# October 2022

## S&P 500 Stocks

### Summary

<table>
<thead>
<tr>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.00</td>
<td>94.71</td>
<td>0.34</td>
<td>3.35</td>
<td>1.59</td>
</tr>
</tbody>
</table>

### Venues

<table>
<thead>
<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(cents per hundred shares)</th>
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<tbody>
<tr>
<td>Morgan Stanley &amp; Co., LLC</td>
<td>91.43</td>
<td>93.09</td>
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### 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 MSSB to facilitate liquidity provision and price improvement opportunities for its customers. MSSB 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, MSSB 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 MSSB 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 MS&Co to route a higher percentage of customer orders to MSSB, 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 MS&Co 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 routes orders to U.S. securities exchanges through MSSB 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 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 may send certain MSSB customer orders to an exchange or other market center for execution, including to market centers from which MSSB 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 equity securities 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 equity 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 MS&Co’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 $0.003 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 tightening 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 sub-category (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 customer MSSB 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 SO 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/f/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 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 best-effort 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 receives from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage 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 equity securities 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 orders. Because MSSB does not charge commission 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/quarterly-order-routing-report.

Virtu generates revenue from executing or facilitating the execution of 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 limited market 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 at a rate of not less than $0.0007 per share (subject to applicable exchange rules) and will not route its orders to Virtu unless Virtu is compensated at least at the rate of $0.002 per share for order flow terms applicable to Virtu. A market maker not under the sub as Virtu executing a Self-Directed 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 than predicted profit or price improvement but no profit).

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 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.

GA Execution Services, LLC

Morgan Stanley Smith Barney LLC ("MSSB") routes NMS equity orders to GA 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 — 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 accounts and other advisory accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Service Channel executions from commissions on their brokerage account order accounts 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 equity securities 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 orders. Because MSSB does not charge commission 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 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/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 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 at a rate of not less than $0.0007 per share (subject to applicable exchange rules) and will not route its orders to G1X unless G1X is compensated at least at the rate of $0.002 per share for order flow terms applicable to G1X. A market maker not under the sub as G1X executing a Self-Directed 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 than predicted profit or price improvement but no profit).

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 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.

G1X Execution Services, LLC
## October 2022

### Non-S&P 500 Stocks

#### Summary

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<th>Non-Directed Orders as % of All Orders</th>
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<td>Morgan Stanley &amp; Co., LLC</td>
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#### Material Aspects:

Morgan Stanley & Co., LLC:
Morgan Stanley Smith Barney LLC ("MSBB") is an affiliate of Morgan Stanley & Co. LLC ("MS&Co"). Both MSBB and MS&Co are registered broker-dealers. MSBB 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 MSBB relating to the operation, servicing, and administration of their MSBB brokerage or advised accounts and the generation of orders for such accounts. Among other things, MSBB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSBB 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, MSBB routes NMS equity orders to MSBB to facilitate liquidity provision and price improvement opportunities for its customers. MSBB executes MSBB 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, MSBB 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 MSBB 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 may receive remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSBB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSBB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSBB 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 MSBB Full-Service Channel customer executions are passed through to MSBB. As such, these rebate payments could theoretically incentivize MS&Co to route a higher percentage of customer orders to MS&Co, subject to MSBB's independent order routing and best execution obligations. Additionally, affiliates of MSBB 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 MSBB receives from MS&Co or its affiliate broker-dealer E*TRADE Securities LLC, with customer instructions to route to directly to certain U.S. securities exchanges, MSBB does not route Self-Directed Channel-directed orders to MSBB for execution directly. MSBB orders routed to U.S. securities exchanges through MSBB 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 ("MSBB") routes NMS equity orders to Citadel Securities LLC ("Citadel") to facilitate liquidity provision and price improvement opportunities for its customers. MSBB 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"). MSBB 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 MSBB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSBB customers receive from Citadel.

