

# Virtu Americas LLC - Not-Held NMS Stocks Order Handling Report

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For SternBro

Reporting Period 2023-01-01 to 2023-06-30

## January 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## January 2023 - Non-directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)
2,355,952	0	0

### Order Routing Venues

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BATS Y Exchange (EV/SRV) (BATY)	84,819	84,819	0	154.4973	3,088	3.64	35.907	10.8468	488	15.80	200	6.48	2,400	77.72	0	0.00			3,088	100.00	10.8468
BIDS TRADING L.P (EV/SRV) (BIDS)	3,630,725	0	0	6,811.8668	18,033	0.50	2,254.125	-10.7912	6,763	37.50	11,270	62.50	0	0.00	17,933	99.45	1,731,478	-10.8329	100	0.55	-3.3100
BNPP Cortex ATS (EV/SRV) (BNPC)	385,177	90,620	0	298.5868	24,178	6.28	71.3215	-10.7539	1,979	8.19	4,594	19.00	17,605	72.81	21,637	89.49	3,618,062	-10.6022	2,541	10.51	-12.0460
Bank Of America - Merrill Lynch Instinct X Ats (EV/SRV) (BAML)	3,051,512	95,873	0	1,066.5893	12,791	0.42	81.4713	-9.9806	1,899	14.85	4,170	32.60	6,722	52.55	10,486	81.98	3,567,153	-10.0669	2,305	18.02	-9.5879
Barclays Ats (EV/SRV) (BARX)	234,226	98,026	0	297.9975	6,452	2.75	111.2414	-11.0944	1,060	16.43	350	5.42	5,042	78.15	4,258	66.00	6,711,139	-10.9737	2,194	34.00	-11.3286
BlockCross ATS (Instinet) (EV/SRV) (BLKX)	3,348,603	25,703	0	12,879.2423	0																
CBOE BX Exchange (EV/SRV) (BATS)	581,321	278,729	0	173.0122	38,847	6.68	67.2093	-3.2553	8,083	20.81	11,068	28.49	19,696	50.70	17,397	44.78	1,938,315	32.2191	21,450	55.22	-32.0268
CBOE EDGA US Equities Exchange (EV/SRV) (EDGA)	92,816	92,816	0	174.1388	3,031	3.27	45.2388	14.8604	146	4.82	200	6.60	2,685	88.58	0	0.00			3,031	100.00	14.8604
CGXS (EV/SRV) (CGXS)	87,000	0	0	384.9558	0																
CODA MARKETS INC (EV/SRV) (CODA)	3,227,498	31,470	0	6,985.9264	438	0.01	146	-10.6986	0	0.00	200	45.66	238	54.34	400	91.32	7,828,731	-10.6875	38	8.68	-10.8158
Cboe EDGX Exchange, Inc. (EV/SRV) (EDGX)	231,610	231,610	0	486.5756	19,408	8.38	96.0792	-29.7227	1,454	7.49	179	0.92	17,775	91.59	0	0.00			19,408	100.00	-29.7227
Credit Suisse Crossfinder (EV/SRV) (CROS)	843,360	91,737	0	155.172	16,715	1.98	116.8881	-10.8474	8,377	50.12	5,093	30.47	3,245	19.41	10,632	63.61	2,380,710	-10.5253	6,083	36.39	-11.4103
EBX LLC (EV/SRV) (EBXL)	3,505,592	90,790	0	1,406.1741	7,599	0.22	107.0282	-6.9571	2,323	30.57	1,900	25.00	3,376	44.43	5,509	72.50	4,041,854	-6.3783	2,090	27.50	-8.4828
Fidelity Crossstream ATS (EV/SRV) (XSTM)	146,070	0	0	225.0693	770	0.53	192.5	-15.1610	0	0.00	0	0.00	770	100.00	298	38.70	2,078,436	-15.2081	472	61.30	-15.1314
Goldman Sachs & Co. LLC SIGMA X2 (EV/SRV) (SGMT)	3,990,831	94,979	0	2,545.1728	30,448	0.76	78.4742	-10.8946	11,073	36.37	7,759	25.48	11,616	38.15	26,146	85.87	4,573,648	-10.7827	4,302	14.13	-11.5746
Intelligentcross (EV/SRV) (INCR)	328,914	60,658	0	200.5573	15,238	4.63	106.5594	-5.4227	5,670	37.21	1,224	8.03	8,344	54.76	6,474	42.49	3,908,607	-3.8519	8,764	57.51	-6.5831
Interactive Brokers Llc - Ats (EV/SRV) (IATS)	112,780	0	0	492.4891	1,743	1.55	83	-12.1130	0	0.00	1,740	99.83	3	0.17	1,743	100.00	11,702,079	-12.1130	0	0.00	
Investors Exchange (IEGX) (EV/SRV) (IEGX)	1,745,660	152,247	0	288.7775	132,443	7.59	83.4024	-8.8585	87,813	66.30	25,889	19.55	18,741	14.15	72,521	54.76	3,752,156	-8.3918	59,922	45.24	-9.4234
J.F. Morgan Securities LLC (EV/SRV) (JPMX)	3,629,602	107,885	0	589.5082	50,311	1.39	131.7042	-10.4321	27,961	55.58	15,148	30.11	7,202	14.31	20,050	39.85	3,691,023	-10.3743	30,261	60.15	-10.4704

