

Morgan Stanley Smith Barney LLC - Held NMS Stocks and Options Order Routing Public Report

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4th Quarter, 2022

October 2022

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	94.71	0.34	3.35	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)
Morgan Stanley & Co., LLC	91.43	93.09	67.72	59.30	65.52	-13.32	-0.0010	-170.26	-0.3650	17,407.33	25.1267	-8,054.41	-4.7935
CITADEL SECURITIES LLC	4.85	3.80	17.06	22.65	27.18	0.00	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	3.53	2.94	14.64	17.53	7.26	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	0.19	0.18	0.58	0.53	0.04	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer orders opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S. securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

October 2022

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	79.24	0.70	17.10	2.96

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
Morgan Stanley & Co., LLC	86.83	92.31	76.69	65.24	67.28	49.67	0.0013	-666.48	-0.1170	64,326.40	16.3348	-13,210.20	-4.1347
CITADEL SECURITIES LLC	7.45	4.10	11.97	19.64	25.81	0.49	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	5.43	3.38	10.95	14.46	6.75	0.02	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	0.29	0.21	0.40	0.66	0.16	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.00	0.00	0.00	0.03	18.7500	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Jane Street Capital	0.00	0.00	0.00	0.00	0.00	0.01	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer orders opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S. securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

UBS Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to UBS Securities, LLC ("UBS") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including UBS. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com//quarterly-order-routing-report>.

UBS generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from UBS in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from UBS for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and UBS do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to UBS.

There is a potential conflict for a market maker such as UBS both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as UBS can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as UBS's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that UBS may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to UBS, UBS also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize UBS to route higher percentages of MSSB customer orders to particular venues over others, subject to UBS's independent order routing and best execution obligations. Exchange rebates provided to UBS for MSSB customer executions are not passed through to MSSB or its customers, although UBS could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect Self-Directed Channel orders, or both.

Jane Street Capital:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Jane Street Capital ("Jane Street") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Jane Street. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com//quarterly-order-routing-report>.

Jane Street generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Jane Street in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Jane Street for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and Jane Street do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Jane Street.

There is a potential conflict for a market maker such as Jane Street both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that Jane Street may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to Jane Street, Jane Street also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Jane Street to route higher percentages of MSSB customer orders to particular venues over others, subject to Jane Street independent order routing and best execution obligations. Exchange rebates provided to Jane Street for MSSB customer executions are not passed through to MSSB or its customers, although Jane Street could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect Self-Directed Channel orders, or both.

October 2022

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	40.35	7.48	38.44	13.74

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)
Morgan Stanley & Co., LLC	83.84	83.72	84.23	83.69	84.38	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Citadel Securities, LLC	12.09	12.13	11.72	12.33	11.52	0.48	48.0000	0.48	9.6000	0.00	0.0000	2.40	48.0000
Wolverine Execution Services, LLC	3.01	3.10	2.94	2.99	2.82	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Global Execution Brokers LP	1.05	1.04	1.11	0.98	1.21	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Dash/IMC Financial Markets	0.01	0.00	0.00	0.00	0.07	0.00	0.0000	0.00	0.0000	0.96	48.0000	1.92	48.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor.

MSSB sends orders in U.S.-listed options to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MSSB customer orders in U.S.-listed options that are sent to MS&Co are then routed by MS&Co to a U.S. options exchange to be either crossed or executed against MS&Co interest and/or other liquidity on such exchanges, subject to the principles of best execution. In general, MS&Co generates revenue from executing or facilitating the execution of MSSB customer orders. MSSB does not receive payment from MS&Co for the options orders it routes to MS&Co (i.e. payment for order flow), either for Full-Service Channel options orders or Self-Directed Channel options orders and MSSB and MS&Co do not have any arrangements:

- that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- for volume-based tiered payment schedules; or
- that require MSSB to route any orders or a minimum number of orders to MS&Co.

In the course of providing liquidity, MS&Co may preference option orders to MS&Co's options market maker or third-party market makers on the applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. MS&Co also participates in exchange-sponsored listed option payment for order flow programs under which MS&Co may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates, including from exchanges in which MSSB's parent company Morgan Stanley or another affiliated entity may have a financial interest. These U.S. options exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations.

MS&Co. receives rebates and pays fees for the routing of customer orders in exchange listed options to option exchanges. When the rebates received exceed the fees paid to such venue, MS&Co. receives benefits from the trading activity. In addition, certain exchanges offer volume-based tiered rates based on the type of order routed. MS&Co receives incremental pricing benefits from exchange offers volume-based tiered rates. The volume tiers are published in the fee schedule by the exchange. Exchange rebates provided and fees charged to MS&Co for MSSB customer executions by the U.S. options exchanges are not passed through to MSSB or its customers. However, MSSB is an affiliated company of MS&Co, which is a market maker on various U.S. options exchanges and MS&Co may realize market-making profits from MSSB orders routed to MS&Co for execution. In addition, MSSB orders that MS&Co executes are combined on a monthly basis with other order flow that MS&Co executes for tiered pricing program incentive purposes and it is possible that MS&Co could generate additional profit as a result of the combination of such order flow and the incentives of such tiered pricing programs. As a result of MSSB's corporate affiliation with MS&Co, MSSB may share indirectly in any such profits (whether from market-making, from pricing programs, or otherwise) generated by MS&Co.