Customers of the Full-Service Channel receive services from MSBB relating to the operation, servicing, and administration of their MSBB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSBB receives compensation for customer Full-Service Channel execution orders from commissions on customers’ brokerage accounts or fees on their advised accounts. As a result, MSBB 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 MSBB customer orders to an exchange or other market center for execution, including to market centers from which MSBB may receive payment in the form of rebates.

Conversely, customers of the Self-Directed Channel generally generate and order entries 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 MSBB's 50 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 MSBB does not charge commissions on these Self-Directed Channel orders, MSBB 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 MSBB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSBB, a limited number of Self-Directed Channel customers were customers of MSBB 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 MSBB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/about-us/quarterly-order-routing-report.

Citadel generates revenue from executing or facilitating the execution of MSBB customer orders. In exchange for routing such orders to Citadel, and solely with respect to Self-Directed Channel orders, MSBB 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. MSBB does not receive payment from Citadel for NMS equity executions on Self-Directed Channel orders priced below $1.00 per share. MSBB 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, MSBB 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, MSBB marks applicable orders as retail orders on an order-by-order basis. MSBB and Citadel do not have any arrangements:

A. that require MSBB to meet certain volume thresholds or that provide incentives to MSBB for meeting or exceeding certain volume thresholds;
B. that require MSBB to meet certain minimum volume thresholds or that provide disincentives to MSBB for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules; or
D. that require MSBB 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. MSBB mitigates the risk of overallocation to market maker profits at the expense of providing price improvement on MSBB 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 sub-category (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 MSBB does not receive payment for order flow from Citadel on these order executions and instead is compensated directly by MSBB'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 MSBB routes to Citadel, Citadel also receives remuneration from U.S. securities exchanges to which it routes or directs MSBB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Citadel to route higher percentages of MSBB customer orders to particular venues over others, subject to Citadel's independent order routing and best execution obligations. MSBB does not share directly in any such rebates Citadel receives for executions of MSBB customer orders, although Citadel could potentially use such rebates to provide price improvement to MSBB customers, order flow payments to MSBB 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/t/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) return the portion of such 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 return 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-Scale Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). MSSB receives and handles on behalf of its independent order customers 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 receives from Virtu.

Customers of the Full-Scale Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage account or orders and the generation of order flows for such accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Scale 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.etade.com/what-we-offer/pricing-and-rates), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel 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-Scale 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.etade.com/quarterly-order-routing-report.

Virtu generates revenue from executing or facilitating the execution of 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 or more and $0.0013 per share for non-directed, NMS equity non-marketable limit order executions priced at $1.00 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 so does not receive any portion of payment for such order flow from Virtu with respect to Self-Directed Channel orders. 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 providers and high 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 order flow 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) forego 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 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 by routing up to 10% of order flow terms applicable to Virtu. A market maker such as Virtu executing a Self-Directed Channel order does not have to allocate any of its anticipated profit in connection with such order for payment flow or any expense related to Virtu or in order for Virtu to receive payment for such order flow from Virtu.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Scale 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 or exchanges, 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.

1. 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-Scale Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Scale Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advised accounts, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer Full-Scale 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.etade.com/what-we-offer/pricing-and-rates), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel 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 MSSB.

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 or $0.0013 per share for non-directed, NMS equity non-marketable limit order executions priced at $1.00 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 so does not receive any portion of payment for such order flow from G1X. A market maker such as G1X executing a Self-Directed Channel order does not have to allocate any of its anticipated profit in connection with such order for payment flow or any expense related to G1X or in order for G1X to receive payment for such order flow from G1X.

In addition to revenues that Virtu may collect for executing or facilitating the execution of customer orders (both Full-Scale Channel and Self-Directed Channel customer orders) that MSSB routes to Virtu, MSSB 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 or exchanges, subject to Virtu'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 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 S0 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.