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
MIAX Pearl Equities (EV/SRV) (EPRL)	171,558	171,558	0	3,236.9434	4,727	2.76	70.5522	-27.5392	17	0.36	0	0.00	4,710	99.64	0	0.00			4,727	100.00	-27.5392
MORGAN STANLEY & CO. LLC (EV/SRV) (MSPL)	331,600	0	0	820.7921	12,700	3.83	151.1905	-10.7406	2,800	22.05	7,600	59.84	2,300	18.11	10,900	85.83	6,461,151	-10.7261	1,800	14.17	-10.8283
Marketaxess Corporation (EV/SRV) (LIUH)	2,641,338	0	0	25,895.4706	0																
Members Exchange (MEMX) (EV/SRV) (MEMX)	627,165	378,278	0	215.2248	37,382	5.96	82.3392	-13.5120	4,632	12.39	9,050	24.21	23,700	63.40	10,715	28.66	1,009,277	30.2494	26,667	71.34	-31.0957
NASDAQ OMX PSX (EV/SRV) (XPSX)	79,475	79,475	0	196.2346	2,562	3.22	67.4211	-32.4411	212	8.27	246	9.60	2,104	82.12	0	0.00			2,562	100.00	-32.4411
NYSE Arca, Inc. (EV/SRV) (ARCX)	700,537	408,251	0	215.0866	48,643	6.94	60.4261	-10.7211	10,275	21.12	11,392	23.42	26,976	55.46	17,405	35.78	1,559,097	21.0988	31,238	64.22	-28.4503
NYSE CHICAGO, INC. (EV/SRV) (XCHI)	54,203	54,203	0	3,011.2778	757	1.40	84.1111	-11.8956	0	0.00	0	0.00	757	100.00	0	0.00		757	100.00	-11.8956	
NYSE MKT LLC (EV/SRV) (XASE)	602	602	0	150.5	302	50.17	75.5	-28.0927	0	0.00	0	0.00	302	100.00	0	0.00			302	100.00	-28.0927
NYSE NATIONAL, INC (EV/SRV) (XCIS)	95,486	95,486	0	173.2958	2,353	2.46	40.569	18.2626	214	9.09	200	8.50	1,939	82.41	0	0.00			2,353	100.00	18.2626
Nasdaq OMX BX (EV/SRV) (XBOS)	78,543	78,543	0	150.7543	1,045	1.33	21.3265	1.0000	144	13.78	200	19.14	701	67.08	0	0.00			1,045	100.00	1.0000
Nasdaq Stock Exchange (INET) (EV/SRV) (XNAS)	1,392,542	549,773	0	341.5605	261,927	18.81	215.4005	-7.5122	17,403	6.64	45,767	17.47	48,657	18.58	204,976	78.26	2,397,956	-1.7896	56,951	21.74	-28.1087
New York Stock Exchange (EV/SRV) (XNYS)	1,796,705	250,510	0	536.8106	327,842	18.25	81.0687	8.6314	12,863	3.92	256,218	78.15	31,224	9.52	281,329	85.81	2,696,548	12.3287	46,513	14.19	-13.7309
ONEC (EV/SRV) (ONEC)	152,165	24,729	0	551.3225	594	0.39	118.8	-11.3805	0	0.00	300	50.51	294	49.49	494	83.16	10,113,030	-11.5972	100	16.84	-10.3100
Pure Stream ATS (EV/SRV) (STRM)	3,369,297	0	0	12,341.7473	0																
Schonfeld Securities, LLC (EV/SRV) (STRD)	6,200	0	0	1,033.3333	0																
UBS Securities, LLC ATS (EV/SRV) (UBSA)	4,576,840	103,767	0	947.5859	54,367	1.19	86.0237	-10.7815	12,547	23.08	13,723	25.24	28,097	51.68	42,015	77.28	3,385,797	-10.6161	12,352	22.72	-11.3443
Virtu Americas LLC (EV/SRV) (KCGM)	4,308,531	463,114	0	1,515.4875	7,148	0.17	92.8312	-6.6287	4,112	57.53	1,829	25.59	1,207	16.89	4,751	66.47	5,235,503	-4.2799	2,397	33.53	-11.2841
Virtu Americas, LLC (EV/SRV) (NITE)	303,844	90,598	0	330.2652	18,070	5.95	76.5678	-5.2125	1,889	10.45	7,910	43.77	8,271	45.77	16,750	92.70	5,038,332	-4.9748	1,320	7.30	-8.2288
Virtu POSIT ATS (EV/SRV) (ITGI)	3,970,097	88,334	0	1,241.0431	12,638	0.32	183.1594	-10.4764	6,235	49.34	2,301	18.21	4,102	32.46	12,638	100.00	3,783,344	-10.4764	0	0.00	

## February 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## February 2023 - Non-directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)
2,917,262	0	0

### Order Routing Venues

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BATS Y Exchange (EV/SRV) (BATY)	171,449	97,919	0	210.1091	4,546	2.65	39.1897	2.3009	2,067	45.47	312	6.86	2,167	47.67	2,562	56.36	1,783,720	-6.0285	1,984	43.64	13.0570
BIDS TRADING L.P. (EV/SRV) (BIDS)	2,640,959	0	0	5,548.2332	33,624	1.27	1,528.3636	-3.0203	32,824	97.62	0	0.00	800	2.38	3,200	9.52	764,270	-3.0388	30,424	90.48	-3.0183
BNPP Cortex ATS (EV/SRV) (BNPC)	256,967	100,186	0	219.0682	2,847	1.11	37.4605	-11.3045	433	15.21	764	26.84	1,650	57.96	2,195	77.10	6,771,159	-10.7882	652	22.90	-13.0429



Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
UBS Securities, LLC ATS (EV/SRV) (UBSA)	3,987,437	114,708	0	616.6775	32,543	0.82	75.157	-10.6099	10,658	32.75	7,064	21.71	14,821	45.54	19,672	60.45	2,464,434	-10.4496	12,871	39.55	-10.8549
Virtu Americas LLC (EV/SRV) (KCGM)	3,273,653	377,543	0	1,192.1533	13,112	0.40	145.6889	-0.2128	10,912	83.22	1,700	12.97	500	3.81	12,060	91.98	11,143,314	-0.2005	1,052	8.02	-0.3536
Virtu Americas, LLC (EV/SRV) (NITE)	339,249	100,903	0	348.6629	4,059	1.20	57.9857	-0.7186	1,370	33.75	595	14.66	2,094	51.59	3,462	85.29	4,920,214	-0.7889	597	14.71	-0.3116
Virtu POSIT ATS (EV/SRV) (ITG)	3,056,358	100,752	0	844.0646	21,639	0.71	379.6316	-10.0817	18,822	86.98	1,304	6.03	1,513	6.99	21,639	100.00	4,282,377	-10.0817	0	0.00	

## March 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## March 2023 - Non-directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)
23,571,498	0	0

### Order Routing Venues

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BATS Y Exchange (EV/SRV) (BATY)	945,173	650,383	0	333.8654	33,206	3.51	148.2411	5.6548	2,556	7.70	12,247	36.88	18,403	55.42	13,017	39.20	5,732,388	-5.4337	20,189	60.80	12.8042
BIDS TRADING LP (EV/SRV) (BIDS)	8,799,710	0	0	7,533.9983	4,256	0.05	212.8	-6.4925	100	2.35	4,156	97.65	0	0.00	2,656	62.41	2,908,388	-8.0930	1,600	37.59	-3.8356
BNPP Cortex ATS (EV/SRV) (BNPC)	2,038,119	476,388	0	448.3324	21,417	1.05	84.3189	-10.5772	3,861	18.03	12,511	58.42	5,045	23.56	15,463	72.20	4,043,365	-10.3443	5,954	27.80	-11.1819
Bank Of America - Merrill Lynch Instinct X Ats (EV/SRV) (BAML)	21,466,259	488,888	0	3,541.1183	90,372	0.42	117.5189	-5.4745	24,405	27.01	56,024	61.99	9,943	11.00	82,448	91.23	5,263,426	-5.3515	7,924	8.77	-6.7543
Barclays Ats (EV/SRV) (BARX)	1,719,200	515,854	0	424.1796	16,037	0.93	82.241	-10.6847	3,872	24.14	986	6.15	11,179	69.71	2,328	14.52	3,098,987	-10.2930	13,709	85.48	-10.7512
BlockCross ATS (Instinet) (EV/SRV) (BLKX)	7,513,500	0	0	10,733.5714	2,316	0.03	105.2727	-10.2945	100	4.32	2,216	95.68	0	0.00	2,016	87.05	604,779	-10.2922	300	12.95	-10.3100
CBOE BZX Exchange (EV/SRV) (BATS)	17,499,021	895,620	0	1,429.425	354,064	2.02	109.0099	-7.7079	70,939	20.04	99,768	28.18	165,376	46.71	137,800	38.92	2,746,125	28.7928	216,264	61.08	-30.9656
CBOE EDGA US Equities Exchange (EV/SRV) (EDGA)	897,528	618,749	0	332.4178	32,064	3.57	130.8735	5.3168	2,142	6.68	14,122	44.04	15,800	49.28	14,639	45.66	7,204,413	-10.4363	17,425	54.34	18.5513
CGXS (EV/SRV) (CGXS)	217,212	0	0	518.4057	100	0.05	100	-0.3100	100	100.00	0	0.00	0	0.00	100	100.00	17,277,076	-0.3100	0	0.00	
CODA MARKETS INC (EV/SRV) (CODA)	7,242,007	0	0	28,069.7946	17,270	0.24	8.635	-10.5914	0	0.00	17,270	100.00	0	0.00	17,270	100.00	3,117,004	-10.5914	0	0.00	
Choe EDGX Exchange, Inc. (EV/SRV) (EDGX)	2,151,515	1,078,909	0	802.5047	369,470	17.17	177.9721	-27.0208	22,035	5.96	8,960	2.43	338,475	91.61	8,057	2.18	11,219,608	25.8730	361,413	97.82	-28.2000
Credit Suisse Crossfinder (EV/SRV) (CROS)	2,576,377	498,163	0	210.5571	23,608	0.92	98.7782	-10.4492	4,139	17.53	5,715	24.21	13,754	58.26	7,841	33.21	4,544,186	-10.3598	15,767	66.79	-10.4936
EBX LLC (EV/SRV) (EBXL)	14,723,057	501,186	0	1,332.7652	59,567	0.40	129.4935	-4.6583	13,621	22.87	25,388	42.62	20,558	34.51	37,484	62.93	4,023,024	-4.2531	22,083	37.07	-5.3460
Fidelity Crossstream ATS (EV/SRV) (XSTM)	625,733	0	0	255.8189	14,408	2.30	257.2857	-15.1205	13,908	96.53	0	0.00	500	3.47	10,368	71.96	4,049,743	-15.1256	4,040	28.04	-15.1074
Goldman Sachs & Co. LLC SIGMA X2 (EV/SRV) (SGMT)	10,318,565	504,557	0	2,221.4349	41,569	0.40	99.4474	-10.5647	11,445	27.53	10,867	26.14	19,257	46.33	21,875	52.62	4,933,889	-10.4569	19,694	47.38	-10.6844
Intelligentcross (EV/SRV) (INCR)	4,078,685	448,515	0	767.8247	88,917	2.18	123.3245	-3.2293	23,322	26.23	8,646	9.72	56,949	64.05	26,131	29.39	7,012,988	-2.5805	62,786	70.61	-3.4993
Interactive Brokers Llc - Ats (EV/SRV) (IATS)	282,069	0	0	884.2288	2,690	0.95	158.2353	-10.4770	4	0.15	2,686	99.85	0	0.00	2,690	100.00	7,533,205	-10.4770	0	0.00	