Citadel Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel executes MSSB customer orders on U.S. listed options exchanges from which Citadel may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel options order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com//quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Citadel in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Citadel for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict to an options market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Citadel also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. In addition to revenues that Citadel may collect for executing or facilitating the execution of MSSB customer orders, Citadel may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. Citadel also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. MSSB does not share directly in any rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Wolverine Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Wolverine Execution Services, LLC ("Wolverine") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Wolverine. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Wolverine. In addition, as more fully described below, Wolverine executes MSSB customer orders on U.S. listed options exchanges from which Wolverine may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Wolverine. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel options order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com//quarterly-order-routing-report>.

Wolverine generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Wolverine in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Wolverine for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Wolverine with respect to Full-Service Channel order executions. MSSB and Wolverine do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Wolverine.

There is a potential conflict to an options market maker such as Wolverine both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Wolverine can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Wolverine's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Wolverine also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. In addition to revenues that Wolverine may collect for executing or facilitating the execution of MSSB customer orders, Wolverine may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Wolverine to route higher percentages of MSSB customer orders to particular venues over others, subject to Wolverine's independent order routing and best execution obligations. Wolverine also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. MSSB does not share directly in any rebates Wolverine receives for executions of MSSB customer orders, although Wolverine could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Global Execution Brokers LP:

Morgan Stanley Smith Barney LLC ("MSSB") routes customer orders in NMS securities that are options contracts to Global Execution Brokers, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to G1X.

G1X generates revenue from executing or facilitating the execution of MSSB Self-Directed Channel customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from G1X (based upon the consideration G1X receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from G1X for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, MSSB does not route Full-Service Channel customer orders to G1X. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict to an options market maker such as G1X both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories, with the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders mitigated by market maker competition for order flow (as measured by the amount of price improvement provided), under the same general payment for order flow terms applicable to G1X.

G1X also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, G1X can earn a profit from such market-making executions. In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders, G1X may also receive remuneration from the U.S. options exchanges to which it routes or directs Self-Directed Channel customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligation. Exchange rebates provided to G1X for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Dash/IMC Financial Markets:

Morgan Stanley Smith Barney LLC ("MSSB") routes U.S.-listed options orders to Dash Financial Technologies, LLC ("Dash") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their MSSB accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all E*TRADE from Morgan Stanley Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to Dash.

Dash generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Dash (based upon the consideration Dash receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Dash for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not route Full-Service Channel customer orders to Dash. Furthermore, MSSB and Dash do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Dash.

In connection with Dash's handling of MSSB retail equity option orders and solely with respect to Self-Directed Channel orders, Dash has arrangements with multiple, unaffiliated liquidity providers, including IMC Financial Markets, designed to facilitate liquidity provision and price improvement opportunities. Pursuant to these arrangements, Dash routes MSSB Self-Directed Channel options orders to exchanges and may preference the liquidity providers on such applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. The liquidity providers provide Dash with payment in connection with Dash's routing of MSSB Self-Directed Channel customer options orders, including through reciprocal order flow arrangements between Dash and such liquidity provider and/or payment per contract to Dash in return for Self-Directed Channel options orders that Dash routes or directs. Dash provides payment to MSSB on such Self-Directed Channel orders as described above based upon the compensation Dash receives from such liquidity providers. For clarity, and as indicated above, MSSB does not route Full-Service Channel orders to Dash or receive payment from Dash with respect to Full-Service Channel order executions.

There is a potential conflict to Dash and/or the liquidity provider to which Dash routes orders both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the liquidity provider seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, the liquidity provider can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay Dash (and for Dash, in turn, to pay MSSB) for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. The liquidity provider's anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories. Dash and the liquidity provider can also adjust the amount of profit that the liquidity provider shares with Dash. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Dash also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, Dash can earn a profit from such market-making executions. In addition to revenues that Dash may collect for executing or facilitating the execution of Self-Directed Channel customer orders, Dash may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Dash to route higher percentages of MSSB customer orders to particular venues over others, subject to Dash's independent order routing and best execution obligations. MSSB does not share directly in any rebates Dash receives for executions of MSSB customer orders, although Dash could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

November 2022

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	94.89	0.38	3.19	1.53

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)
Morgan Stanley & Co., LLC	93.38	94.81	69.58	67.09	65.68	-0.02	-0.0000	-128.22	-0.1929	19,048.74	25.2540	-4,664.75	-3.7471
CITADEL SECURITIES LLC	3.71	2.85	15.06	16.83	27.20	4.36	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Two Sigma Securities, LLC	2.76	2.20	14.83	15.78	7.11	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	0.14	0.14	0.53	0.30	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.00	0.01	0.00	0.03	16.6667	0.00	0.0000	0.02	40.0000	0.00	0.0000
Jane Street Capital	0.00	0.00	0.00	0.00	0.00	0.02	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer orders opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S. securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Jane Street Capital:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Jane Street Capital ("Jane Street") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Jane Street. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Jane Street generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Jane Street in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Jane Street for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and Jane Street do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Jane Street.