UBS generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. For execution of 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 orders. Accordingly, and anticipating such a 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 profit makers 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 or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to UBS, MSSB also receives compensation 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 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 S0 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/i/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 orders. Accordingly, and anticipating such a 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 profit makers 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 or facilitating the execution of Self-Directed Channel customer orders that MSSB routes to Jane Street, Jane Street also receives compensation 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’s 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.
### Options

#### Summary

<table>
<thead>
<tr>
<th></th>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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<td></td>
<td>100.00</td>
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#### Venues

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<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</th>
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<tr>
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<td>0.07</td>
<td>0.0000</td>
<td>0.00</td>
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</table>

### 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 on MS&Co's 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. MS&Co does not receive payment from MSSB for the options 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 MS&Co to route any orders or a minimum number of orders to MS&Co.

In the course of providing liquidity, MS&Co may prefer 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 MS&Co'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 its 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, MS&Co 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 MS&Co orders routed to MS&Co for execution. In addition, MS&Co 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 MS&Co's corporate affiliation with MS&Co, MS&Co may share indirect 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 ETXtrade 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 and soliciting orders from customers. Both channels allow MSSB to 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 balances 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 orders for the execution of MSSB customer orders which may relate to一笔客户提供服务的订单, which benefits the service 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 markets makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all MSSB's limited number of Self-Directed Channel customers are 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 ETXtrade from Morgan Stanley Self-Directed Channel orders routed by ETX 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 all options orders. Net does not provide less pricing than Channel's order provide (or provide less) to payment for Channel's orders for the execution of MSSB customer orders. For example, if Citadel routing $100,000 in customer orders, which may relate to一笔客户提供服务的订单, which benefits the service 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 markets makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all MSSB's limited number of Self-Directed Channel customers are 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 ETXtrade from Morgan Stanley Self-Directed Channel orders routed by ETX are available at https://us.etrade.com/quarterly-order-routing-report.

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 makers at the expense of providing price improvement on Self-Directed Channel 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 of 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 such executions (as described above), Citadel may receive rebates on orders from the options exchanges. For example, if Citadel routing $100,000 in customer orders, which may relate to一笔客户提供服务的订单, which benefits the service 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 markets makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all MSSB's limited number of Self-Directed Channel customers are 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 ETXtrade from Morgan Stanley Self-Directed Channel orders routed by ETX are available at https://us.etrade.com/quarterly-order-routing-report.

Wolfinye Execution Services LLC ("Ettery") 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. Wolverine operates two primary service channels for its wealth management customers including the Full-service Channel and the ETXtrade 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 and soliciting orders from customers. Both channels allow MSSB to 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. 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 markets makers that provide liquidity and guarantee executions on the U.S. options exchanges, including Citadel. While nearly all MSSB's limited number of Self-Directed Channel customers are 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 ETXtrade from Morgan Stanley Self-Directed Channel orders routed by ETX 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 executed in the course of a Financial Advisor's recommendation to a customer. Other than for certain directed orders, which MSSB routes to its affiliated 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 ETXtrade from Morgan Stanley Self-Directed Channel orders routed by ETX are available at https://us.etrade.com/quarterly-order-routing-report.

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 alternative options orders to reputable 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 arm's length arrangements.

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 makers at the expense of providing price improvement on Self-Directed Channel orders, is informed and mitigated by competition for order flow amongst Wolverine's market makers, all of which pay the same order flow payment rates for Self-Directed Channel NMS options orders.
Global ExecutionBrokers LP.

Morgan Stanley Smith Barney LLC ("MSSB") routes customer orders in NMS securities that are options contracts to Global Execution Brokers, LLC ("GXB") to facilitate liquidity provision and price improvement opportunities for its customers. MSSB operates two primary service channels for its customers including the Execution Services Channel and the ETXtrade by Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Service Channel receive executions from MSSB relating to the operation, servicing, and administration of their MSSB brokerage or advisor 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 MSSB accounts based upon their own investment decision making and without the involvement of a third-party advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's D0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions) are charged a $0.48 per contract for simple and complex equity options orders. MSSB does not receive 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 the CME. While nearly all Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, ETXtrade 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 ETXtrade can be found at https://us.etradecom/q/quarterly-order-routing-report. MSSB does not route Full-Service Channel orders routed to GXB.

