Merrill Lynch Pierce Fenner & Smith Inc. - Held NMS Stocks and Options Order Routing Public Report

Generated on Thu Sep 14 2023 11:12:07 GMT-0400 (Eastern Daylight Time)

2nd Quarter, 2023

April 2023

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	37.53	2.18	57.68	2.61

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.	79.94	58.91	83.03	92.64	99.14	-1,942.78	-0.1669	-11,280.33	-5.0808	92,549.26	23.8484	5,273.09	2.2598
CITADEL SECURITIES LLC	4.68	12.43	0.20	0.00	0.35	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.35	8.91	0.12	0.00	0.26	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	2.92	0.63	10.02	4.27	0.03	-271.15	-3.1647	-952.39	-7.2721	1,148.48	14.8882	-1.32	-4.3853
Two Sigma Securities, LLC	2.54	6.76	0.08	0.00	0.17	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Nasdaq Stock Exchange (INET)	1.88	0.31	5.00	2.87	0.04	-173.24	-4.0287	-786.34	-14.0890	1,083.06	23.7405	-1.95	-4.9801
UBS Securities, LLC	1.69	4.49	0.06	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.49	3.98	0.05	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.34	3.58	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.	0.03	0.00	0.18	0.05	0.00	0.00	0.0000	-139.50	-30.0000	96.42	20.0188	0.48	30.9677

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 Instanbul (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

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

Nasdaq Stock Exchange (INET):
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

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

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

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.

April 2023

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	36.53	3.91	56.66	2.89

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.	85.36	67.57	87.53	95.96	99.56	-7,454.18	-0.1733	-108,059.46	-6.0601	325,262.53	18.4148	-21,195.48	-1.9774
CITADEL SECURITIES LLC	3.64	9.91	0.25	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.16	5.89	0.16	0.00	0.07	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.98	5.38	0.14	0.00	0.12	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.29	3.52	0.10	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.16	3.16	0.08	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.05	2.86	0.07	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE Arca, Inc.	0.98	0.21	3.69	1.34	0.02	-1,586.19	-15.1172	-4,046.22	-15.7588	885.78	14.2965	-6.99	-5.5441
NEW YORK STOCK EXCHANGE, INC.	0.83	0.17	2.63	1.18	0.02	-470.75	-4.8024	-3,834.40	-14.0882	2,515.44	14.5325	6.35	1.7079
Nasdaq Stock Exchange (INET)	0.77	0.13	2.66	1.09	0.03	-288.24	-4.6076	-4,389.73	-19.2550	3,562.22	24.9313	9.31	4.3115

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 Instanbul (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.

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.

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.

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.

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.

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.

Nasdaq Stock Exchange (INET):
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.

April 2023

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
100.00	5.68	15.65	56.71	21.97

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	29.36	0.00	13.82	47.86	0.26	0.00	0.0000	43,419.23	23.4378	582,810.58	55.7846	75.09	2.2998
Dash Financial Technologies	23.33	30.30	11.19	4.08	79.86	0.00	0.0000	15,557.74	6.1667	12,941.56	9.9260	-18,487.06	-11.0345
PHILADELPHIA OPTIONS EXCHANGE	22.95	0.00	2.51	39.49	0.76	0.00	0.0000	-782.63	-2.5100	-47.26	-0.0394	-60.56	-2.4331
CITADEL SECURITIES LLC	3.95	44.75	8.14	0.04	0.51	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE AMEX OPTIONS	3.10	0.00	3.19	0.09	11.62	0.00	0.0000	260.28	0.3662	37.20	2.9784	0.12	0.0304
Cboe Exchange, Inc.	3.07	0.00	5.50	2.94	2.48	0.00	0.0000	-23,832.40	-31.3712	-26,741.23	-43.9425	-1,177.19	-25.9407
NASDAQ OPTIONS MARKET	2.79	0.00	5.02	3.53	0.03	0.00	0.0000	-47,248.82	-34.9538	85,660.99	46.8831	24.79	3.1823
Global Execution Brokers, LP	2.58	24.95	6.95	0.04	0.22	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INTERNATIONAL SECURITIES EXCHANGE, LLC	1.78	0.00	2.67	0.86	3.99	0.00	0.0000	-11,714.56	-23.4968	17,062.27	78.5990	-58.29	-8.7919