There is a potential conflict for a market maker such as Jane Street both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that Jane Street may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to Jane Street, Jane Street also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Jane Street to route higher percentages of MSSB customer orders to particular venues over others, subject to Jane Street independent order routing and best execution obligations. Exchange rebates provided to Jane Street for MSSB customer executions are not passed through to MSSB or its customers, although Jane Street could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect Self-Directed Channel orders, or both.

November 2022

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	80.04	0.82	17.08	2.06

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)
Morgan Stanley & Co., LLC	93.02	94.42	78.54	90.22	67.75	759.59	0.0185	-1,163.20	-0.1942	73,399.30	16.9314	-9,777.36	-3.2909
CITADEL SECURITIES LLC	3.97	3.03	10.99	5.38	26.25	0.68	20.0000	0.02	20.0000	0.00	0.0000	0.00	10.0000
Two Sigma Securities, LLC	2.84	2.38	10.02	4.25	5.96	0.04	20.0000	0.00	0.0000	0.01	31.0000	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)
Virtu Americas, LLC	0.16	0.17	0.42	0.15	0.04	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.02	0.00	0.00	0.13	19.6970	0.02	0.1984	0.14	22.2222	0.00	0.0000
Jane Street Capital	0.00	0.00	0.00	0.00	0.00	0.08	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
UBS Securities, LLC	0.00	0.00	0.00	0.00	0.00	0.23	18.5484	0.20	20.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer orders opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Jane Street Capital:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Jane Street Capital ("Jane Street") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Jane Street. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com//quarterly-order-routing-report>.

Jane Street generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Jane Street in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Jane Street for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and Jane Street do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Jane Street.

There is a potential conflict for a market maker such as Jane Street both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that Jane Street may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to Jane Street, Jane Street also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Jane Street to route higher percentages of MSSB customer orders to particular venues over others, subject to Jane Street independent order routing and best execution obligations. Exchange rebates provided to Jane Street for MSSB customer executions are not passed through to MSSB or its customers, although Jane Street could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

UBS Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to UBS Securities, LLC ("UBS") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including UBS. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com//quarterly-order-routing-report>.

UBS generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from UBS in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from UBS for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and UBS do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to UBS.

There is a potential conflict for a market maker such as UBS both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as UBS can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as UBS's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that UBS may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to UBS, UBS also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize UBS to route higher percentages of MSSB customer orders to particular venues over others, subject to UBS's independent order routing and best execution obligations. Exchange rebates provided to UBS for MSSB customer executions are not passed through to MSSB or its customers, although UBS could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

November 2022

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	39.78	7.44	37.38	15.39

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)
Morgan Stanley & Co., LLC	83.87	83.78	84.03	83.64	84.61	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Citadel Securities, LLC	12.08	12.07	11.92	12.32	11.57	0.96	48.0000	0.96	48.0000	2.88	48.0000	0.96	48.0000
Wolverine Execution Services, LLC	3.03	3.10	3.00	3.05	2.81	1.44	48.0000	0.48	48.0000	0.00	0.0000	0.96	48.0000
Global Execution Brokers LP	1.02	1.05	1.05	0.98	1.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Dash/IMC Financial Markets	0.00	0.00	0.00	0.00	0.01	0.48	48.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Citigroup Global Markets Inc.	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor.

MSSB sends orders in U.S.-listed options to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MSSB customer orders in U.S.-listed options that are sent to MS&Co are then routed by MS&Co to a U.S. options exchange to be either crossed or executed against MS&Co interest and/or other liquidity on such exchanges, subject to the principles of best execution. In general, MS&Co generates revenue from executing or facilitating the execution of MSSB customer orders. MSSB does not receive payment from MS&Co for the options orders it routes to MS&Co (i.e. payment for order flow), either for Full-Service Channel options orders or Self-Directed Channel options orders and MSSB and MS&Co do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to MS&Co.

In the course of providing liquidity, MS&Co may preference option orders to MS&Co's options market maker or third-party market makers on the applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. MS&Co also participates in exchange-sponsored listed option payment for order flow programs under which MS&Co may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer orders in the form of rebates, including from exchanges in which MSSB's parent company Morgan Stanley or another affiliated entity may have a financial interest. These U.S. options exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations.