GXB generates revenue from executing or facilitating the execution of Self-Directed Channel customer orders. In exchange for such routing and solely for the purpose of facilitating the execution of MSSB customer orders, GXB receives payment from GXB (based on the consideration GXB 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 GXB for index options exchanges 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 execution routed through MSSB, which only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all market makers are subject to substantially the same rate of payment. For clarity, MSSB does not route Full-Service Channel customer orders to GXB. Furthermore, MSSB and GXB do not have any arrangements:

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

There is a potential conflict to an options market maker such as GXB 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 GXB 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 price improvement or not provide (or provide less) price improvement for order flow. An options market maker's (such as GXB) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one or more of the other categories, with the risk of overall allocation 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 GXB.

GXB 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, GXB can earn a profit from such market-making executions. In addition to revenues that GXB may collect for executing or facilitating the execution of Self-Directed Channel customer orders, GXB may also receive remuneration from the U.S. options exchanges 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. These U.S. options exchange rebate payments could, in theory, incentivize GXB to trade higher percentages of MSSB customer orders to particular venues over others, subject to GXB's independent order routing and best execution obligation. Exchange rebates provided to GXB for MSSB customer order executions by the U.S. options exchanges are not passed through to MSSB or its customers although GXB could potentially provide rebates to market makers to provide price improvement to MSSB customer orders, 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 ETXtrade by 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 advisor accounts and the generation of orders for such accounts, including the services of an IMC 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 involvement of a third-party advisor. The arrangements of a Financial Advisor (based material communications) with respect to the MSSB's D0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described full at https://us.etradecom/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 the CME. While nearly all ETXtrade by Morgan Stanley Self-Directed Channel customers are customers of MSSB's affiliate broker-dealer, ETXtrade 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 ETXtrade by Morgan Stanley Self-Directed Channel orders routed by ETS are available at https://us.etradecom/q/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 Self-Directed Channel customer orders. Dash may also receive remuneration from the U.S. options exchanges 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 execution routed through MSSB, which only routes Self-Directed Channel orders in NMS securities that are options contracts to market makers that pay for customer order flow, and all 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 for MSSB to meet or exceed certain volume thresholds;
B. that require MSSB to meet certain minimum volume thresholds or that provide incentives to MSSB for failing to meet certain minimum volume thresholds;
C. of volume-based tiered payment schedules; or
D. that require MSSB to route to 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. 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 orders, including through reciprocal order flow arrangements between Dash and such liquidity provider or/and payment for order flow to Dash in return for Self-Directed Channel orders as described above. The liquidity providers provide Dash with payment based on the applicable 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 for order flow; or (iii) retain a larger portion of anticipated profit and not provide price improvement or not provide (or provide less) price improvement 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 or more of the other categories, with the risk of overall allocation 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 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. The U.S. options exchange rebate payments could, in theory, incentivize Dash to trade higher percentages of MSSB customer orders to particular venues over others, subject to Dash's independent order routing and best execution obligations. Dash does not share directly in any rebates Dash receives for executions of MSSB customer orders, although Dash could potentially use these rebates to reduce market makers to provide price improvement to MSSB customer orders, order flow payments to MSSB with respect to Self-Directed Channel orders, or both.
S&P 500 Stocks

### Summary

<table>
<thead>
<tr>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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<tbody>
<tr>
<td>100.00</td>
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<td>0.38</td>
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### Venues

<table>
<thead>
<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(cents per hundred shares)</th>
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<tr>
<td>Morgan Stanley &amp; Co., Inc.</td>
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<td>94.81</td>
<td>69.58</td>
<td>67.09</td>
<td>65.68</td>
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</table>

### Material Aspects:

Morgan Stanley & Co., LLC: Morgan Stanley Smith Barney LLC ("MSSB") is an affiliate of Morgan Stanley & Co., LLC ("MSSB "). 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 S0 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at https://us.etrade.com/what-we-offer/price-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/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 MSSB 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 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:
Virtu Americas, 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 So 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/f/quarterly-order-routingreport.

