

MLCO.GWIM.NEW - Held NMS Stocks and Options Order Routing Public Report

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4th Quarter, 2024

October 2024

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	37.91	2.42	58.08	1.59

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)
BofA Securities, Inc.	82.60	62.49	87.71	95.07	98.72	-1,987.41	-0.1292	-9,654.06	-2.4922	142,644.58	23.1192	3,898.34	1.8781
CITADEL SECURITIES LLC	3.76	9.88	0.13	0.00	0.55	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.20	8.41	0.14	0.00	0.36	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	2.37	6.26	0.10	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	2.00	0.57	7.48	2.76	0.10	-309.35	-2.7217	-357.15	-2.6808	1,106.01	19.6136	-2.95	-3.3170
Two Sigma Securities, LLC	1.82	4.78	0.07	0.00	0.14	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.54	4.06	0.05	0.00	0.07	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	1.39	0.28	3.91	2.05	0.06	-175.00	-2.8889	-334.97	-5.1857	2,083.92	30.7668	-2.92	-3.6540
UBS Securities, LLC	1.25	3.29	0.05	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Cboe BZX Exchange, Inc.	0.02	0.00	0.07	0.03	0.00	-0.12	-7.5241	-62.93	-30.0000	184.71	22.8640	0.29	29.0000

Material Aspects:

BofA Securities, Inc.:
Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") is a broker-dealer that executes its customer orders in National Market System ("NMS") securities as agent. MLPF&S routes the bulk of its customer held orders in NMS stocks and NMS securities that are option contracts to its affiliated broker-dealer under common control, BofA Securities, Inc. ("BofAS"), for further order handling, leveraging BofAS's connectivity and other infrastructure. As further described below, BofAS then may either further route, as agent, MLPF&S customer orders to other venues for execution or, with respect to MLPF&S's brokerage customer orders in NMS stocks, BofAS may execute such MLPF&S customer orders on a principal basis. BofAS acts as a registered market maker in numerous Nasdaq and other exchange-listed securities and may execute customer orders in such securities on a principal basis. BofAS also may principally commit capital to facilitate customer transactions or serve as the contra-side to customer orders executed internally through one or more alternative trading systems operated by BofAS. BofAS, however, does not transact on a principal basis with respect to any orders executed on behalf of MLPF&S investment advisory customers or with respect to any MLPF&S customer orders in option contracts. BofAS stands to realize 100% of any profits or losses generated when BofAS trades as agent or principal with respect to MLPF&S customer orders. In addition, BofAS may route MLPF&S customer orders to other venues including but not limited to national securities exchanges, multi-lateral trading facilities, other alternative trading systems or external liquidity providers, or broker-dealers. For information about BofAS's routing of its customer orders in NMS securities and the material aspects of its relationships with its identified trading venues, see BofAS's quarterly public disclosure, available at <http://public.s3.com/rule606/bofas>. When BofAS routes orders to certain SEC-registered securities exchanges, BofAS pays fees and receives credits in accordance with that market center's published fee schedule filed with the SEC, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by a market center to BofAS over a period of time will exceed the charges assessed. Likewise, in some cases, the charges over a period of time will exceed the credits. BofAS passes through to MLPF&S the net credit or net charge attributable to MLPF&S customer orders. Aside from holdings that BofAS may acquire from time to time as part of its ordinary market making, block positioning, client facilitation and related hedging activities, an MLPF&S affiliate under common control may acquire equity stakes in market centers as part of a strategic investment. In this regard, an MLPF&S affiliate owns a minority equity investment stake in the following market centers and therefore stands to participate as a shareholder/investor in the profits that each market center realizes in part from the execution of securities transactions, including the execution of MLPF&S customer orders: Members Exchange (MEMX); CME; Tokyo Financial Exchange; JapanNext; Borsa Istanbul (BIST); Xpansiv; Kezar Trading (LeveL and Luminex); Curve Global; Trumid; MTS S.p.A.; iSwap; Philippine Dealing Systems; PureStream Trading Technologies, Inc.; Equilend; Zanbato; LedgerEdge; and Liquidity Match (FXSpotStream). BofAS or an affiliate also own an equity stake in Miami International Holdings, Inc., which is the parent company of the MIAx family of options exchanges, including MIAx Pearl, LLC and MIAx Emerald, LLC. Additionally, BofAS owns and is the broker-dealer operator of Instinct X®, an NMS stock Alternative Trading System in the United States

CITADEL SECURITIES LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

NEW YORK STOCK EXCHANGE, INC.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

Two Sigma Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

G1 Execution Services, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The Nasdaq Stock Market LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