MS&Co. receives rebates and pays fees for the routing of customer orders in exchange listed options to option exchanges. When the rebates received exceed the fees paid to such venue, MS&Co. receives benefits from the trading activity. In addition, certain exchanges offer volume-based tiered rates based on the type of order routed. MS&Co receives incremental pricing benefits from exchange offers volume-based tiered rates. The volume tiers are published in the fee schedule by the exchange. Exchange rebates provided and fees charged to MS&Co for MSSB customer executions by the U.S. options exchanges are not passed through to MSSB or its customers. However, MSSB is an affiliated company of MS&Co, which is a market maker on various U.S. options exchanges and MS&Co may realize market-making profits from MSSB orders routed to MS&Co for execution. In addition, MSSB orders that MS&Co executes are combined on a monthly basis with other order flow that MS&Co executes for tiered pricing program incentive purposes and it is possible that MS&Co could generate additional profit as a result of the combination of such order flow and the incentives of such tiered pricing programs. As a result of MSSB's corporate affiliation with MS&Co, MSSB may share indirectly in any such profits (whether from market-making, from pricing programs, or otherwise) generated by MS&Co.

Citadel Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel executes MSSB customer orders on U.S. listed options exchanges from which Citadel may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel options order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Citadel in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Citadel for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict to an options market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Citadel also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. In addition to revenues that Citadel may collect for executing or facilitating the execution of MSSB customer orders, Citadel may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. Citadel also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. MSSB does not share directly in any rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Wolverine Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Wolverine Execution Services, LLC ("Wolverine") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Wolverine. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Wolverine. In addition, as more fully described below, Wolverine executes MSSB customer orders on U.S. listed options exchanges from which Wolverine may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Wolverine. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Wolverine generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Wolverine in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Wolverine for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Wolverine with respect to Full-Service Channel order executions. MSSB and Wolverine do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Wolverine.

There is a potential conflict to an options market maker such as Wolverine both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Wolverine can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Wolverine's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow among MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Wolverine also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. In addition to revenues that Wolverine may collect for executing or facilitating the execution of MSSB customer orders, Wolverine may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Wolverine to route higher percentages of MSSB customer orders to particular venues over others, subject to Wolverine's independent order routing and best execution obligations. Wolverine also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. MSSB does not share directly in any rebates Wolverine receives for executions of MSSB customer orders, although Wolverine could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Global Execution Brokers LP:

Morgan Stanley Smith Barney LLC ("MSSB") routes customer orders in NMS securities that are options contracts to Global Execution Brokers, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to G1X.

G1X generates revenue from executing or facilitating the execution of MSSB Self-Directed Channel customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from G1X (based upon the consideration G1X receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from G1X for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, MSSB does not route Full-Service Channel customer orders to G1X. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict to an options market maker such as G1X both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories, with the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders mitigated by market maker competition for order flow (as measured by the amount of price improvement provided), under the same general payment for order flow terms applicable to G1X.

G1X also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, G1X can earn a profit from such market-making executions. In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders, G1X may also receive remuneration from the U.S. options exchanges to which it routes or directs Self-Directed Channel customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligation. Exchange rebates provided to G1X for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Dash/IMC Financial Markets:

Morgan Stanley Smith Barney LLC (“MSSB”) routes U.S.-listed options orders to Dash Financial Technologies, LLC (“Dash”) to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel (“Self-Directed Channel”). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their MSSB accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB’s \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all E*TRADE from Morgan Stanley Self-Directed Channel customers are customers of MSSB’s affiliate broker-dealer, E*TRADE Securities LLC (“ETS”) and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to Dash.

Dash generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Dash (based upon the consideration Dash receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Dash for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not route Full-Service Channel customer orders to Dash. Furthermore, MSSB and Dash do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Dash.

In connection with Dash’s handling of MSSB retail equity option orders and solely with respect to Self-Directed Channel orders, Dash has arrangements with multiple, unaffiliated liquidity providers, including IMC Financial Markets, designed to facilitate liquidity provision and price improvement opportunities. Pursuant to these arrangements, Dash routes MSSB Self-Directed Channel options orders to exchanges and may preference the liquidity providers on such applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. The liquidity providers provide Dash with payment in connection with Dash’s routing of MSSB Self-Directed Channel customer options orders, including through reciprocal order flow arrangements between Dash and such liquidity provider and/or payment per contract to Dash in return for Self-Directed Channel options orders that Dash routes or directs. Dash provides payment to MSSB on such Self-Directed Channel orders as described above based upon the compensation Dash receives from such liquidity providers. For clarity, and as indicated above, MSSB does not route Full-Service Channel orders to Dash or receive payment from Dash with respect to Full-Service Channel order executions.