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 customer 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) retain a proportion of such 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.
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-direct 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 receives from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage account or orders 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 50 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 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 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/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 marketplace order executions per order. MSSB also receives payments for Full-Service Channel order executions per order (as described in the section on order flow terms applicable to Virtu). A mark of under the assumption that Virtu executes a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to for payment for order flow subcategory (as if it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or other sub-categories (that is, to provide more price improvement on the outbound order and/or rebates).

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 rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues or exchanges, but 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.

G1X 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 account or order according 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 50 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 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. A mark of under the assumption that Virtu executes a Full-Service Channel order does not have to allocate any of its anticipated profit in connection with such order to for payment for order flow subcategory (as if it would with Self-Directed Channel orders) and is therefore able to allocate its anticipated profit to one or other sub-categories (that is, to provide more price improvement on the outbound order and/or rebates).

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 rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSSB customer orders to particular venues or exchanges, but 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.
Jane Street Capital:
Morgan Stanley Smith Barney LLC ("MSBB") routes NMS equity orders to Jane Street Capital ("Jane Street") to facilitate liquidity provision and price improvement opportunities for its customers. MSBB 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 MSBB relating to the operation, servicing, and administration of their MSBB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSBB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSBB 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 MSBB's 5% 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 MSBB does not charge commissions on these Self-Directed Channel orders, MSBB 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 MSBB's affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSBB, a limited number of Self-Directed Channel customers were customers of MSBB during Q4 2022. The tables above reflect Self-Directed Channel orders routed by MSBB 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, MSBB 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 $0.001 per share for non-directed, NMS equity non-marketable limit order executions priced at $1.00 per share or more. MSBB does not receive payment from Jane Street for NMS equity executions priced below $1.00 per share. MSBB 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, MSBB and Jane Street do not have any arrangements:

A. that require MSBB to meet certain volume thresholds or that provide incentives to MSBB for meeting or exceeding certain volume thresholds;
B. that require MSBB to meet certain minimum volume thresholds or that provide disincentives to MSBB for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules; or
D. that require MSBB 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 MSBB'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 MSBB routes to Jane Street, Jane Street also receives remuneration from U.S. securities exchanges to which it routes or directs MSBB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Jane Street to route higher percentages of MSBB 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 MSBB customer executions are not passed through to MSBB or its customers, although Jane Street could potentially use these rebates to provide price improvement to MSBB customers, order flow payments to MSBB with respect Self-Directed Channel orders, or both.

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### November 2022

#### Non-S&P 500 Stocks

**Summary**

<table>
<thead>
<tr>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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</thead>
<tbody>
<tr>
<td>100.00</td>
<td>80.04</td>
<td>0.82</td>
<td>17.08</td>
<td>2.06</td>
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</table>

**Venues**

<table>
<thead>
<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(cents per hundred shares)</th>
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</thead>
<tbody>
<tr>
<td>Morgan Stanley &amp; Co., LLC</td>
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<td>94.42</td>
<td>78.54</td>
<td>90.22</td>
<td>67.75</td>
<td>759.59</td>
<td>0.0185</td>
<td>-1,163.20</td>
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<td>20.0000</td>
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<td>Two Sigma Securities, LLC</td>
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<td>0.04</td>
<td>20.0000</td>
<td>0.00</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

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*The tables above reflect Self-Directed Channel orders routed by MSBB 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.*
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 50 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/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 MSSB 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 for such Self-Directed 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 50 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/quarterly-order-routingreport.

