

HSBC Securities - Held NMS Stocks and Options Order Routing Public Report

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2nd Quarter, 2020

April 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	0.45	21.17	74.33	4.04

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)
NASDAQ-ALL MARKETS	26.61	31.81	19.39	28.29	32.94	-468.89	-14.6161	-8,844.82	-17.8748	10,909.11	22.1688	-59,743.79	-14.5029
NEW YORK STOCK EXCHANGE, INC.	18.45	31.76	4.89	19.60	66.80	-1,433.74	-19.0000	-6,426.44	-19.0000	-6,586.16	-19.0000	-177,804.17	-19.0000
CBOE BZX Exchange	9.12	1.57	6.13	10.51	0.12	-11.38	-29.9697	-5,692.34	-25.4618	5,438.99	22.8451	-81.48	-18.0000
NYSE Arca, Inc.	7.63	1.44	3.59	9.24	0.00	-11.30	-30.4086	-4,937.63	-27.4818	4,132.77	18.5542	0.00	0.0000
Citadel Securities	6.83	0.00	20.66	3.30	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Cboe EDGX Exchange, Inc.	5.93	0.70	2.49	7.27	0.00	-5.30	-22.6627	-2,884.72	-25.6140	2,923.49	15.8818	0.00	0.0000
CBOE EDGA US Equities Exchange	3.91	0.31	2.07	4.67	0.00	0.05	1.5354	359.74	15.4824	-4,807.55	-29.6152	0.00	0.0000
UBS Securities, LLC ATS	3.88	0.04	10.63	2.20	0.00	-0.05	-10.0000	-1,670.82	-10.0000	-123.15	-10.0000	0.00	0.0000
INVESTORS EXCHANGE	3.18	0.44	0.42	4.15	0.00	-0.43	-9.0000	-60.21	-7.2991	-305.77	-3.9089	0.00	0.0000
Credit Suisse AES Crossfinder	3.07	0.00	7.51	2.00	0.00	0.00	0.0000	-825.71	-10.0000	-53.95	-10.0000	0.00	0.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

INVESTORS EXCHANGE:
No material aspects related to this relationship

Credit Suisse AES Crossfinder:
No material aspects related to this relationship

April 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	0.19	20.78	77.41	1.62

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)
NASDAQ-ALL MARKETS	20.56	25.48	22.15	19.66	42.63	-982.92	-10.3593	-37,403.27	-20.2534	24,694.17	17.2082	-38,316.98	-14.4519
NYSE Arca, Inc.	11.47	12.64	8.31	12.47	4.52	-1,848.77	-15.5164	-34,645.66	-22.3943	13,260.61	14.7948	-13,828.34	-12.0626
NEW YORK STOCK EXCHANGE, INC.	8.06	12.64	2.38	9.03	34.14	-1,146.77	-19.0000	-13,640.17	-19.0000	-12,186.31	-19.0000	-102,600.55	-19.0000
CBOE BZX Exchange	7.75	3.01	5.41	8.53	0.92	-7.72	-6.2455	-4,307.52	-6.2456	11,244.10	23.5765	2.94	1.3677
Cboe EDGX Exchange, Inc.	7.70	3.15	3.55	8.98	0.14	-1.26	-1.9319	-4,021.92	-7.1310	11,709.78	16.1186	1.01	2.4133
Citadel Securities	6.55	0.00	15.81	4.17	2.20	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA US Equities Exchange	6.32	0.43	2.03	7.62	0.27	-0.46	-19.5949	-1,372.86	-12.0601	-42,602.56	-29.9255	7.63	14.5930

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)
BATS Y Exchange	5.04	0.48	1.56	6.09	0.12	-2.01	-18.2727	-2,230.90	-10.3408	-19,105.57	-18.7046	0.61	3.2877
UBS Securities, LLC ATS	4.67	0.05	8.29	3.78	1.42	-0.06	-10.0000	-6,974.66	-10.0000	-337.72	-10.0000	-15.67	-10.0000
Credit Suisse AES Crossfinder	4.13	0.00	6.16	3.66	1.10	0.00	0.0000	-2,863.97	-10.0000	-194.43	-10.0000	-6.40	-10.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

BATS Y Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

Credit Suisse AES Crossfinder:
No material aspects related to this relationship

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April 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	5.92	26.86	67.22	0.00

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)
Interactive Brokers LLC	100.00	100.00	100.00	100.00	0.00	0.00	0.0000	-388.35	-0.0908	4,158.92	0.1572	2,103.20	0.1695

Material Aspects:

Interactive Brokers LLC:

No material aspects related to this relationship

May 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	0.63	15.92	78.36	5.10

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)
NASDAQ-ALL MARKETS	27.21	33.30	23.81	27.59	31.21	-331.36	-16.7451	-6,245.63	-16.2910	8,117.59	21.2441	-43,655.26	-14.5036
NEW YORK STOCK EXCHANGE, INC.	18.25	30.86	5.29	17.69	65.81	-1,312.79	-19.0000	-4,297.57	-19.0000	-4,490.12	-19.0000	-150,376.60	-19.0000
CBOE BZX Exchange	8.53	4.07	7.42	9.34	0.13	-40.23	-30.1195	-4,730.52	-25.3375	4,134.21	22.6600	-20.80	-17.9826
NYSE Arca, Inc.	7.52	3.85	3.66	8.82	0.00	-42.08	-29.3021	-3,817.74	-27.7365	3,310.36	18.0224	0.00	0.0000
Citadel Securities	6.32	0.00	21.37	3.73	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Cboe EDGX Exchange, Inc.	6.06	2.98	2.36	7.24	0.00	-32.62	-24.2986	-2,559.34	-25.3796	2,407.14	15.0221	0.00	0.0000
CBOE EDGA US Equities Exchange	3.77	0.33	2.06	4.40	0.00	0.24	4.8000	288.20	18.6943	-3,744.64	-29.4700	0.00	0.0000
UBS Securities, LLC ATS	3.75	0.00	9.58	2.84	0.00	0.00	0.0000	-945.60	-10.0000	-50.56	-10.0000	0.00	0.0000
Credit Suisse AES Crossfinder	3.30	0.00	7.21	2.75	0.00	0.00	0.0000	-463.89	-10.0000	-30.27	-10.0000	0.00	0.0000
Nasdaq OMX BX	3.09	0.18	1.31	3.68	0.00	-0.30	-30.0000	11.31	1.3859	-1,397.27	-29.7258	0.00	0.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

Credit Suisse AES Crossfinder:
No material aspects related to this relationship

Nasdaq OMX BX:
No material aspects related to this relationship

May 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	0.34	20.97	76.73	1.96

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
NASDAQ-ALL MARKETS	23.60	33.49	25.79	22.33	48.19	-455.63	-10.5381	-24,074.82	-17.8470	23,171.32	17.6430	-26,175.49	-14.5080
NYSE Arca, Inc.	12.08	13.36	8.07	13.38	4.06	-581.17	-16.9399	-13,641.33	-21.0854	11,067.35	16.3487	-10,527.87	-12.0153
NEW YORK STOCK EXCHANGE, INC.	8.77	12.05	2.61	9.49	46.01	-1,031.24	-19.0000	-7,345.08	-19.0000	-8,748.34	-19.0000	-53,487.57	-19.0000
CBOE BZX Exchange	8.45	4.45	6.73	9.16	0.03	-23.83	-10.4743	-7,742.68	-17.0807	9,493.05	23.4704	-25.61	-18.0000
Cboe EDGX Exchange, Inc.	7.83	4.49	3.69	9.18	0.00	-26.70	-15.3540	-8,238.40	-18.5974	10,947.29	16.0597	0.00	0.0000

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)
Citadel Securities	6.51	0.00	15.44	4.26	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA US Equities Exchange	4.98	0.65	3.04	5.65	0.00	-1.11	-6.3797	-532.90	-7.4250	-12,077.28	-29.8803	0.00	0.0000
UBS Securities, LLC ATS	4.50	0.00	7.61	3.78	0.00	0.00	0.0000	-2,946.20	-10.0000	-207.29	-10.0000	0.00	0.0000
Credit Suisse AES Crossfinder	4.10	0.00	5.95	3.72	0.00	0.00	0.0000	-1,471.58	-10.0000	-83.92	-10.0000	0.00	0.0000
BATS Y Exchange	4.10	1.64	2.29	4.71	0.00	-4.91	-9.6581	-145.14	-0.8900	-6,821.28	-18.6629	0.00	0.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

Credit Suisse AES Crossfinder:
No material aspects related to this relationship

BATS Y Exchange:
No material aspects related to this relationship

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May 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
99.40	6.94	22.41	70.65	0.00

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)
Interactive Brokers LLC	100.00	100.00	100.00	100.00	0.00	0.00	0.0000	-1,604.02	-0.1744	1,882.92	0.0597	1,575.50	0.1112

Material Aspects:

Interactive Brokers LLC:

No material aspects related to this relationship

June 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	0.85	16.87	76.37	5.91

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
NASDAQ-ALL MARKETS	24.82	33.30	16.81	28.38	0.53	-638.70	-16.5049	-11,605.54	-21.5955	13,073.67	21.4395	-291.22	-14.5014
NEW YORK STOCK EXCHANGE, INC.	15.19	43.56	5.57	18.07	1.44	-2,317.16	-19.0000	-5,134.27	-19.0000	-6,051.58	-19.0000	-1,303.50	-19.0000
NYSE Arca, Inc.	8.80	3.18	4.02	10.60	0.00	-51.47	-29.5973	-3,613.90	-24.5508	4,264.67	17.8471	0.00	0.0000
Citadel Securities	7.33	0.00	27.35	3.56	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Cboe EDGX Exchange, Inc.	7.16	3.10	3.32	8.61	0.00	-50.25	-25.2926	-3,271.17	-23.6885	4,166.06	15.2958	0.00	0.0000
CBOE BZX Exchange	7.16	2.26	4.65	8.32	0.00	-38.70	-29.9566	-3,004.87	-24.3051	3,736.77	22.0409	-0.74	-18.0000
Primex Prime Electronic Execution, Inc.	5.79	0.02	0.00	0.00	98.01	-0.00	-19.0000	0.00	0.0000	0.00	0.0000	-377,908.39	-19.0000
UBS Securities, LLC ATS	4.10	0.00	12.32	2.65	0.00	0.00	0.0000	-1,261.76	-10.0000	-81.35	-10.0000	0.00	0.0000
CBOE EDGA US Equities Exchange	3.25	0.31	1.70	3.88	0.00	-0.24	-2.9474	263.91	16.3992	-4,892.81	-29.8466	0.00	0.0000
BATS Y Exchange	3.08	0.49	1.90	3.61	0.00	-3.68	-17.8965	21.73	0.7583	-2,830.82	-18.9216	0.00	0.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

BATS Y Exchange:
No material aspects related to this relationship

June 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	0.64	19.11	77.53	2.72

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)
NASDAQ-ALL MARKETS	21.95	34.38	21.37	22.68	2.02	-1,489.10	-14.5651	-40,975.39	-22.8288	36,776.40	19.0661	-347.45	-15.9355
NYSE Arca, Inc.	13.55	31.43	6.74	15.54	0.38	-1,424.82	-16.4546	-23,249.47	-24.3568	15,364.57	16.3001	-49.96	-26.6617
NEW YORK STOCK EXCHANGE, INC.	8.62	11.16	3.12	10.23	0.78	-1,364.07	-19.0000	-13,370.88	-19.0000	-12,784.82	-19.0000	-787.80	-19.0000
Cboe EDGX Exchange, Inc.	8.53	3.91	3.82	10.02	0.34	-37.48	-10.0133	-13,723.48	-20.3534	16,561.67	15.3883	-15.78	-21.6166
CBOE BZX Exchange	7.95	4.03	4.56	9.09	0.16	-52.25	-8.1686	-8,066.30	-18.0471	10,852.02	23.5435	-5.11	-20.2598
Citadel	6.74	0.00	21.03	3.47	1.20	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

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)
Securities													
CBOE EDGA US Equities Exchange	5.61	0.84	2.46	6.60	0.57	-4.42	-13.1575	173.19	2.1883	-20,286.66	-29.8869	-39.77	-23.7162
BATS Y Exchange	4.78	0.70	2.23	5.61	0.17	-9.88	-15.5341	-200.13	-1.1084	-12,608.14	-18.8673	-5.23	-14.4757
UBS Securities, LLC ATS	4.47	0.01	11.47	2.91	0.90	-0.07	-10.0000	-5,026.12	-10.0000	-291.05	-10.0000	-20.83	-10.0000
INVESTORS EXCHANGE	3.09	0.48	0.74	3.79	0.19	-1.06	-6.2282	-103.92	-6.4191	-747.08	-4.1307	-0.81	-9.0000

Material Aspects:

NASDAQ-ALL MARKETS:
No material aspects related to this relationship

NYSE Arca, Inc.:
No material aspects related to this relationship

NEW YORK STOCK EXCHANGE, INC.:
No material aspects related to this relationship

Cboe EDGX Exchange, Inc.:
No material aspects related to this relationship

CBOE BZX Exchange:
No material aspects related to this relationship

Citadel Securities:
No material aspects related to this relationship

CBOE EDGA US Equities Exchange:
No material aspects related to this relationship

BATS Y Exchange:
No material aspects related to this relationship

UBS Securities, LLC ATS:
No material aspects related to this relationship

INVESTORS EXCHANGE:
No material aspects related to this relationship

June 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	5.77	26.99	67.24	0.00

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)
Interactive Brokers LLC	100.00	100.00	100.00	100.00	0.00	0.00	0.0000	-1,115.54	-0.1536	4,564.26	0.1154	2,982.76	0.1908

Material Aspects:

Interactive Brokers LLC:
No material aspects related to this relationship