There is a potential conflict to Dash and/or the liquidity provider to which Dash routes orders both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the liquidity provider seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, the liquidity provider can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay Dash (and for Dash, in turn, to pay MSSB) for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. The liquidity provider’s anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories. Dash and the liquidity provider can also adjust the amount of profit that the liquidity provider shares with Dash. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB’s market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Dash also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, Dash can earn a profit from such market-making executions. In addition to revenues that Dash may collect for executing or facilitating the execution of Self-Directed Channel customer orders, Dash may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Dash to route higher percentages of MSSB customer orders to particular venues over others, subject to Dash’s independent order routing and best execution obligations. MSSB does not share directly in any rebates Dash receives for executions of MSSB customer orders, although Dash could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Citigroup Global Markets Inc.:

Morgan Stanley Smith Barney LLC (“MSSB”) routes customer orders in NMS securities that are options contracts to Citigroup Global Markets Inc. (“Citigroup”) to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel (“Self-Directed Channel”). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. MSSB does not route Self-Directed Channel customer options orders to Citigroup and the tables above reflect Full-Service Channel order executions only. For clarity, MSSB does not receive payment from Citigroup for Full-Service Channel option order executions and MSSB does not route Self-Directed Channel options orders to Citigroup. Additionally, MSSB and Citigroup do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citigroup.

Citigroup may receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Citigroup to route higher percentages of MSSB customer orders to particular venues over others, subject to Citigroup’s independent order routing and best execution obligation. Exchange rebates provided to Citigroup for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although Citigroup’s receipt of such rebates could potentially be used to provide price improvement to MSSB customers.

December 2022

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
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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	96.25	0.28	2.32	1.15

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)
Morgan Stanley & Co., LLC	94.73	95.69	71.69	71.30	66.66	1.79	0.0001	-57.58	-0.0915	12,586.07	23.9078	-6,120.54	-3.7977
CITADEL SECURITIES LLC	2.96	2.35	13.89	14.85	27.20	1.17	20.0000	1.00	20.0000	0.00	0.0000	0.00	20.0000
Two Sigma Securities, LLC	2.16	1.81	13.61	13.61	6.11	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	0.15	0.15	0.80	0.22	0.04	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.02	0.02	0.00	0.13	20.3125	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer order opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S. securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

December 2022

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	84.64	0.74	12.99	1.64

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)
Morgan Stanley & Co., LLC	94.81	95.49	79.42	94.43	69.43	146.70	0.0025	-1,000.94	-0.1410	78,907.86	16.5187	-14,886.63	-3.6803
CITADEL SECURITIES LLC	2.91	2.39	10.32	2.90	26.35	0.15	20.0000	0.04	20.0000	0.03	31.0000	0.00	20.0000
Two Sigma Securities, LLC	2.15	1.98	9.76	2.60	4.16	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Virtu Americas, LLC	0.13	0.14	0.49	0.07	0.05	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
G1 Execution Services, LLC	0.00	0.00	0.01	0.00	0.00	0.00	0.0000	0.00	0.0000	0.67	30.0448	0.00	0.0000
Jane Street Capital	0.00	0.00	0.00	0.00	0.00	0.01	20.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC. ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders, apart from the U.S. securities exchange rebates described in further detail below.

Solely with respect to Full-Service Channel orders, MSSB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSSB Full-Service Channel customer equity orders on an agency, principal or riskless principal basis and may receive compensation for such executions. In connection with certain of these executions, MS&Co may internalize customer order flow to allow the customer to benefit from various sources of liquidity and to offer customer orders opportunities for price improvement. Such internalization may enable MS&Co to generate a trading profit and/or commissions or fees on the transaction. In addition, MS&Co routes orders to U.S. securities exchanges that offer cash credits for orders that provide liquidity to their books and charge explicit fees for orders that extract liquidity from their books. MS&Co receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSSB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSSB may also receive incremental pricing benefits from U.S securities exchanges and/or electronic communication networks if certain volume thresholds are met. The net of U.S. securities exchange fees paid by, and rebates provided to, MS&Co for MSSB Full-Service Channel customer executions are passed through to MSSB. As such, these rebate payments could theoretically incentivize MSSB to route a higher percentage of customer orders to MS&Co, subject to MSSB's independent order routing and best execution obligations. Additionally, affiliates of MSSB maintain ownership interests in certain market centers that stand to appreciate as a result of any profits generated from the execution of orders. Apart from a limited number of Self-Directed Channel directed orders, which MS&Co. receives from MSSB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSSB does not route Self-Directed Channel orders to MS&Co for execution directly. MSSB orders routed to U.S. securities exchanges through MS&Co will be combined with any other order flow that MS&Co routes to the exchange for the purpose of determining the applicable pricing and rebates under exchange tiered pricing models.

CITADEL SECURITIES LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Citadel may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Citadel in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Citadel to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict for a market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Citadel. A market maker such as Citadel executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Citadel may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Two Sigma Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Two Sigma Securities, LLC ("Two Sigma") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Two Sigma.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Two Sigma. In addition, as more fully described below, Two Sigma may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Two Sigma may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Two Sigma. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Two Sigma generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Two Sigma, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Two Sigma in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Two Sigma for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Two Sigma with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Two Sigma to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Two Sigma do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Two Sigma.