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
Investors Exchange (EXG) (EV/SRV) (EXG)	27,136,258	704,083	0	1,476.3211	294,539	1.09	100.1833	-6.8598	128,320	43.57	123,788	42.03	42,431	14.41	179,148	60.82	4,372,717	-5.5756	115,391	39.18	-8.8536
J.P. Morgan Securities LLC (EV/SRV) (JPMX)	11,887,738	497,959	0	381.5676	48,928	0.41	100.2623	-10.3746	15,850	32.39	18,969	38.77	14,109	28.84	31,551	64.48	4,039,512	-10.3449	17,377	35.52	-10.4287
MIAX Pearl Equities (EV/SRV) (EPRL)	570,328	146,628	0	4,916.6207	45,884	8.05	118.5633	-26.4836	1,240	2.70	52	0.11	44,592	97.18	0	0.00			45,884	100.00	-26.4836
MORGAN STANLEY & CO. LLC (EV/SRV) (MSPL)	493,013	0	0	1,373.2953	9,800	1.99	272.2222	-10.1883	2,200	22.45	1,600	16.33	6,000	61.22	8,300	84.69	8,192,193	-10.1999	1,500	15.31	-10.1240
Marketaxess Corporation (EV/SRV) (LIJH)	7,300,866	0	0	46,208.0127	0																
Members Exchange (MEMX) (EV/SRV) (MEMX)	18,451,514	930,504	0	2,823.0591	286,648	1.55	130.0581	-18.1935	43,574	15.20	53,042	18.50	190,032	66.29	56,768	19.80	2,163,443	29.9409	229,880	80.20	-30.0801
NASDAQ OMX PSX (EV/SRV) (XPSX)	867,407	643,304	0	395.174	29,000	3.34	235.7724	-30.7614	4,928	16.99	519	1.79	23,553	81.22	0	0.00			29,000	100.00	-30.7614
NYSE Arca, Inc. (EV/SRV) (ARCX)	25,192,946	849,918	0	2,723.5617	388,309	1.54	143.7649	-10.1999	57,948	14.92	86,060	22.16	118,179	30.43	226,097	58.23	2,815,943	4.0278	162,212	41.77	-30.0311
NYSE CHICAGO, INC. (EV/SRV) (XCHI)	63,156	6,856	0	4,858.1538	2,605	4.12	260.5	-11.6564	200	7.68	0	0.00	2,405	92.32	0	0.00			2,605	100.00	-11.6564
NYSE MKT LLC (EV/SRV) (XASE)	313,009	23,772	0	4,347.3472	9,844	3.14	136.7222	-24.1077	1,902	19.32	0	0.00	6,405	65.07	1,537	15.61	10,521,315	-7.1087	8,307	84.39	-27.2529
NYSE NATIONAL, INC (EV/SRV) (XCIS)	903,563	739,801	0	297.8125	32,745	3.62	137.0084	-5.5211	2,397	7.32	19,811	60.50	10,537	32.18	19,970	60.99	4,686,881	-25.4165	12,775	39.01	25.5796
Nasdaq OMX BX (EV/SRV) (XBOS)	907,550	555,592	0	334.2726	20,402	2.25	136.0133	-3.8249	1,777	8.71	9,186	45.02	9,439	46.27	10,099	49.50	10,239,081	-18.5994	10,303	50.50	10.6570
Nasdaq Stock Exchange (INET) (EV/SRV) (XNAS)	24,977,676	1,402,513	0	2,140.3321	7,489,319	29.98	1,537.8478	-11.6266	118,984	1.59	152,415	2.04	273,406	3.65	7,159,515	95.60	6,133,485	-10.7504	329,804	4.40	-30.6473
New York Stock Exchange (EV/SRV) (XNYS)	32,957,899	1,829,201	0	2,987.211	8,877,336	26.94	1,237.087	-8.7024	127,308	1.43	667,727	7.52	437,981	4.93	8,395,568	94.57	4,317,783	-7.6240	481,768	5.43	-27.4954
ONEC (EV/SRV) (ONEC)	282,034	0	0	483.7633	3,522	1.25	153.1304	-10.2024	300	8.52	2,622	74.45	600	17.04	3,522	100.00	2,270,026	-10.2024	0	0.00	
Pure Stream ATS (EV/SRV) (STRM)	7,475,332	0	0	33,521.6682	0																
UBS Securities, LLC ATS (EV/SRV) (UBSA)	25,398,896	559,625	0	833.7895	130,150	0.51	82.6349	-10.6410	29,747	22.86	46,365	35.62	54,038	41.52	61,834	47.51	3,002,192	-10.4377	68,316	52.49	-10.8250
Virtu Americas LLC (EV/SRV) (KCGM)	16,440,097	2,799,229	0	2,164.0249	60,132	0.37	193.3505	-1.3878	44,964	74.78	8,288	13.78	6,880	11.44	47,240	78.56	7,336,503	-0.8771	12,892	21.44	-3.2592
Virtu Americas, LLC (EV/SRV) (NITE)	1,153,344	488,780	0	422.7801	23,701	2.05	166.9085	-1.2499	4,161	17.56	15,071	63.59	4,469	18.86	18,046	76.14	7,228,335	-0.7257	5,655	23.86	-2.9229
Virtu POSIT ATS (EV/SRV) (ITGI)	15,872,958	480,584	0	1,593.8305	23,357	0.15	89.4904	-10.4515	10,013	42.87	5,314	22.75	8,030	34.38	23,357	100.00	4,211,909	-10.4515	0	0.00	