UBS Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Cboe BZX Exchange, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.cboe.com/us/equities/membership/fee_schedule/bzx/

October 2024

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	37.00	4.37	57.00	1.63

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)
BofA Securities, Inc.	86.61	69.97	90.88	96.73	99.17	-8,953.41	-0.1524	-154,276.61	-5.5799	493,936.81	17.5998	6,826.37	1.1168
CITADEL SECURITIES LLC	2.97	8.00	0.15	0.00	0.30	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.52	6.79	0.13	0.00	0.12	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.86	5.00	0.09	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.43	3.84	0.07	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.21	3.25	0.06	0.00	0.10	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	0.99	2.66	0.05	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE Arca, Inc.	0.72	0.17	2.67	0.95	0.06	-1,772.39	-15.0998	-3,750.90	-13.7773	1,601.41	20.6288	-6.68	-7.2047
The Nasdaq Stock Market LLC	0.71	0.12	1.93	1.01	0.04	-197.96	-2.3841	-4,517.69	-17.6991	6,332.57	26.3647	7.99	3.6329
NEW YORK STOCK EXCHANGE, INC.	0.68	0.13	1.83	0.96	0.03	-390.85	-4.2763	-3,439.45	-12.7723	3,222.54	16.2938	4.15	1.4176

Material Aspects:

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CITADEL SECURITIES LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Two Sigma Securities, LLC:

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G1 Execution Services, LLC:

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UBS Securities, LLC:

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NYSE Arca, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

The Nasdaq Stock Market LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

NEW YORK STOCK EXCHANGE, INC.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

October 2024

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	3.87	18.73	54.69	22.71

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)
NYSE ARCA OPTIONS	28.39	0.00	9.30	48.37	0.88	0.00	0.0000	54,024.48	31.4676	633,405.62	54.3219	-14,946.19	-36.2341
Nasdaq PHLX LLC	19.29	0.00	2.15	32.63	4.58	0.00	0.0000	7,392.23	19.7147	29,465.03	22.5476	13,884.70	22.6885
Nasdaq ISE, LLC	10.23	0.00	1.69	0.40	42.70	0.00	0.0000	-12,571.43	-27.4605	14,367.50	76.9015	71,722.00	17.1321
CITADEL SECURITIES LLC	7.73	35.86	14.35	0.82	14.13	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Dash/IMC Financial Markets	5.92	25.75	2.84	2.31	13.76	417.90	0.3488	17,332.61	17.5075	25,969.09	32.4869	52,661.03	36.0329
The NASDAQ Options Market LLC	5.60	0.00	1.72	9.65	0.00	0.00	0.0000	-10,873.67	-17.7477	215,022.25	72.5035	0.00	0.0000
Cboe Exchange, Inc.	5.56	0.00	4.01	3.74	12.18	-6.49	-59.0000	-5,959.32	-7.9827	12,430.41	8.4182	827.83	0.1315
Global Execution Brokers, LP	5.36	38.35	11.06	0.91	5.78	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)
MIAX SAPPHIRE LLC	2.53	0.00	13.46	0.01	0.00	0.00	0.0000	130,269.29	45.6713	260.35	49.5905	0.00	0.0000
Nasdaq MRX, LLC	1.92	0.00	10.16	0.04	0.00	0.00	0.0000	48,371.21	26.1981	102.22	14.2765	0.00	0.0000

Material Aspects:

NYSE ARCA OPTIONS:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing during this quarter. In October, BofAS qualified for an additional \$0.25 customer posting rebate in Penny Interval Program symbols, and an additional \$0.25 customer posting rebate in non-Penny Interval Program symbols. In November and December, BofAS qualified for an additional \$0.18 customer posting rebate in Penny Interval Program symbols. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/arca-options/NYSE_Arca_Options_Fee_Schedule.pdf

Nasdaq PHLX LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules>.

Nasdaq ISE, LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/ise/rules>.

CITADEL SECURITIES LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Dash/IMC Financial Markets:
Orders routed to this market center for execution may be executed by such center or may be further routed by Dash to other venues (such as exchanges or other market centers) for execution. For MLPF&S's customer orders routed to exchanges, Dash pays fees or receives credits in accordance with the published fee schedules of the relevant exchanges, may receive incremental pricing benefits in accordance with such published fee schedules, and may participate in fee programs sponsored by the relevant exchanges. In some cases, the credits or rebates offered by relevant exchanges to Dash over a period of time may exceed the charges assessed and, in such cases, Dash passes through to BofAS the net credit or net charge attributable to MLPF&S customer orders, which BofAS in turn passes through to MLPF&S.