There is a potential conflict for a market maker such as Two Sigma both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Two Sigma can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Two Sigma's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Two Sigma. A market maker such as Two Sigma executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Two Sigma on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Two Sigma may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Two Sigma, Two Sigma also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Two Sigma to route higher percentages of MSSB customer orders to particular venues over others, subject to Two Sigma's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Two Sigma receives for executions of MSSB customer orders, although Two Sigma could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Virtu Americas, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed customer orders in NMS equity securities on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on customers' brokerage account order executions and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Virtu. In addition, as more fully described below, Virtu may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which Virtu may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Virtu. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel order statistics reflected in the tables above (which also include details on Full-Service Channel orders) are only for those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Virtu generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Virtu in the amounts outlined in the above Public Order Routing Report disclosures (i.e. payment for order flow), calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Virtu for NMS equity executions on Self-Directed Channel orders priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Virtu with respect to Full-Service Channel order executions. In addition, to take advantage of rules adopted by the U.S. securities exchanges that allow retail orders to be eligible for certain potential benefits, including additional price improvement from retail liquidity programs and higher queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSSB marks applicable orders as retail orders on an order-by-order basis. MSSB and Virtu do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Virtu.

There is a potential conflict for a market maker such as Virtu both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. MSSB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders through competition for order flow (as measured by the amount of price improvement provided) between market makers under the same general payment for order flow terms applicable to Virtu. A market maker such as Virtu executing a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to the payment for order flow subcategory (as it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or more other sub-categories (that is, to provide more price improvement or retain more anticipated profit or a mixture of the two). These same potential conflicts do not apply to Full-Service Channel customer order executions because MSSB does not receive payment for order flow from Virtu on these order executions and instead is compensated directly by MSSB's customers as described above.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Service Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues over others, subject to Virtu's independent order routing and best execution obligations. MSSB does not share directly in any such rebates Virtu receives for executions of MSSB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

G1 Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including G1X. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

G1X generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from G1X in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from G1X for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict for a market maker such as G1X both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to G1X, G1X also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligations. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB or its customers, although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Jane Street Capital:

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to Jane Street Capital ("Jane Street") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders.

Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS equities are subject to MSSB's \$0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel NMS equities orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other ways, through the receipt of payment for such order flow from equity securities market makers, including Jane Street. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at <https://us.etrade.com/l/quarterly-order-routing-report>.

Jane Street generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel orders, MSSB receives payments from Jane Street in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.002 per share for non-directed, NMS equity market and marketable limit order executions priced at \$1.00 per share or more and \$0.0031 per share for non-directed, NMS equity non-marketable limit order executions priced at \$1.00 per share or more. MSSB does not receive payment from Jane Street for NMS equity executions priced below \$1.00 per share. MSSB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. Furthermore, MSSB and Jane Street do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Jane Street.

There is a potential conflict for a market maker such as Jane Street both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Self-Directed Channel customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS equity orders.

In addition to revenues that Jane Street may collect for executing or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to Jane Street, Jane Street also receives remuneration from U.S. securities exchanges to which it routes or directs MSSB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Jane Street to route higher percentages of MSSB customer orders to particular venues over others, subject to Jane Street independent order routing and best execution obligations. Exchange rebates provided to Jane Street for MSSB customer executions are not passed through to MSSB or its customers, although Jane Street could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

December 2022

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	42.36	7.77	34.82	15.05

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)
Morgan Stanley & Co., LLC	83.92	83.76	84.19	83.44	85.34	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Citadel Securities, LLC	11.95	12.20	11.91	12.25	10.57	3.84	48.0000	1.44	48.0000	4.32	48.0000	5.76	48.0000
Wolverine Execution Services, LLC	3.07	2.94	2.86	3.19	3.23	0.00	0.0000	0.48	48.0000	0.00	0.0000	0.96	48.0000

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)
Global Execution Brokers LP	1.06	1.10	1.03	1.12	0.84	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
Dash/IMC Financial Markets	0.00	0.00	0.00	0.01	0.01	0.00	0.0000	0.00	0.0000	1.44	48.0000	0.00	0.0000
Citigroup Global Markets Inc.	0.00	0.00	0.00	0.00	0.01	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

Morgan Stanley & Co., LLC:

Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC ("MS&Co"). Both MSSB and MS&Co are registered broker-dealers. MSSB operates two primary service channels for its wealth management customers, including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor.

MSSB sends orders in U.S.-listed options to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MSSB customer orders in U.S.-listed options that are sent to MS&Co are then routed by MS&Co to a U.S. options exchange to be either crossed or executed against MS&Co interest and/or other liquidity on such exchanges, subject to the principles of best execution. In general, MS&Co generates revenue from executing or facilitating the execution of MSSB customer orders. MSSB does not receive payment from MS&Co for the options orders it routes to MS&Co (i.e. payment for order flow), either for Full-Service Channel options orders or Self-Directed Channel options orders and MSSB and MS&Co do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to MS&Co.

In the course of providing liquidity, MS&Co may preference option orders to MS&Co's options market maker or third-party market makers on the applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. MS&Co also participates in exchange-sponsored listed option payment for order flow programs under which MS&Co may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates, including from exchanges in which MSSB's parent company Morgan Stanley or another affiliated entity may have a financial interest. These U.S. options exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSSB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations.