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) retain a portion of such 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-directional customer orders in NMS equity securities on a hold 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 receives customer orders from.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage account or orders 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 equity securities 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 orders or other MSSB non-directional 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 routed by MSSB) are for those Self-Directed Channel orders routed by E*TRADE from Morgan Stanley Self-Directed orders routed to ETS are available at https://us.etrade.com/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 marketplace order execution orders priced $1.00 per share or more and $0.0037 per share for non-directed, NMS equity non-marketable limit execution orders priced $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 routed to MSSB, and contracts with various market makers to subject to a certain limit rate of payment from Virtu with respect to Full-Service Channel orders 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 providers and high 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 retail 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 makers profits at the expense of providing price improvement on MSSB customer orders by calculating a standardized "quote" for order flow terms applicable to Virtu. A market maker who seeks to allocate any of its anticipated profit in connection with order flow 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 and less payment for order flow terms) is subject to MSSB's non-marketable limit order flow terms. 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-Surface 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.

G1X 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, the Full-Surface Channel and the E*TRADE from Morgan Stanley Self-Directed Channel ("Self-Directed Channel"). Customers of the Full-Surface Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage account or orders and fees on their accounts. Among other things, MSSB receives compensation for customer Full-Surface 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 equity securities 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 orders or other MSSB non-directional 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/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 $1.00 or more and $0.0037 per share for non-directed, NMS equity non-marketable limit order executions priced $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 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 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. MSSB mitigates the risk of overallocation to market makers profits at the expense of providing price improvement on MSSB customer orders by calculating a standardized "quote" for order flow terms applicable to Virtu. A market maker who seeks to allocate any of its anticipated profit in connection with order flow 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 and less payment for order flow terms) is subject to MSSB's non-marketable limit order flow terms. These same potential conflicts do not apply to Full-Surface 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-Surface 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. Exchange rebates provided to G1X for MSSB customer executions are not passed through to MSSB, 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 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 payments for such order flow on 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 orders 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 sub-categories 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.

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 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 payments for such order flow on 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 $0.003 per share for non-directed, NMS equity market and marketable limit orders 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 sub-categories 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.

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November 2022
Options

Summary

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<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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Venues

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<tr>
<th>Venue - Non-Directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
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Material Aspects:

Morgan Stanley & Co., LLC: Morgan Stanley & Co. ("MS&Co.") is an affiliate of Morgan Stanley & Co., LLC ("MS&Co."). Both MS&Co and MS&Co are registered broker-dealers. MS&Co 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 MS&Co relating to the operation, servicing, and administration of their MS&Co 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.

MS&Co sends orders in U.S.-listed options to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co 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 MS&Co customer orders. MS&Co does not receive payment from MS&Co for the orders it routes to MS&Co (i.e. payment for order flow), either for Full-Service Channel options orders or Self-Directed Channel orders and MS&Co and MS&Co do not have any arrangements:

- A. that require MS&Co to meet certain volume thresholds or that provide incentives to MS&Co for meeting or exceeding certain volume thresholds
- B. that require MS&Co to meet certain minimum volume thresholds or that provide disincentives to MS&Co for failing to meet certain minimum volume thresholds
- C. for volume-based tiered payment schedules or
- D. that require MS&Co 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 MS&Co customer orders in the form of rebates, including from exchanges in which MS&Co'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 MS&Co 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 MS&Co customer executions by the U.S. options exchanges are not passed through to MS&Co or its customers. However, MS&Co 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 MS&Co orders routed to MS&Co for execution. In addition, MS&Co 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 MS&Co's corporate affiliation with MS&Co, MS&Co 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 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 Execution Brokers, 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 obligations to its customers. If there are differences between its obligations and its execution of the orders, these differences may 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 others, 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 does not receive payment on U.S. listed options exchanges from theexecution of orders in any sub-category. 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 subject to the MSSB’s S0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described below) 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, MSSB compensates its customers that provide liquidity and guarantee execution of these orders, facilitating execution orders, with amounts that are generally equal to the commissions that MSSB would have paid Wolverine for the execution of such orders, including Wolverine.

