per executed contract.

Global Execution Brokers LP:

Ally Invest Securities LLC received payment for certain option orders routed to Global Execution Brokers in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.50 per executed contract.

Wolverine Execution Services, LLC:

Ally Invest Securities LLC received payment for certain option orders routed to Wolverine in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.48 per executed contract.

## 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	29.80	8.98	55.73	5.50

#### 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	50.57	51.04	50.05	49.47	59.87	27,248.48	22.0000	9,140.44	22.0053	21,854.91	29.9991	8,692.86	21.1055
Virtu Americas, LLC	36.30	36.27	35.47	37.06	30.07	16,812.53	21.6031	7,580.13	20.6276	17,030.04	29.2497	5,317.01	23.2012
G1 Execution Services, LLC	11.05	10.50	12.27	11.49	7.69	5,834.75	20.0000	2,346.22	20.0000	7,009.79	30.0000	1,898.70	24.9583
Wolverine Securities LLC	2.06	2.19	2.21	1.98	1.98	987.97	20.0000	373.50	20.0603	978.73	29.5690	88.65	20.0000
NYSE Arca, Inc.	0.02	0.00	0.00	0.00	0.39	0.00	0.0000	0.00	0.0000	0.00	0.0000	5.92	11.8709
Apex Clearing Corporation	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.01	20.6667	9.59	25.2368

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 Execution Services, LLC	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	1.57	18.7799

### Material Aspects:

Citadel Execution Services:

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Virtu Americas, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

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Ally Invest Securities LLC received payment for certain equity orders routed to G1 Execution Services in Q1 2020. Payment was variable based on order type and size. Payments received averaged less than \$0.0021 per executed share.

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Nasdaq Execution Services, LLC:

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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
100.00	26.73	10.21	55.58	7.48

#### 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	50.95	51.38	50.17	49.51	61.15	89,467.60	21.9688	36,878.08	12.4177	71,422.89	23.0857	18,745.34	13.8669
Virtu Americas, LLC	36.65	36.78	36.42	37.56	29.70	67,150.75	22.1843	46,435.52	21.1717	67,713.15	27.8153	18,522.94	22.3602
G1 Execution Services, LLC	9.85	9.22	10.78	10.44	6.44	13,887.67	19.9929	9,308.75	15.5279	17,317.50	22.2658	3,429.71	22.1663
Wolverine Securities LLC	2.51	2.62	2.63	2.48	2.15	3,686.69	20.0000	3,582.06	20.1020	4,720.05	29.4291	349.16	20.0000

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)
NYSE Arca, Inc.	0.04	0.00	0.00	0.00	0.55	0.00	0.0000	0.00	0.0000	0.00	0.0000	55.26	11.8790
Nasdaq Execution Services, LLC	0.00	0.00	0.00	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	26.13	18.7608
Apex Clearing Corporation	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	1.49	19.9200	0.00	0.0000

### Material Aspects:

Citadel Execution Services:

Ally Invest Securities LLC received payment for certain equity orders routed to Citadel in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0021 per executed share.

Virtu Americas, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Virtu in Q1 2020. Payment was based on order type, size and time of day. Payments received averaged less than \$0.0024 per executed share.

G1 Execution Services, LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to G1 Execution Services in Q1 2020. Payment was variable based on order type and size. Payments received averaged less than \$0.0021 per executed share.

Wolverine Securities LLC:

Ally Invest Securities LLC received payment for certain equity orders routed to Wolverine in Q1 2020. Payment was based on order type and size. Payments received averaged less than \$0.0024 per executed share.

NYSE Arca, Inc.:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Arca in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged less than \$0.0029 per share and payments averaged less than \$0.0020 per share.

Nasdaq Execution Services, LLC:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to Nasdaq in Q1 2020. Payments and fees are based on the exchange's published rate schedules. Fees averaged \$0.0030 per share and payments averaged less than \$0.0020 per share.

Apex Clearing Corporation:

Ally Invest Securities LLC received payment and was charged fees for certain equity orders routed to its clearing firm, Apex Clearing Corp., pursuant to an agreement between the parties. Fees averaged less than \$0.0003 per share and payment averaged less than \$0.0007 per share in Q1 2020.

## 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	4.34	6.07	56.23	33.36

### 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	37.50	30.40	32.36	36.68	40.73	21,059.00	49.1906	56,124.50	49.5253	122,324.50	49.1117	39,828.00	46.9731

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)
Global Execution Brokers LP	34.11	41.04	41.90	35.17	30.00	82,183.88	48.9726	27,613.35	48.1564	152,788.60	49.9614	29,014.56	47.4893
Wolverine Execution Services, LLC	28.39	28.56	25.73	28.15	29.27	17,332.40	43.0063	40,176.95	46.9873	85,867.10	48.0220	30,666.01	48.3508

#### Material Aspects:

Citadel Execution Services:

Ally Invest Securities LLC received payment for certain option orders routed to Citadel in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.49 per executed contract.

Global Execution Brokers LP:

Ally Invest Securities LLC received payment for certain option orders routed to Global Execution Brokers in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.50 per executed contract.

Wolverine Execution Services, LLC:

Ally Invest Securities LLC received payment for certain option orders routed to Wolverine in Q1 2020. Payment was based on the underlying option security and order type. Payments received averaged less than \$0.48 per executed contract.