The NASDAQ Options Market LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing benefits during this quarter. In October, November and December, BofAS qualified for an additional \$0.30 customer posting rebate in Penny Interval Program symbols and an additional \$0.30 customer posting rebate in non-Penny Interval Program symbols. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/Nasdaq%20Options%207>.

Cboe Exchange, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.cboe.com/us/options/membership/fee_schedule/cone/.

Global Execution Brokers, LP:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

MIAX SAPPHIRE LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's SEC approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/american-options/NYSE_American_Options_Fee_Schedule.pdf

Nasdaq MRX, LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/mrx/rules/MRX%20Options%207>

S&P 500 Stocks

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100.00	41.22	2.78	54.33	1.68

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)
BofA Securities, Inc.	82.61	64.60	88.20	95.49	98.66	-2,496.14	-0.1529	-8,394.85	-2.1844	148,232.87	22.5839	3,928.76	2.0467
CITADEL SECURITIES LLC	3.85	9.32	0.14	0.00	0.53	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.30	7.98	0.12	0.00	0.43	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	2.42	5.88	0.08	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.85	4.47	0.07	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	1.81	0.58	7.00	2.52	0.10	-294.43	-2.2536	-364.99	-2.5112	1,045.35	19.2654	-23.01	-4.6968
G1 Execution Services, LLC	1.55	3.76	0.05	0.00	0.06	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.29	3.13	0.04	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	1.23	0.28	3.85	1.85	0.06	-174.28	-2.0924	-361.14	-4.2229	2,288.22	30.6650	-0.27	-0.6055
NYSE Arca, Inc.	0.02	0.00	0.07	0.04	0.00	0.00	0.0000	-79.59	-29.1076	337.60	26.4027	0.00	0.0000

Material Aspects:

BofA Securities, Inc.:

Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") is a broker-dealer that executes its customer orders in National Market System ("NMS") securities as agent. MLPF&S routes the bulk of its customer held orders in NMS stocks and NMS securities that are option contracts to its affiliated broker-dealer under common control, BofA Securities, Inc. ("BofAS"), for further order handling, leveraging BofAS's connectivity and other infrastructure. As further described below, BofAS then may either further route, as agent, MLPF&S customer orders to other venues for execution or, with respect to MLPF&S's brokerage customer orders in NMS stocks, BofAS may execute such MLPF&S customer orders on a principal basis. BofAS acts as a registered market maker in numerous Nasdaq and other exchange-listed securities and may execute customer orders in such securities on a principal basis. BofAS also may principally commit capital to facilitate customer transactions or serve as the contra-side to customer orders executed internally through one or more alternative trading systems operated by BofAS. BofAS, however, does not transact on a principal basis with respect to any orders executed on behalf of MLPF&S investment advisory customers or with respect to any MLPF&S customer orders in option contracts. BofAS stands to realize 100% of any profits or losses generated when BofAS trades as agent or principal with respect to MLPF&S customer orders. In addition, BofAS may route MLPF&S customer orders to other venues including but not limited to national securities exchanges, multi-lateral trading facilities, other alternative trading systems or external liquidity providers, or broker-dealers. For information about BofAS's routing of its customer orders in NMS securities and the material aspects of its relationships with its identified trading venues, see BofAS's quarterly public disclosure, available at <http://public.s3.com/rule606/bofas>. When BofAS routes orders to certain SEC-registered securities exchanges, BofAS pays fees and receives credits in accordance with that market center's published fee schedule filed with the SEC, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by a market center to BofAS over a period of time will exceed the charges assessed. Likewise, in some cases, the charges over a period of time will exceed the credits. BofAS passes through to MLPF&S the net credit or net charge attributable to MLPF&S customer orders. Aside from holdings that BofAS may acquire from time to time as part of its ordinary market making, block positioning, client facilitation and related hedging activities, an MLPF&S affiliate under common control may acquire equity stakes in market centers as part of a strategic investment. In this regard, an MLPF&S affiliate owns a minority equity investment stake in the following market centers and therefore stands to participate as a shareholder/investor in the profits that each market center realizes in part from the execution of securities transactions, including the execution of MLPF&S customer orders: Members Exchange (MEMX); CME; Tokyo Financial Exchange; JapanNext; Borsa Istanbul (BIST); Xpansiv; Kezar Trading (Level and Luminex); Curve Global; Trumid; MTS S.p.A.; iSwap; Philippine Dealing Systems; PureStream Trading Technologies, Inc.; Equilend; Zambato; LedgerEdge; and Liquidity Match (FXSpotStream). BofAS or an affiliate also own an equity stake in Miami International Holdings, Inc., which is the parent company of the MIAX family of options exchanges, including MIAX Pearl, LLC and MIAX Emerald, LLC. Additionally, BofAS owns and is the broker-dealer operator of Instinct X®, an NMS stock Alternative Trading System in the United States