Wolverine generates revenue from executing or facilitating the execution of the 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 orders of Professional Customers, which are orders for customers that meet the defined threshold of $250,000 in average of 30 days of trading volume. Other than for certain limited order types, which MSSB routes to its affiliated 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 GX1. Furthermore, MSSB and GX1 do not have any arrangements:

- that require MSSB to meet certain minimum 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 incentives 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 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 sub-cATEGORIES 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 such orders, Wolverine may also receive remuneration from the U.S. options exchanges to which it routes or directs MSSB options orders in the form of rebates to Wolverine. In theory, incentivizing 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 or facilitate the execution of such orders, 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, or pay for order flow with respect to Self-Directed Channel orders. For both.

Global Execution Brokers LP

Morgan Stanley Smith Barney LLC ("MSSB") route customer orders in NMS securities that are options contracts to Global Execution Brokers, LLC ("GX1") 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 ETRADE 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 subject to the MSSB’s S0 based commission policy, pursuant to which customers generally (subject to disclosed exceptions as described below) 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 execution on the U.S. options exchanges, including Citadel. While nearly all Self-Directed Channel customers are customers of MSSB’s affiliate broker-dealer, ETRADGE 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 ETRADGE from Morgan Stanley Self-Directed Channel routed by ETS are available at https://us.etrade.com/quarterly-order-routing-report. MSSB does not route Full-Service Channel options orders to GX1.

GX1 generates revenue from executing or facilitating the execution of MSSB options orders for the Self-Directed Channel Channel option customers. In exchange for such routing and solely with respect to Self-Directed Channel options orders, MSSB receives payment from GX1 (based upon the consideration GX1 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 GX1 for index options executions on Self-Directed Channel orders or for orders of Professional Customers, which are orders for customers that meet the defined threshold of $250,000 in average of 30 days of trading volume. Other than for certain limited order types, which MSSB routes to its affiliated 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 GX1. Furthermore, MSSB and GX1 do not have any arrangements:

- that require MSSB to meet certain minimum 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 incentives 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 GX1.

There is a potential conflict to an options market maker such as GX1 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 GX1 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 GX1’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 GX1.

GX1 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, GX1 can earn a profit from such market-making executions. In addition to revenues that GX1 may collect for executing or facilitating the execution of Self-Directed Channel customer orders, GX1 may also receive remuneration from the U.S. options exchanges to which it routes or directs Self-Directed Channel customer orders in the form of rebates. These U.S. options exchange rebate payments could, in theory, incentivize GX1 to route higher percentages of MSSB customer orders to particular venues over others, subject to GX1’s independent order routing and best execution obligations. Exchange rebates provided to GX1 for MSSB customer order executions from the U.S. options exchanges are not passed through to MSSB or its customers although GX1 could potentially use these rebates to provide price improvement to MSSB customers, or provide payment 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 a Financial Advisor. Conversely, customers of the Self-Directed Channel generally generate and enter orders themselves over 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/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 orders, as shown by self-reporting. For such execution or solely for service, Dash receives revenue from both (a) 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 orders 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 routes only 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 minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules;
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 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 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 Self-Directed Channel orders 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 and customer order flow from MSSB 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 customer option orders and, as such, 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 options 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 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 minimum volume thresholds or that provide disincentives to MSSB for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules;
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

<table>
<thead>
<tr>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
</tr>
</thead>
<tbody>
<tr>
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**Venues**

<table>
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<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(cents per hundred shares)</th>
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</tbody>
</table>

**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 equities 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 routed orders 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 50 commission policy, pursuant to which customers generally (subject to disclosed exceptions as described more fully at https://us.etrade.com/what-we-offer/fee-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 affiliated 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/q/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 SO 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/6/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 to 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) retain a greater 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 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 receives from Virtu.