## April 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## April 2023 - Non-directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)
5,293,289	0	0

### Order Routing Venues

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BATS Y Exchange (EV/SRV) (BATY)	154,784	150,884	0	107.4889	1,841	1.19	48.4474	10.7621	305	16.57	100	5.43	1,436	78.00	100	5.43	10,352	-14.3100	1,741	94.57	12.2022

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BIDS TRADING L.P (EV/SRV) (BIDS)	290,779	0	0	2,033.4196	0																
BNPP Cortex ATS (EV/SRV) (BNPC)	265,170	127,421	0	125.0212	3,919	1.48	93.3095	-10.3322	1,250	31.90	2,268	57.87	401	10.23	3,619	92.34	4,558,462	-10.3341	300	7.66	-10.3100
Bank Of America- Merrill Lynch Instinct X Ats (EV/SRV) (BAML)	1,472,393	127,756	0	377.7304	33,666	2.29	79.9667	-5.4352	12,320	36.59	18,180	54.00	3,166	9.40	31,225	92.75	3,884,624	-5.3951	2,441	7.25	-5.9476
Barclays Ats (EV/SRV) (BARX)	206,865	131,385	0	112.3656	3,407	1.65	83.0976	-10.5028	991	29.09	296	8.69	2,120	62.22	380	11.15	6,264,372	-10.3263	3,027	88.85	-10.5249
BlockCross ATS (Instinct) (EV/SRV) (BLKX)	403,911	811	0	3,059.9318	0																
CBOE BZX Exchange (EV/SRV) (BATS)	337,381	152,554	0	118.7961	32,357	9.59	72.387	-9.4104	17,289	53.43	5,115	15.81	9,953	30.76	11,465	35.43	2,988,212	28.8942	20,892	64.57	-30.4309
CBOE EDGA US Equities Exchange (EV/SRV) (EDGA)	152,752	151,452	0	107.2697	4,077	2.67	66.8361	18.2499	609	14.94	0	0.00	3,468	85.06	0	0.00			4,077	100.00	18.2499
CGXS (EV/SRV) (CGXS)	22,066	0	0	374	256	1.16	36.5714	-5.8477	256	100.00	0	0.00	0	0.00	256	100.00	13,707,116	-5.8477	0	0.00	
CODA MARKETS INC (EV/SRV) (CODA)	407,394	0	0	5.223	0																
Choe EDGX Exchange, Inc. (EV/SRV) (EDGX)	160,939	160,939	0	125.9304	37,464	23.28	104.648	-28.0547	8,450	22.55	493	1.32	28,521	76.13	0	0.00			37,464	100.00	-28.0547
Credit Suisse Crossfinder (EV/SRV) (CROS)	373,642	127,497	0	110.873	2,292	0.61	69.4545	-10.5157	1,041	45.42	423	18.46	828	36.13	1,353	59.03	3,943,757	-10.3895	939	40.97	-10.6976
EBX LLC (EV/SRV) (EBXL)	939,936	130,335	0	298.203	7,791	0.83	92.75	-4.4886	3,289	42.22	3,400	43.64	1,102	14.14	6,464	82.97	3,284,700	-4.3309	1,327	17.03	-5.2570
Fidelity Crossstream ATS (EV/SRV) (XSTM)	145,200	0	0	137.6303	2,262	1.56	107.7143	-15.2878	2,262	100.00	0	0.00	0	0.00	1,962	86.74	1,009,019	-15.2844	300	13.26	-15.3100
Goldman Sachs & Co. LLC SIGMA X2 (EV/SRV) (SGMT)	693,911	135,387	0	343.6904	7,577	1.09	76.5354	-10.4772	2,705	35.70	2,756	36.37	2,116	27.93	5,902	77.89	3,936,596	-10.3992	1,675	22.11	-10.7522
Intelligentcross (EV/SRV) (INCR)	389,343	92,776	0	164.3491	21,856	5.61	74.0881	-2.4184	12,937	59.19	932	4.26	7,987	36.54	10,681	48.87	4,914,103	-2.4383	11,175	51.13	-2.3995
Interactive Brokers Llc - Ats (EV/SRV) (ATS)	13,200	0	0	286.9565	100	0.76	100	-10.3100	100	100.00	0	0.00	0	0.00	100	100.00	13,535,828	-10.3100	0	0.00	
Investors Exchange (IEXS) (EV/SRV) (IEXS)	715,447	142,105	0	127.5761	47,496	6.64	74.562	-8.2642	33,962	71.50	7,797	16.42	5,737	12.08	27,625	58.16	2,617,880	-7.5955	19,871	41.84	-9.1939
J.P. Morgan Securities LLC (EV/SRV) (JPMX)	760,214	63,902	0	330.0973	7,272	0.96	94.4416	-10.4108	4,405	60.57	1,595	21.93	1,272	17.49	4,500	61.88	4,253,417	-10.3582	2,772	38.12	-10.4960
MIAX Pearl Equities (EV/SRV) (EPRL)	1,971	1,971	0	394.2	1,538	78.03	219.7143	-25.1411	9	0.59	0	0.00	1,529	99.41	0	0.00			1,538	100.00	-25.1411
MORGAN STANLEY & CO. LLC (EV/SRV) (MSPL)	74,300	0	0	990.6667	1,600	2.15	100	-10.3100	1,000	62.50	300	18.75	300	18.75	1,600	100.00	13,549,138	-10.3100	0	0.00	
Marketaxess Corporation (EV/SRV) (LIUH)	322,172	0	0	11,506.1429	0																
Members Exchange (MEMX) (EV/SRV) (MEMX)	248,943	134,387	0	112.086	17,934	7.20	86.2212	-12.7248	8,849	49.34	3,213	17.92	5,872	32.74	5,053	28.18	1,889,403	27.4767	12,881	71.82	-28.4951
NASDAQ OMX PSX (EV/SRV) (XPSX)	130,313	130,313	0	116.7679	1,078	0.83	77	-30.4026	1,040	96.47	3	0.28	35	3.25	0	0.00			1,078	100.00	-30.4026
NYSE Arca, Inc. (EV/SRV) (ARCX)	337,412	158,066	0	131.8016	19,184	5.69	57.2657	-4.2672	10,838	56.49	5,910	30.81	2,436	12.70	10,173	53.03	2,380,011	17.9388	9,011	46.97	-29.3367
NYSE CHICAGO, INC. (EV/SRV) (XCHI)	640	640	0	128	400	62.50	200	-11.3975	0	0.00	0	0.00	400	100.00	0	0.00			400	100.00	-11.3975
NYSE MKT LLC (EV/SRV) (XASE)	7,124	58	0	3,562	7,070	99.24	883.75	-5.2836	0	0.00	4	0.06	0	0.00	7,066	99.94	2,736,506	-5.2675	4	0.06	-33.7500
NYSE NATIONAL, INC (EV/SRV) (XCIS)	157,225	156,625	0	109.794	3,197	2.03	74.3488	29.3810	400	12.51	0	0.00	2,797	87.49	0	0.00			3,197	100.00	29.3810
Nasdaq OMX BX (EV/SRV) (XBOS)	150,874	147,774	0	107.3073	1,185	0.79	42.3214	2.7004	400	33.76	100	8.44	685	57.81	100	8.44	184	-20.3100	1,085	91.56	4.8212
Nasdaq Stock Exchange (INET) (EV/SRV) (XNAS)	2,112,561	182,060	0	654.4489	1,609,982	76.21	2,473.0906	-11.7486	30,697	1.91	8,966	0.56	8,103	0.50	1,587,037	98.57	3,147,334	-11.4810	22,945	1.43	-30.2569
New York Stock Exchange (EV/SRV) (XNYS)	3,316,739	209,623	0	1,120.5199	2,769,663	83.51	937.5975	-9.2955	13,480	0.49	93,919	3.39	7,132	0.26	2,751,658	99.35	2,951,927	-9.2821	18,005	0.65	-11.3463