CITADEL SECURITIES LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Two Sigma Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

NEW YORK STOCK EXCHANGE, INC.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

G1 Execution Services, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

UBS Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The Nasdaq Stock Market LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

NYSE Arca, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

November 2024

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	39.68	4.96	53.51	1.85

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)
BofA Securities, Inc.	86.44	71.48	89.91	96.78	99.24	-9,975.06	-0.1637	-160,749.92	-5.5446	530,459.23	17.9827	7,482.24	1.2179
CITADEL SECURITIES LLC	3.04	7.61	0.14	0.00	0.33	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.55	6.41	0.11	0.00	0.13	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.89	4.74	0.08	0.00	0.00	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)
Two Sigma Securities, LLC	1.44	3.62	0.06	0.00	0.12	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.22	3.07	0.05	0.00	0.08	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.01	2.53	0.05	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE Arca, Inc.	0.69	0.19	2.71	0.89	0.02	-2,182.80	-15.1110	-4,949.43	-15.2979	1,350.26	18.1034	-0.80	-1.4811
The Nasdaq Stock Market LLC	0.69	0.14	2.14	0.98	0.03	-225.20	-2.2829	-6,401.64	-16.7782	6,295.69	25.1797	14.03	20.0463
NEW YORK STOCK EXCHANGE, INC.	0.67	0.14	1.81	0.97	0.02	-453.16	-4.2788	-4,347.95	-12.4973	3,240.28	16.5623	-16.80	-4.2054

Material Aspects:

BofA Securities, Inc.:

Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") is a broker-dealer that executes its customer orders in National Market System ("NMS") securities as agent. MLPF&S routes the bulk of its customer held orders in NMS stocks and NMS securities that are option contracts to its affiliated broker-dealer under common control, BofA Securities, Inc. ("BofAS"), for further order handling, leveraging BofAS's connectivity and other infrastructure. As further described below, BofAS then may either further route, as agent, MLPF&S customer orders to other venues for execution or, with respect to MLPF&S's brokerage customer orders in NMS stocks, BofAS may execute such MLPF&S customer orders on a principal basis. BofAS acts as a registered market maker in numerous Nasdaq and other exchange-listed securities and may execute customer orders in such securities on a principal basis. BofAS also may principally commit capital to facilitate customer transactions or serve as the contra-side to customer orders executed internally through one or more alternative trading systems operated by BofAS. BofAS, however, does not transact on a principal basis with respect to any orders executed on behalf of MLPF&S investment advisory customers or with respect to any MLPF&S customer orders in option contracts. BofAS stands to realize 100% of any profits or losses generated when BofAS trades as agent or principal with respect to MLPF&S customer orders. In addition, BofAS may route MLPF&S customer orders to other venues including but not limited to national securities exchanges, multi-lateral trading facilities, other alternative trading systems or external liquidity providers, or broker-dealers. For information about BofAS's routing of its customer orders in NMS securities and the material aspects of its relationships with its identified trading venues, see BofAS's quarterly public disclosure, available at <http://public.s3.com/rule606/bofas>. When BofAS routes orders to certain SEC-registered securities exchanges, BofAS pays fees and receives credits in accordance with that market center's published fee schedule filed with the SEC, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by a market center to BofAS over a period of time will exceed the charges assessed. Likewise, in some cases, the charges over a period of time will exceed the credits. BofAS passes through to MLPF&S the net credit or net charge attributable to MLPF&S customer orders. Aside from holdings that BofAS may acquire from time to time as part of its ordinary market making, block positioning, client facilitation and related hedging activities, an MLPF&S affiliate under common control may acquire equity stakes in market centers as part of a strategic investment. In this regard, an MLPF&S affiliate owns a minority equity investment stake in the following market centers and therefore stands to participate as a shareholder/investor in the profits that each market center realizes in part from the execution of securities transactions, including the execution of MLPF&S customer orders: Members Exchange (MEMX); CME; Tokyo Financial Exchange; JapanNext; Borsa Istanbul (BIST); Xpansiv; Kezar Trading (Level and Luminex); Curve Global; Trumid; MTS S.p.A.; iSwap; Philippine Dealing Systems; PureStream Trading Technologies, Inc.; Equilend; Zambato; LedgerEdge; and Liquidity Match (FXSpotStream). BofAS or an affiliate also own an equity stake in Miami International Holdings, Inc., which is the parent company of the MIAX family of options exchanges, including MIAX Pearl, LLC and MIAX Emerald, LLC. Additionally, BofAS owns and is the broker-dealer operator of Instinct X®, an NMS stock Alternative Trading System in the United States