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)
Cboe C2 Exchange, Inc.	1.53	0.00	9.47	0.05	0.09	0.00	0.0000	-120,970.60	-41.7695	-1,025.18	-51.5944	-168.07	-41.7047

Material Aspects:

NYSE ARCA OPTIONS:
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 qualified for various tier pricing during this quarter. In April, BofAS qualified for an additional $0.25 customer posting rebate in both Penny Interval Program symbols and Non-Penny Interval Program symbols. In May, BofAS qualified for an additional $0.18 customer posting rebate in Penny Interval Program symbols. In June, BofAS qualified for an additional $0.20 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.

Dash Financial Technologies:
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.

PHILADELPHIA OPTIONS EXCHANGE:
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.

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.

NYSE AMEX 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. 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

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/.

NASDAQ OPTIONS MARKET:
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 qualified for various tier pricing during this quarter. In April, May and June, BofAS qualified for an additional $0.30 customer posting rebate in Penny Interval Program symbols and an additional $0.20 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.

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.

INTERNATIONAL SECURITIES EXCHANGE, 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.

Cboe C2 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. 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/ctwo/.

May 2023

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	38.64	2.13	56.81	2.43

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.	80.18	59.58	82.96	93.30	98.73	-1,838.86	-0.1400	-8,219.56	-3.7899	112,746.04	24.1429	5,246.66	2.3570
CITADEL SECURITIES LLC	4.74	12.22	0.18	0.01	0.50	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.37	8.67	0.13	0.00	0.44	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	2.70	0.61	10.00	3.96	0.05	-330.36	-2.7265	-828.76	-4.2843	1,311.64	17.1578	-3.96	-2.7873
Two Sigma Securities, LLC	2.61	6.74	0.12	0.00	0.21	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.70	4.39	0.07	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Nasdaq Stock Exchange (INET)	1.67	0.33	5.19	2.51	0.06	-344.73	-4.8525	-873.50	-11.7211	1,561.27	24.9947	-3.46	-3.7399
G1 Execution Services, LLC	1.51	3.90	0.07	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.38	3.56	0.04	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE Arca, Inc.	0.03	0.00	0.22	0.05	0.00	0.00	0.0000	-149.22	-27.9014	153.41	20.8193	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 Instanbul (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

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

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

Nasdaq Stock Exchange (INET):
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.

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

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

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.

May 2023

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	36.54	4.10	56.25	3.11

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.	86.14	69.67	88.52	95.94	99.29	-7,933.87	-0.1566	-140,158.85	-6.1576	419,257.72	19.8908	-18,075.66	-1.3865
CITADEL SECURITIES LLC	3.42	9.30	0.23	0.00	0.28	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.39	6.51	0.15	0.00	0.12	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.86	5.06	0.11	0.00	0.20	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.20	3.27	0.08	0.00	0.01	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)
G1 Execution Services, LLC	1.09	2.96	0.07	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	0.99	2.70	0.06	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE Arca, Inc.	0.93	0.18	3.30	1.29	0.03	-1,597.12	-14.4195	-3,996.48	-14.3230	1,315.69	18.7260	-37.12	-8.5646
NEW YORK STOCK EXCHANGE, INC.	0.82	0.15	2.65	1.16	0.02	-402.80	-3.7573	-4,426.08	-12.6106	3,770.72	15.8243	-10.32	-2.9759
Nasdaq Stock Exchange (INET)	0.78	0.13	2.43	1.13	0.03	-300.25	-4.0903	-5,455.12	-18.7881	5,241.96	25.4578	-15.23	-5.4880

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 Instanbul (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.

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.

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.

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.

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.

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.

Nasdaq Stock Exchange (INET):

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.