MS&Co. receives rebates and pays fees for the routing of customer orders in exchange listed options to option exchanges. When the rebates received exceed the fees paid to such venue, MS&Co. receives benefits from the trading activity. In addition, certain exchanges offer volume-based tiered rates based on the type of order routed. MS&Co receives incremental pricing benefits from exchange offers volume-based tiered rates. The volume tiers are published in the fee schedule by the exchange. Exchange rebates provided and fees charged to MS&Co for MSSB customer executions by the U.S. options exchanges are not passed through to MSSB or its customers. However, MSSB is an affiliated company of MS&Co, which is a market maker on various U.S. options exchanges and MS&Co may realize market-making profits from MSSB orders routed to MS&Co for execution. In addition, MSSB orders that MS&Co executes are combined on a monthly basis with other order flow that MS&Co executes for tiered pricing program incentive purposes and it is possible that MS&Co could generate additional profit as a result of the combination of such order flow and the incentives of such tiered pricing programs. As a result of MSSB's corporate affiliation with MS&Co, MSSB may share indirectly in any such profits (whether from market-making, from pricing programs, or otherwise) generated by MS&Co.

Citadel Securities, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Citadel. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Citadel. In addition, as more fully described below, Citadel executes MSSB customer orders on U.S. listed options exchanges from which Citadel may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel options order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com//quarterly-order-routing-report>.

Citadel generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Citadel in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Citadel for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Citadel with respect to Full-Service Channel order executions. MSSB and Citadel do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citadel.

There is a potential conflict to an options market maker such as Citadel both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Citadel also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. In addition to revenues that Citadel may collect for executing or facilitating the execution of MSSB customer orders, Citadel may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSSB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. Citadel also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Citadel can earn a profit from such market-making executions. MSSB does not share directly in any rebates Citadel receives for executions of MSSB customer orders, although Citadel could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Wolverine Execution Services, LLC:

Morgan Stanley Smith Barney LLC ("MSSB") routes orders in NMS securities that are U.S.-listed options to Wolverine Execution Services, LLC ("Wolverine") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles non-directed options orders on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSSB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSSB customers receive from Wolverine. Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders from Wolverine. In addition, as more fully described below, Wolverine executes MSSB customer orders on U.S. listed options exchanges from which Wolverine may receive payment in the form of rebates. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Wolverine. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The Self-Directed Channel options order execution statistics in the tables above (which also include details on Full-Service Channel options orders) reflect only those Self-Directed Channel orders routed by MSSB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com//quarterly-order-routing-report>.

Wolverine generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing, and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Wolverine in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Wolverine for index options executions on Self-Directed Channel orders or for options orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not receive payment from Wolverine with respect to Full-Service Channel order executions. MSSB and Wolverine do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Wolverine.

There is a potential conflict to an options market maker such as Wolverine both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as Wolverine can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as Wolverine's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other sub-categories. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Wolverine also acts as options market maker on one or more of the U.S. options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. In addition to revenues that Wolverine may collect for executing or facilitating the execution of MSSB customer orders, Wolverine may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Wolverine to route higher percentages of MSSB customer orders to particular venues over others, subject to Wolverine's independent order routing and best execution obligations. Wolverine also acts as options market maker on one or more of the options exchanges on which it can execute an MSSB customer order and, as such, Wolverine can earn a profit from such market-making executions. MSSB does not share directly in any rebates Wolverine receives for executions of MSSB customer orders, although Wolverine could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Global Execution Brokers LP:

Morgan Stanley Smith Barney LLC ("MSSB") routes customer orders in NMS securities that are options contracts to Global Execution Brokers, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to G1X.

G1X generates revenue from executing or facilitating the execution of MSSB Self-Directed Channel customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from G1X (based upon the consideration G1X receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from G1X for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, MSSB does not route Full-Service Channel customer orders to G1X. Furthermore, MSSB and G1X do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to G1X.

There is a potential conflict to an options market maker such as G1X both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the options market maker seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, an options market maker such as G1X can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as G1X's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories, with the risk of overallocation to market maker profits at the expense of providing price improvement on MSSB customer orders mitigated by market maker competition for order flow (as measured by the amount of price improvement provided), under the same general payment for order flow terms applicable to G1X.

G1X also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, G1X can earn a profit from such market-making executions. In addition to revenues that G1X may collect for executing or facilitating the execution of Self-Directed Channel customer orders, G1X may also receive remuneration from the U.S. options exchanges to which it routes or directs Self-Directed Channel customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize G1X to route higher percentages of MSSB customer orders to particular venues over others, subject to G1X's independent order routing and best execution obligation. Exchange rebates provided to G1X for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although G1X could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Dash/IMC Financial Markets:

Morgan Stanley Smith Barney LLC ("MSSB") routes U.S.-listed options orders to Dash Financial Technologies, LLC ("Dash") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers, the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of an MSSB Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their MSSB accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's \$0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at <https://us.etrade.com/what-we-offer/pricing-and-rates>) do not pay base commission for order handling and execution of Self-Directed Channel NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other ways, through the receipt of payment for such order flow from the options market makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all E*TRADE from Morgan Stanley Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSSB, a limited number of Self-Directed Channel customers were customers of MSSB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSSB only. Quarterly routing statistics for E*TRADE from Morgan Stanley Self-Directed Channel orders routed by ETS are available at <https://us.etrade.com/l/quarterly-order-routing-report>. MSSB does not route Full-Service Channel options orders to Dash.