CITADEL SECURITIES LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Two Sigma Securities, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

G1 Execution Services, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

UBS Securities, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

NYSE Arca, Inc.:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

The Nasdaq Stock Market LLC:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

NEW YORK STOCK EXCHANGE, INC.:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

November 2024

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	4.20	17.47	54.70	23.63

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 Marketable Limit 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 OPTIONS	29.46	0.00	10.40	50.21	0.75	0.00	0.0000	42,609.66	23.9385	544,972.08	45.4792	-19,641.08	-36.4209
Nasdaq PHLX LLC	18.94	0.00	2.14	32.10	4.24	11.90	27.6744	6,133.04	19.9890	27,784.50	20.2184	13,905.95	18.5242
Dash/IMC Financial Markets	8.34	25.41	3.13	1.60	24.73	247.60	0.2243	18,109.50	17.7249	27,426.75	32.3048	115,795.10	44.8766
Nasdaq ISE, LLC	8.33	0.00	1.85	0.37	33.01	0.00	0.0000	-11,766.76	-24.2504	12,615.23	78.8156	56,307.05	15.6841
CITADEL SECURITIES LLC	7.81	36.13	15.62	0.94	12.90	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Global Execution Brokers, LP	5.66	38.45	12.08	1.03	5.82	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The NASDAQ Options Market LLC	5.47	0.00	1.84	9.40	0.00	0.00	0.0000	-11,489.72	-16.8659	207,264.48	70.4040	0.00	0.0000
Cboe Exchange, Inc.	5.02	0.00	3.74	3.22	11.05	-4.24	-53.0000	534.01	0.9031	20,732.75	15.0989	7,197.71	1.1180
MIAX SAPPHIRE LLC	2.63	0.00	14.99	0.02	0.00	0.00	0.0000	127,715.03	45.5400	763.34	58.5833	5.76	48.0000
NYSE American LLC	1.26	0.00	1.61	0.22	3.64	0.00	0.0000	119.10	0.2945	14.64	0.0888	0.00	0.0000

Material Aspects:

NYSE ARCA OPTIONS:

When routing orders to this market center for execution, including client orders, BofA Securities, Inc. (“BofAS”) pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing during this quarter. In October, BofAS qualified for an additional \$0.25 customer posting rebate in Penny Interval Program symbols, and an additional \$0.25 customer posting rebate in non-Penny Interval Program symbols. In November and December, BofAS qualified for an additional \$0.18 customer posting rebate in Penny Interval Program symbols. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/arca-options/NYSE_Arca_Options_Fee_Schedule.pdf

Nasdaq PHLX LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange’s approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules>.

Dash/IMC Financial Markets:
Orders routed to this market center for execution may be executed by such center or may be further routed by Dash to other venues (such as exchanges or other market centers) for execution. For MLPF&S’s customer orders routed to exchanges, Dash pays fees or receives credits in accordance with the published fee schedules of the relevant exchanges, may receive incremental pricing benefits in accordance with such published fee schedules, and may participate in fee programs sponsored by the relevant exchanges. In some cases, the credits or rebates offered by relevant exchanges to Dash over a period of time may exceed the charges assessed and, in such cases, Dash passes through to BofAS the net credit or net charge attributable to MLPF&S customer orders, which BofAS in turn passes through to MLPF&S.

Nasdaq ISE, LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/ise/rules>.

CITADEL SECURITIES LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Global Execution Brokers, LP:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The NASDAQ Options Market LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. (“BofAS”) pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing benefits during this quarter. In October, November and December, BofAS qualified for an additional \$0.30 customer posting rebate in Penny Interval Program symbols and an additional \$0.30 customer posting rebate in non-Penny Interval Program symbols. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/Nasdaq%20Options%207>.

Cboe Exchange, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange’s approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.cboe.com/us/options/membership/fee_schedule/cone/.