May 2023

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	0.20	24.67	55.72	19.41

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	31.33	0.00	14.01	49.59	1.28	0.00	0.0000	4,827.60	2.5383	618,440.34	47.3529	567.41	33.6143
PHILADELPHIA OPTIONS EXCHANGE	22.06	0.00	2.45	37.11	4.02	0.00	0.0000	-2,766.73	-4.7178	-68.98	-0.0485	-49.37	-0.8007
Dash Financial Technologies	9.42	26.19	2.70	2.35	38.07	0.00	0.0000	5,719.10	4.5070	9,713.26	9.8833	167.02	0.1786
Cboe Exchange, Inc.	6.30	0.00	10.30	4.48	6.50	0.00	0.0000	-4,928.86	-1.5853	-17,563.99	-13.6321	-134.88	-0.3209
CITADEL SECURITIES LLC	5.99	44.34	13.15	0.46	12.38	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INTERNATIONAL SECURITIES EXCHANGE, LLC	5.99	0.00	1.64	0.77	26.53	0.00	0.0000	-15,852.88	-24.7516	23,803.95	79.2461	-26.11	-10.8792
Global Execution Brokers, LP	5.33	29.47	16.42	0.55	4.72	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OPTIONS MARKET	2.76	0.00	3.34	3.46	0.03	0.00	0.0000	-59,195.46	-38.2170	114,340.35	50.6491	-41.94	-4.8262
NASDAQ OMX BX OPTIONS	1.85	0.00	7.38	0.05	0.02	0.00	0.0000	-132,981.78	-36.7234	-631.67	-43.8965	-209.96	-35.7075
Cboe C2 Exchange, Inc.	1.73	0.00	6.62	0.05	0.35	0.00	0.0000	-152,352.73	-41.5685	-563.98	-42.6285	-221.70	-37.2605

Material Aspects:

NYSE ARCA OPTIONS:
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 qualified for various tier pricing during this quarter. In April, BofAS qualified for an additional $0.25 customer posting rebate in both Penny Interval Program symbols and Non-Penny Interval Program symbols. In May, BofAS qualified for an additional $0.18 customer posting rebate in Penny Interval Program symbols. In June, BofAS qualified for an additional $0.20 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.

PHILADELPHIA OPTIONS EXCHANGE:

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 Financial Technologies:
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.

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/.

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.

INTERNATIONAL SECURITIES EXCHANGE, 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.

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.

NASDAQ OPTIONS MARKET:
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 qualified for various tier pricing during this quarter. In April, May and June, BofAS qualified for an additional $0.30 customer posting rebate in Penny Interval Program symbols and an additional $0.20 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 OMX BX OPTIONS:
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 qualified for various tier pricing during this quarter. In April, May and June, BofAS qualified for an additional $0.30 customer posting rebate in Penny Interval Program symbols and an additional $0.20 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://api.ibkr.com/en/index.php?f=4099&nhf=T

Cboe C2 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. 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/ctwo/.

June 2023

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	38.42	2.48	56.61	2.49

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.	80.61	60.80	77.02	93.40	98.99	-2,160.44	-0.1624	-9,227.06	-4.1556	113,118.71	24.4079	5,645.05	2.3858

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CITADEL SECURITIES LLC	4.59	11.90	0.15	0.00	0.41	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	3.30	8.55	0.10	0.00	0.32	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC.	2.69	0.63	11.22	3.83	0.04	-293.22	-2.2086	-2,393.19	-9.1030	1,113.09	13.9715	-2.51	-2.1513
Two Sigma Securities, LLC	2.39	6.20	0.09	0.00	0.18	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Nasdaq Stock Exchange (INET)	1.70	0.31	7.09	2.48	0.03	-165.93	-2.9022	-2,492.39	-20.4298	1,055.17	15.3971	-5.40	-2.8490
UBS Securities, LLC	1.63	4.25	0.06	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.47	3.83	0.05	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	1.36	3.53	0.04	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Members Exchange (MEMX)	0.06	0.00	1.08	0.06	0.00	0.00	0.0000	-658.30	-30.0000	53.07	8.7918	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 Instanbul (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

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

Nasdaq Stock Exchange (INET):

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

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

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

Members Exchange (MEMX):
MLPF&S did not receive any payment for order flow from or have any profit-sharing arrangement with this venue during the calendar quarter