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
ONEC (EV/SRV) (ONEC)	14,300	900	0	246.5517	0																
Pure Stream ATS (EV/SRV) (STRM)	416,536	0	0	5,272.6076	0																
UBS Securities, LLC ATS (EV/SRV) (UBSA)	960,625	148,859	0	241.1813	19,914	2.07	62.0374	-10.5794	4,279	21.49	6,353	31.90	9,282	46.61	8,332	41.84	3,331,752	-10.4502	11,582	58.16	-10.6723
Virtu Americas LLC (EV/SRV) (KCGM)	1,089,273	307,466	0	273.4805	21,078	1.94	234.2	-0.1940	20,777	98.57	0	0.00	301	1.43	15,239	72.30	5,826,378	-0.1322	5,839	27.70	-0.3554
Virtu Americas, LLC (EV/SRV) (NITE)	170,203	129,362	0	132.4537	1,451	0.85	63.087	-0.4914	528	36.39	0	0.00	923	63.61	1,036	71.40	12,844,842	-0.5386	415	28.60	-0.3735
Virtu POSIT ATS (EV/SRV) (ITGI)	621,988	133,971	0	212.791	3,334	0.54	98.0588	-10.3161	2,017	60.50	103	3.09	1,214	36.41	3,334	100.00	2,903,679	-10.3161	0	0.00	

## May 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## May 2023 - Non-directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)
14,038,376	0	0