MIAX SAPHIRE LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. (“BofAS”) pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange’s SEC approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/american-options/NYSE_American_Options_Fee_Schedule.pdf

NYSE American LLC:
When routing orders to this market center for execution, including client orders, BofA Securities, Inc. (“BofAS”) pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange’s SEC approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/american-options/NYSE_American_Options_Fee_Schedule.pdf

December 2024

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	42.37	2.53	53.54	1.56

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)
BofA Securities, Inc.	81.43	62.32	86.89	95.78	98.65	-2,659.11	-0.1557	-8,964.19	-2.7126	139,485.74	23.2357	3,826.02	2.0929
CITADEL SECURITIES LLC	4.17	9.83	0.14	0.00	0.51	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.61	8.49	0.11	0.00	0.41	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	2.66	6.26	0.09	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	2.03	4.78	0.07	0.00	0.18	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.76	4.15	0.05	0.00	0.04	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	1.70	0.56	7.82	2.35	0.11	-286.86	-1.9953	-483.39	-2.6587	1,269.36	19.7727	-7.40	-4.4250
UBS Securities, LLC	1.40	3.31	0.05	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	1.17	0.30	4.33	1.74	0.08	-258.92	-2.8796	-463.73	-4.7755	2,589.23	29.8138	-10.61	-5.6440
NYSE Arca, Inc.	0.02	0.00	0.08	0.04	0.00	0.00	0.0000	-80.85	-30.0000	481.33	27.7956	0.00	0.0000

Material Aspects:

BofA Securities, Inc.:

Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") is a broker-dealer that executes its customer orders in National Market System ("NMS") securities as agent. MLPF&S routes the bulk of its customer held orders in NMS stocks and NMS securities that are option contracts to its affiliated broker-dealer under common control, BofA Securities, Inc. ("BofAS"), for further order handling, leveraging BofAS's connectivity and other infrastructure. As further described below, BofAS then may either further route, as agent, MLPF&S customer orders to other venues for execution or, with respect to MLPF&S's brokerage customer orders in NMS stocks, BofAS may execute such MLPF&S customer orders on a principal basis. BofAS acts as a registered market maker in numerous Nasdaq and other exchange-listed securities and may execute customer orders in such securities on a principal basis. BofAS also may principally commit capital to facilitate customer transactions or serve as the contra-side to customer orders executed internally through one or more alternative trading systems operated by BofAS. BofAS, however, does not transact on a principal basis with respect to any orders executed on behalf of MLPF&S investment advisory customers or with respect to any MLPF&S customer orders in option contracts. BofAS stands to realize 100% of any profits or losses generated when BofAS trades as agent or principal with respect to MLPF&S customer orders. In addition, BofAS may route MLPF&S customer orders to other venues including but not limited to national securities exchanges, multi-lateral trading facilities, other alternative trading systems or external liquidity providers, or broker-dealers. For information about BofAS's routing of its customer orders in NMS securities and the material aspects of its relationships with its identified trading venues, see BofAS's quarterly public disclosure, available at <http://public.s3.com/rule606/bofas>. When BofAS routes orders to certain SEC-registered securities exchanges, BofAS pays fees and receives credits in accordance with that market center's published fee schedule filed with the SEC, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by a market center to BofAS over a period of time will exceed the charges assessed. Likewise, in some cases, the charges over a period of time will exceed the credits. BofAS passes through to MLPF&S the net credit or net charge attributable to MLPF&S customer orders. Aside from holdings that BofAS may acquire from time to time as part of its ordinary market making, block positioning, client facilitation and related hedging activities, an MLPF&S affiliate under common control may acquire equity stakes in market centers as part of a strategic investment. In this regard, an MLPF&S affiliate owns a minority equity investment stake in the following market centers and therefore stands to participate as a shareholder/investor in the profits that each market center realizes in part from the execution of securities transactions, including the execution of MLPF&S customer orders: Members Exchange (MEMX); CME; Tokyo Financial Exchange; JapanNext; Borsa Istanbul (BIST); Xpansiv; Kezar Trading (Level and Luminex); Curve Global; Trumid; MTS S.p.A.; iSwap; Philippine Dealing Systems; PureStream Trading Technologies, Inc.; Equilend; Zambato; LedgerEdge; and Liquidity Match (FXSpotStream). BofAS or an affiliate also own an equity stake in Miami International Holdings, Inc., which is the parent company of the MIA family of options exchanges, including MIA Pearl, LLC and MIA Emerald, LLC. Additionally, BofAS owns and is the broker-dealer operator of Instinct X®, an NMS stock Alternative Trading System in the United States

CITADEL SECURITIES LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Two Sigma Securities, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

G1 Execution Services, LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

NEW YORK STOCK EXCHANGE, INC.:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

UBS Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The Nasdaq Stock Market LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

NYSE Arca, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center’s published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