Dash generates revenue from executing or facilitating the execution of MSSB customer orders. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from Dash (based upon the consideration Dash receives from the liquidity providers with which it has arrangements as described below) (i.e. payment for order flow) in the amounts outlined in the above Public Order Routing Report disclosures, calculated at a rate of \$0.48 per contract for simple and complex equity options orders. MSSB does not receive payment from Dash for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders of customers who submit an average of 390 options orders per trading day, per calendar month, on a quarterly basis. Other than for certain limited order types, which MSSB routes to its affiliate Morgan Stanley & Co., LLC for handling and execution, MSSB only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all such market makers are subject to substantially the same rate of payment. For clarity, and as indicated above, MSSB does not route Full-Service Channel customer orders to Dash. Furthermore, MSSB and Dash do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Dash.

In connection with Dash's handling of MSSB retail equity option orders and solely with respect to Self-Directed Channel orders, Dash has arrangements with multiple, unaffiliated liquidity providers, including IMC Financial Markets, designed to facilitate liquidity provision and price improvement opportunities. Pursuant to these arrangements, Dash routes MSSB Self-Directed Channel options orders to exchanges and may preference the liquidity providers on such applicable exchange, consistent with exchange-sponsored programs which are described in the fee schedules of each such options exchange. The liquidity providers provide Dash with payment in connection with Dash's routing of MSSB Self-Directed Channel customer options orders, including through reciprocal order flow arrangements between Dash and such liquidity provider and/or payment per contract to Dash in return for Self-Directed Channel options orders that Dash routes or directs. Dash provides payment to MSSB on such Self-Directed Channel orders as described above based upon the compensation Dash receives from such liquidity providers. For clarity, and as indicated above, MSSB does not route Full-Service Channel orders to Dash or receive payment from Dash with respect to Full-Service Channel order executions.

There is a potential conflict to Dash and/or the liquidity provider to which Dash routes orders both paying for order flow on applicable Self-Directed Channel orders and providing price improvement for such orders, as the potential source of funds for each is the same, namely the anticipated profit the liquidity provider seeks to earn from executing or facilitating the execution of MSSB customer orders. Accordingly, from such anticipated profit, the liquidity provider can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay Dash (and for Dash, in turn, to pay MSSB) for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. The liquidity provider's anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one sub-category will result in a decreased allocation to one or more of the other categories. Dash and the liquidity provider can also adjust the amount of profit that the liquidity provider shares with Dash. The allocation of resources between the three subcategories listed above, including the risk of overallocation to market maker profits at the expense of providing price improvement on Self-Directed Channel customer orders, is informed and mitigated by competition for order flow amongst MSSB's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.

Dash also acts as options market maker on one or more of the U.S. options exchanges on which it can execute MSSB customer orders and, as such, Dash can earn a profit from such market-making executions. In addition to revenues that Dash may collect for executing or facilitating the execution of Self-Directed Channel customer orders, Dash may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Dash to route higher percentages of MSSB customer orders to particular venues over others, subject to Dash's independent order routing and best execution obligations. MSSB does not share directly in any rebates Dash receives for executions of MSSB customer orders, although Dash could potentially use these rebates to provide price improvement to MSSB customers, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.

Citigroup Global Markets Inc.:

Morgan Stanley Smith Barney LLC ("MSSB") routes customer orders in NMS securities that are options contracts to Citigroup Global Markets Inc. ("Citigroup") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its wealth management customers including the Full-Service Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSSB does not seek or receive payment for order flow on such orders. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves for their brokerage accounts based upon their own investment decision making and without the benefit of the services of a Financial Advisor. MSSB does not route Self-Directed Channel customer options orders to Citigroup and the tables above reflect Full-Service Channel order executions only. For clarity, MSSB does not receive payment from Citigroup for Full-Service Channel option order executions and MSSB does not route Self-Directed Channel options orders to Citigroup. Additionally, MSSB and Citigroup do not have any arrangements:

- A. that require MSSB to meet certain volume thresholds or that provide incentives to MSSB for meeting or exceeding certain volume thresholds;
- B. that require MSSB to meet certain minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
- C. for volume-based tiered payment schedules; or
- D. that require MSSB to route any orders or a minimum number of orders to Citigroup.

Citigroup may receive remuneration from the U.S. options exchanges to which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize Citigroup to route higher percentages of MSSB customer orders to particular venues over others, subject to Citigroup's independent order routing and best execution obligation. Exchange rebates provided to Citigroup for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although Citigroup's receipt of such rebates could potentially be used to provide price improvement to MSSB customers.