### Order Routing Venues

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
BATS Y Exchange (EV/SRV) (BATY)	408,376	239,375	0	224.5058	2,559	0.63	44.1207	10.8327	317	12.39	91	3.56	2,151	84.06	373	14.58	3,945,610	-6.8284	2,186	85.42	13.8463
BIDS TRADING L.P. (EV/SRV) (BIDS)	1,063,708	0	0	1,175.368	1,100	0.10	183.3333	-3.1691	500	45.45	300	27.27	300	27.27	800	72.73	1,392,928	-3.1162	300	27.27	-3.3100
BNPP Cortex ATS (EV/SRV) (BNPC)	279,661	188,491	0	189.0879	6,385	2.28	85.1333	-10.6103	2,702	42.32	1,013	15.87	2,670	41.82	5,385	84.34	1,990,703	-10.3799	1,000	15.66	-11.8510
Bank Of America - Merrill Lynch Instinct X Ats (EV/SRV) (BAML)	2,772,755	179,952	0	667.1692	15,657	0.56	91.5614	-5.6152	5,454	34.83	8,032	51.30	2,171	13.87	14,157	90.42	651,375	-5.3547	1,500	9.58	-8.0733
Barclays Ats (EV/SRV) (BARX)	383,055	185,732	0	286.5034	2,910	0.76	107.7778	-10.9935	300	10.31	500	17.18	2,110	72.51	505	17.35	1,777,007	-10.4297	2,405	82.65	-11.1119
Barclays Direct Ex Ats (EV/SRV) (ASPN)	952,700	0	0	22,155.814	0																
BlockCross ATS (Instinet) (EV/SRV) (BLKX)	840,790	3,190	0	10,380.1235	12,600	1.50	12,600	-10.0025	12,600	100.00	0	0.00	0	0.00	12,600	100.00	3,162,577	-10.0025	0	0.00	
CBOE BZX Exchange (EV/SRV) (BATS)	5,078,956	296,228	0	491.3375	47,146	0.93	96.2163	2.8712	8,418	17.86	13,206	28.01	7,928	16.82	37,600	79.75	1,117,377	11.2232	9,546	20.25	-30.0259
CBOE BZX Exchange Dark (EV/SRV) (BZXD)	1,240,100	0	0	4,092.7393	2,100	0.17	16.9355	15.9081	907	43.19	841	40.05	352	16.76	1,728	82.29	3,074,000	23.1568	372	17.71	-17.7634
CBOE EDGA US Equities Exchange (EV/SRV) (EDGA)	343,115	242,081	0	202.3084	2,941	0.86	38.1948	7.2866	394	13.40	515	17.51	2,032	69.09	906	30.81	3,426,863	-17.6832	2,035	69.19	18.4034
CGXS (EV/SRV) (CGXS)	46,700	0	0	471.7172	100	0.21	100	-5.3100	0	0.00	100	100.00	0	0.00	100	100.00	1,265,824	-5.3100	0	0.00	
CODA MARKETS INC (EV/SRV) (CODA)	858,786	0	0	9,334.6304	11,917	1.39	11,917	-10.0026	11,917	100.00	0	0.00	0	0.00	11,917	100.00	4,908,262	-10.0026	0	0.00	
Cboe EDGX Exchange, Inc. (EV/SRV) (EDGX)	1,338,454	210,835	0	921.8003	6,114	0.46	80.4474	-24.0208	1,344	21.98	429	7.02	4,341	71.00	559	9.14	3,296,076	25.0018	5,555	90.86	-28.9539
Credit Suisse Crossfinder (EV/SRV) (CROS)	664,663	186,963	0	199.5985	746	0.11	67.8182	-10.9410	200	26.81	100	13.40	446	59.79	300	40.21	2,463,075	-10.3100	446	59.79	-11.3655
EBX LLC (EV/SRV) (EBXL)	2,507,501	189,811	0	311.6069	7,017	0.28	106.3182	-4.6503	3,082	43.92	3,034	43.24	901	12.84	5,516	78.61	1,522,663	-4.3035	1,501	21.39	-5.9247
Fidelity Crossstream ATS (EV/SRV) (XSTM)	94,400	0	0	163.3218	400	0.42	133.3333	-15.2325	200	50.00	0	0.00	200	50.00	400	100.00	866,816	-15.2325	0	0.00	