December 2024

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	40.41	5.12	52.72	1.75

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)
BofA Securities, Inc.	86.08	70.68	90.68	97.00	99.29	-11,987.90	-0.1760	-236,580.85	-6.8331	615,722.16	17.8870	8,869.86	1.1737
CITADEL SECURITIES LLC	3.15	7.77	0.12	0.00	0.24	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.68	6.60	0.12	0.00	0.10	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.98	4.89	0.09	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.51	3.73	0.07	0.00	0.12	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.32	3.25	0.05	0.00	0.13	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.05	2.59	0.04	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The Nasdaq Stock Market LLC	0.65	0.13	1.97	0.94	0.04	-231.47	-1.9629	-6,739.69	-14.9032	6,800.93	24.0584	-24.56	-3.8923
NYSE Arca, Inc.	0.63	0.17	2.51	0.82	0.03	-2,296.44	-15.0512	-5,962.42	-13.8655	2,337.75	21.1949	-11.37	-4.5083

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)
NEW YORK STOCK EXCHANGE, INC.	0.61	0.13	1.72	0.89	0.05	-716.16	-5.1656	-5,459.58	-12.5776	4,152.15	15.2182	-9.30	-1.2747

Material Aspects:

BofA Securities, Inc.:
Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") is a broker-dealer that executes its customer orders in National Market System ("NMS") securities as agent. MLPF&S routes the bulk of its customer held orders in NMS stocks and NMS securities that are option contracts to its affiliated broker-dealer under common control, BofA Securities, Inc. ("BofAS"), for further order handling, leveraging BofAS's connectivity and other infrastructure. As further described below, BofAS then may either further route, as agent, MLPF&S customer orders to other venues for execution or, with respect to MLPF&S's brokerage customer orders in NMS stocks, BofAS may execute such MLPF&S customer orders on a principal basis. BofAS acts as a registered market maker in numerous Nasdaq and other exchange-listed securities and may execute customer orders in such securities on a principal basis. BofAS also may principally commit capital to facilitate customer transactions or serve as the contra-side to customer orders executed internally through one or more alternative trading systems operated by BofAS. BofAS, however, does not transact on a principal basis with respect to any orders executed on behalf of MLPF&S investment advisory customers or with respect to any MLPF&S customer orders in option contracts. BofAS stands to realize 100% of any profits or losses generated when BofAS trades as agent or principal with respect to MLPF&S customer orders. In addition, BofAS may route MLPF&S customer orders to other venues including but not limited to national securities exchanges, multi-lateral trading facilities, other alternative trading systems or external liquidity providers, or broker-dealers. For information about BofAS's routing of its customer orders in NMS securities and the material aspects of its relationships with its identified trading venues, see BofAS's quarterly public disclosure, available at <http://public.s3.com/rule606/bofas>. When BofAS routes orders to certain SEC-registered securities exchanges, BofAS pays fees and receives credits in accordance with that market center's published fee schedule filed with the SEC, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by a market center to BofAS over a period of time will exceed the charges assessed. Likewise, in some cases, the charges over a period of time will exceed the credits. BofAS passes through to MLPF&S the net credit or net charge attributable to MLPF&S customer orders. Aside from holdings that BofAS may acquire from time to time as part of its ordinary market making, block positioning, client facilitation and related hedging activities, an MLPF&S affiliate under common control may acquire equity stakes in market centers as part of a strategic investment. In this regard, an MLPF&S affiliate owns a minority equity investment stake in the following market centers and therefore stands to participate as a shareholder/investor in the profits that each market center realizes in part from the execution of securities transactions, including the execution of MLPF&S customer orders: Members Exchange (MEMX); CME, Tokyo Financial Exchange; JapanNext; Borsa Istanbul (BIST); Xpansiv; Kezar Trading (Level and Luminex); Curve Global; Trumid; MTS S.p.A.; iSwap; Philippine Dealing Systems; PureStream Trading Technologies, Inc.; Equilend; Zambato; LedgerEdge; and Liquidity Match (FXSpotStream). BofAS or an affiliate also own an equity stake in Miami International Holdings, Inc., which is the parent company of the MIAX family of options exchanges, including MIAX Pearl, LLC and MIAX Emerald, LLC. Additionally, BofAS owns and is the broker-dealer operator of Instinct X®, an NMS stock Alternative Trading System in the United States

CITADEL SECURITIES LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Virtu Americas, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Jane Street Capital:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Two Sigma Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

G1 Execution Services, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

UBS Securities, LLC:
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The Nasdaq Stock Market LLC:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7>.