June 2023

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	36.00	4.37	56.72	2.90

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
BofA Securities, Inc.	86.60	70.92	86.42	95.90	99.54	-10,143.26	-0.1939	-149,508.81	-6.7568	427,323.51	20.4941	-16,608.26	-1.3711
CITADEL SECURITIES LLC	3.25	8.98	0.15	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	2.30	6.37	0.12	0.00	0.08	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	1.65	4.56	0.09	0.00	0.15	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	1.12	3.12	0.06	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	1.04	2.87	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.	0.96	0.20	3.90	1.27	0.02	-1,803.05	-15.0646	-5,975.53	-18.4752	1,207.05	20.8749	-11.73	-11.1834
Jane Street Capital	0.95	2.62	0.05	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.	0.86	0.15	2.67	1.21	0.01	-398.23	-3.8732	-4,974.40	-14.4591	3,024.98	16.2713	1.68	0.6441

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
Nasdaq Stock Exchange (INET)	0.84	0.13	3.12	1.16	0.03	-245.17	-3.1901	-6,405.25	-20.1516	3,514.06	21.9805	-1.01	-0.6438

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 Instanbul (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.

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.

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.

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.

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

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.

Nasdaq Stock Exchange (INET):
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.

June 2023

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	2.91	21.93	56.43	18.73

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	29.54	0.00	7.13	48.98	1.78	0.00	0.0000	1,592.52	0.9858	643,079.10	48.4212	386.67	15.9058
PHILADELPHIA OPTIONS EXCHANGE	21.81	0.00	3.99	35.33	5.35	0.00	0.0000	-1,429.23	-2.4342	-82.54	-0.0557	0.00	0.0000
CITADEL SECURITIES LLC	7.27	43.11	12.13	0.58	16.18	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Dash Financial Technologies	7.27	29.99	3.42	1.86	24.54	0.00	0.0000	7,575.08	5.5148	8,664.16	9.9365	-404.66	-0.5042
INTERNATIONAL SECURITIES EXCHANGE, LLC	7.12	0.00	1.99	0.86	33.10	0.00	0.0000	-15,023.92	-29.0654	19,633.84	77.3961	-110.59	-26.2062
Cboe Exchange, Inc.	6.45	0.00	9.94	4.99	7.77	0.00	0.0000	-12,230.19	-4.9109	-14,684.02	-9.0110	-51.23	-0.0807
Global Execution Brokers, LP	5.64	26.89	14.52	0.75	6.68	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OPTIONS MARKET	3.30	0.00	5.18	3.82	0.03	0.00	0.0000	-59,971.55	-39.8874	105,359.48	48.1028	-193.50	-19.5850
NASDAQ OMX BX OPTIONS	1.82	0.00	7.24	0.41	0.02	0.00	0.0000	-95,602.78	-38.0695	-866.54	-47.3002	-292.76	-40.2143
BOX Exchange LLC	1.46	0.00	6.29	0.13	0.04	0.00	0.0000	16,081.10	7.5271	23.80	2.3588	33.40	9.6812

Material Aspects:

NYSE ARCA OPTIONS:
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 qualified for various tier pricing during this quarter. In April, BofAS qualified for an additional $0.25 customer posting rebate in both Penny Interval Program symbols and Non-Penny Interval Program symbols. In May, BofAS qualified for an additional $0.18 customer posting rebate in Penny Interval Program symbols. In June, BofAS qualified for an additional $0.20 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.

PHILADELPHIA OPTIONS EXCHANGE:
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.

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 Financial Technologies:
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.

INTERNATIONAL SECURITIES EXCHANGE, 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.

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.

NASDAQ OPTIONS MARKET:
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 qualified for various tier pricing during this quarter. In April, May and June, BofAS qualified for an additional $0.30 customer posting rebate in Penny Interval Program symbols and an additional $0.20 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 OMX BX OPTIONS:
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 qualified for various tier pricing during this quarter. In April, May and June, BofAS qualified for an additional $0.30 customer posting rebate in Penny Interval Program symbols and an additional $0.20 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://api.ibkr.com/en/index.php?f=4099&nhf=T

BOX Exchange 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://boxoptions.com/fee-schedule/