Venue	Total Shares Routed	Total Shares Routed Marked IOC	Total Shares Routed that were further Routable	Average Order Size Routed	Total Shares Executed	Fill Rate	Average Fill Size	Average Net Execution Fee or (Rebate)	Total Shares Executed at Midpoint	Percentage of Shares Executed at Midpoint	Total Shares Executed that were Priced at the Near Side	Percentage of Total Shares Executed that were Priced at the Near Side	Total Shares Executed that were Priced at the Far Side	Percentage of Total Shares Executed that were Priced at the Far Side	Total Number of Shares that Provided Liquidity	Percentage of Executed Shares that Provided Liquidity	Average Duration of Orders that Provided Liquidity (in msec)	Average Net Execution Rebate (or Fee Paid) for Shares that Provided Liquidity	Total Number of Shares that Removed Liquidity	Percentage of Executed Shares that Removed Liquidity	Average Net Execution Fee (or rebate received) for Shares that Removed Liquidity
Goldman Sachs & Co. LLC SIGMA X2 (EV/SRV) (SGMT)	1,640,061	203,904	0	561.8571	20,719	1.26	74.5288	-10.5634	9,630	46.48	4,674	22.56	6,415	30.96	16,224	78.30	2,130,272	-10.4451	4,495	21.70	-10.9904
Intelligentcross (EV/SRV) (INCR)	409,916	116,239	0	150.2074	14,530	3.54	76.8783	-2.5840	12,337	84.91	490	3.37	1,703	11.72	9,998	68.81	1,214,454	-2.3876	4,532	31.19	-3.0174
Interactive Brokers Llc - Ats (EV/SRV) (IATS)	143,900	0	0	129.1741	0																
Investors Exchange (EXG) (EV/SRV) (EXG)	1,176,981	281,796	0	206.2708	48,666	4.13	80.1746	-8.0893	30,687	63.06	9,495	19.51	8,484	17.43	32,535	66.85	1,538,623	-7.4925	16,131	33.15	-9.2930
Investors Exchange - Dark (EV/SRV) (IEXD)	1,769,400	0	0	12,638.5714	8,300	0.47	54.6053	8.2675	1,523	18.35	4,323	52.08	2,454	29.57	5,609	67.58	3,074,000	21.9606	2,691	32.42	-20.2739
J.P. Morgan Securities LLC (EV/SRV) (JPMX)	1,060,212	105,812	0	156.4889	828	0.08	92	-10.3370	400	48.31	328	39.61	100	12.08	628	75.85	3,617,492	-10.3455	200	24.15	-10.3100
MIAX Pearl Equities (EV/SRV) (EPRL)	53,349	449	0	4,849.9091	211	0.40	70.3333	-25.4408	0	0.00	0	0.00	211	100.00	0	0.00			211	100.00	-25.4408
MORGAN STANLEY & CO. LLC (EV/SRV) (MSPL)	81,800	0	0	676.0331	2,900	3.55	103.5714	-10.2993	700	24.14	300	10.34	1,900	65.52	2,600	89.66	2,320,899	-10.2981	300	10.34	-10.3100
Marketaxess Corporation (EV/SRV) (LIUH)	796,548	0	0	12,254.5846	0																
Members Exchange (MEMX) (EV/SRV) (MEMX)	2,659,230	270,698	0	538.1967	17,450	0.66	41.5476	4.4297	4,781	27.40	5,497	31.50	7,172	41.10	11,143	63.86	879,246	25.0367	6,307	36.14	-31.9780
NASDAQ OMX PSX (EV/SRV) (XPSX)	228,418	201,118	0	183.9114	489	0.21	48.9	-32.3088	145	29.65	174	35.58	170	34.76	0	0.00			489	100.00	-32.3088
NYSE ARCA Non-Displayed (EV/SRV) (ARCD)	1,305,900	0	0	4,582.1053	24,200	1.85	51.8201	10.7357	9,471	39.14	11,442	47.28	3,287	13.58	16,464	68.03	3,074,000	21.3630	7,736	31.97	-11.8816
NYSE Arca, Inc. (EV/SRV) (ARCX)	5,634,281	251,704	0	530.2354	24,631	0.44	42.3941	8.4189	7,690	31.22	12,428	50.46	4,513	18.32	17,639	71.61	934,495	22.8788	6,992	28.39	-28.0595
NYSE CHICAGO, INC. (EV/SRV) (XCHI)	77,280	66,780	0	4,293.3333	2,200	2.85	183.3333	-12.0982	0	0.00	0	0.00	2,200	100.00	0	0.00			2,200	100.00	-12.0982
NYSE MKT LLC (EV/SRV) (XASE)	11,775	276	0	1,177.5	7,565	64.25	1,080.7143	-5.3699	0	0.00	0	0.00	66	0.87	7,499	99.13	5,164,164	-5.1800	66	0.87	-26.9394
NYSE NATIONAL, INC (EV/SRV) (XCIS)	534,739	252,982	0	279.9681	1,382	0.26	37.3514	1.1983	557	40.30	100	7.24	725	52.46	707	51.16	2,463,014	-4.6421	675	48.84	7.3156
Nasdaq OMX BX (EV/SRV) (XBOS)	402,049	242,424	0	229.6111	2,872	0.71	35.0244	-2.6609	1,075	37.43	551	19.19	1,246	43.38	1,506	52.44	2,509,212	-11.5378	1,366	47.56	7.1259
Nasdaq Stock Exchange (INET) (EV/SRV) (XNAS)	10,280,096	582,832	0	1,471.3176	4,151,319	40.38	1,828.7749	-11.4207	31,120	0.75	41,740	1.01	41,653	1.00	4,118,778	99.22	4,588,821	-11.2764	32,541	0.78	-29.6904
New York Stock Exchange (EV/SRV) (XNYS)	11,671,428	298,994	0	1,237.9538	8,182,597	70.11	1,370.8489	-9.5421	12,137	0.15	62,433	0.76	11,083	0.14	8,165,426	99.79	5,229,268	-9.5216	17,171	0.21	-19.2949
ONEC (EV/SRV) (ONEC)	129,065	2,990	0	124.5801	1,175	0.91	83.9286	-10.3694	600	51.06	300	25.53	275	23.40	800	68.09	13,378	-10.3488	375	31.91	-10.4133
Pure Stream ATS (EV/SRV) (STRM)	873,991	0	0	9,199.9053	1,628	0.19	1,628	-15.0190	1,628	100.00	0	0.00	0	0.00	1,628	100.00	1,446,581	-15.0190	0	0.00	
UBS Securities, LLC ATS (EV/SRV) (UBSA)	6,087,892	215,857	0	470.4344	88,341	1.45	80.7505	-5.4996	31,019	35.11	27,408	31.03	29,914	33.86	51,816	58.65	1,914,503	2.4369	36,525	41.35	-16.7588
Virtu Americas LLC (EV/SRV) (KCGM)	5,307,543	972,950	0	802.1071	26,284	0.50	55.5687	7.5656	8,048	30.62	10,910	41.51	7,326	27.87	16,897	64.29	3,785,833	20.0528	9,387	35.71	-14.9120
Virtu Americas, LLC (EV/SRV) (NITE)	290,102	193,878	0	191.3602	8,126	2.80	94.4884	-0.6320	3,153	38.80	1,413	17.39	3,560	43.81	5,726	70.47	1,979,379	-0.3898	2,400	29.53	-1.2100
Virtu POSIT ATS (EV/SRV) (ITG)	1,507,823	194,697	0	559.4891	30,771	2.04	1,025.7	-10.0302	29,471	95.78	100	0.32	1,200	3.90	30,771	100.00	1,632,359	-10.0302	0	0.00	

## June 2023 - Directed Orders

### Summary

Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)

## June 2023 - Non-directed Orders

### Summary



Total Shares Sent to Broker/Dealer	Total Number of Shares Executed as Principal	Total Orders Exposed (Actionable IOI)