NYSE Arca, Inc.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

NEW YORK STOCK EXCHANGE, INC.:
When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf.

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	4.02	16.62	56.10	23.26

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)
NYSE ARCA OPTIONS	27.55	0.00	10.76	45.63	0.70	0.00	0.0000	51,951.29	29.2934	521,932.76	45.8609	-17,700.54	-33.0049
Nasdaq PHLX LLC	22.53	0.01	2.14	37.67	4.49	26.60	51.1538	7,481.13	23.6132	36,371.15	23.8656	18,131.65	19.0841
Nasdaq ISE, LLC	8.38	0.00	1.75	0.41	33.78	0.00	0.0000	-8,094.15	-18.2531	14,023.07	71.7293	58,814.31	14.8759
Dash/IMC Financial Markets	8.06	25.03	2.94	1.58	24.42	111.90	0.1045	16,739.47	16.9928	26,375.24	32.7143	80,700.58	32.4380
CITADEL SECURITIES LLC	7.47	37.01	15.87	0.86	12.29	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Global Execution Brokers, LP	5.42	37.95	12.24	0.95	5.70	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
The NASDAQ Options Market LLC	5.30	0.00	1.89	8.88	0.00	0.00	0.0000	-8,295.03	-13.4206	210,757.25	72.3891	0.00	0.0000
Cboe Exchange, Inc.	4.86	0.00	3.37	2.93	11.40	-9.89	-43.0000	513.86	0.9370	18,857.14	14.1468	15,433.52	2.3939
MIAX SAPPHERE LLC	2.49	0.00	14.86	0.03	0.00	0.00	0.0000	132,087.76	47.2618	1,078.19	55.6916	10.98	52.2857
NYSE American LLC	1.31	0.00	2.08	0.22	3.61	0.00	0.0000	136.32	0.3245	4.32	0.0371	0.00	0.0000

Material Aspects:

NYSE ARCA OPTIONS:

When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing during this quarter. In October, BofAS qualified for an additional \$0.25 customer posting rebate in Penny Interval Program symbols, and an additional \$0.25 customer posting rebate in non-Penny Interval Program symbols. In November and December, BofAS qualified for an additional \$0.18 customer posting rebate in Penny Interval Program symbols.

For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/arca-options/NYSE_Arca_Options_Fee_Schedule.pdf

Nasdaq PHLX LLC:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/phlx/rules>.

Nasdaq ISE, LLC:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/ise/rules>.

Dash/IMC Financial Markets:

Orders routed to this market center for execution may be executed by such center or may be further routed by Dash to other venues (such as exchanges or other market centers) for execution. For MLPF&S's customer orders routed to exchanges, Dash pays fees or receives credits in accordance with the published fee schedules of the relevant exchanges, may receive incremental pricing benefits in accordance with such published fee schedules, and may participate in fee programs sponsored by the relevant exchanges. In some cases, the credits or rebates offered by relevant exchanges to Dash over a period of time may exceed the charges assessed and, in such cases, Dash passes through to BofAS the net credit or net charge attributable to MLPF&S customer orders, which BofAS in turn passes through to MLPF&S.

CITADEL SECURITIES LLC:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

Global Execution Brokers, LP:

MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter.

The NASDAQ Options Market LLC:

When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. BofAS qualified for various tier pricing benefits during this quarter. In October, November and December, BofAS qualified for an additional \$0.30 customer posting rebate in Penny Interval Program symbols and an additional \$0.30 customer posting rebate in non-Penny Interval Program symbols. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule available at: <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/Nasdaq%20Options%207>.

Cboe Exchange, Inc.:

When routing orders to this market center for execution, including client orders, BofAS pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.cboe.com/us/options/membership/fee_schedule/cone/.

MIAX SAPPHERE LLC:

When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's SEC approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/american-options/NYSE_American_Options_Fee_Schedule.pdf

NYSE American LLC:

When routing orders to this market center for execution, including client orders, BofA Securities, Inc. ("BofAS") pays fees or receives credits in accordance with this market center's published fee schedule, and may receive incremental pricing benefits if certain volume thresholds are met in accordance with such published fee schedule. In some cases, the credits offered by this market center to BofAS over a period of time may exceed the charges assessed. In addition, BofAS participates in, and may receive a marketing fee credit under this exchange's SEC approved and administered Marketing Fee Program. BofAS did not qualify for any preferred tier pricing during this quarter. For additional information regarding the pricing tiers offered by this market center, please refer the current fee schedule at: https://www.nyse.com/publicdocs/nyse/markets/american-options/NYSE_American_Options_Fee_Schedule.pdf