Customers of the Full-Service Channel receive services from MSSB relating to the operation, servicing, and administration of their MSSB brokerage account or orders 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.etade.com/what-we-offer/pricing-and-rates), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other things, 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.etade.com/quarterly-order-routing-report.

Virtu generates revenue from executing or facilitating the execution of 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 does not currently subject its own orders to such fees. MSSB receives a fee from Virtu for order flow terms applicable to Virtu. A marker under the sub as Virtu executing a Self-Directed 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 rebates (such as "per share" rebates) to customers). These 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 such rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route to 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.

G1X 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. Among other things, MSSB receives compensation for customer orders from the Full-Service Channel and other channels, including the services of a Financial Advisor. Among other things, MSSB receives compensation for customer orders from the Full-Service Channel and other channels, including the services of a Financial Advisor. Instead of these self-compensated orders, MSSB seeks to be compensated, among other things, through the receipt of payment for such order flow from equity securities market makers, including Virtu. 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 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 marker'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. MSSB mitigates the risk of overallocation to market marker profits at the expense of providing price improvement on MSSB customer orders through the use of a portion of profit from order flow (as measured as the rate of payment for order flow terms applicable to Virtu). A marker under the sub as MSSB executing a Self-Directed 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 rebates (such as "per share" rebates) to customers). These 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 such rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route to 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.

The tables above reflect Self-Directed Channel order statistics routed by MSSB only. Quarterly order routing statistics for self-directed orders routed on behalf of ETS customers are available at https://us.etade.com/quarterly-order-routing-report. 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.etade.com/what-we-offer/pricing-and-rates), and generally do not pay base commissions for order handling and execution of their Self-Directed Channel orders. Because MSSB does not charge commissions on these Self-Directed Channel orders, MSSB seeks to be compensated, among other things, 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.etade.com/quarterly-order-routing-report.
December 2022

Non-S&P 500 Stocks

Summary

<table>
<thead>
<tr>
<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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<tr>
<td>100.00</td>
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Venues

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<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</th>
<th>Net Payment Paid/Received for Other Orders(USD)</th>
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<td>0.00</td>
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</tbody>
</table>

Material Aspects:

Morgan Stanley & Co., LLC: Morgan Stanley Smith Barney LLC ("MS&Co") is an affiliate of Morgan Stanley & Co., LLC ("MSISB"). Both MSISB and MS&Co are registered broker-dealers. MSISB 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 MSISB relating to the operation, servicing, and administration of their MSISB brokerage or advised accounts and the generation of orders for such accounts, including the services of a Financial Advisor. Among other things, MSISB receives compensation for customer Full-Service Channel orders from commissions on their brokerage account orders and fees on their advised accounts. As a result, MSISB 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, MSISB routes NMS equity orders to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&Co executes MSISB 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. MSISB receives remuneration in the form of rebates from U.S. securities exchanges to which it routes or directs MSISB customer orders. These U.S. exchange rebate payments could, in theory, incentivize MS&Co to route higher percentages of MSISB customer orders to particular venues over others, subject to MS&Co's independent order routing and best execution obligations. MSISB 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, MSISB for MSISB Full-Service Channel customer executions are passed through to MSISB. As such, these rebate payments could theoretically incentivize MSISB to route a higher percentage of customer orders to MS&Co, subject to MSISB's independent order routing and best execution obligations. Additionally, affiliates of MSISB 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 MSISB or its affiliate broker-dealer E*TRADE Securities, LLC with customer instructions to route to directly to certain U.S. securities exchanges, MSISB does not route Self-Directed Channel orders to MS&Co for execution directly. MSISB 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 50 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/i/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 market/non-marketable limit order executions priced at $1.00 per share or more. MSSB does not receive payment from Citadel for NMS equity execution orders 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 50 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 equity 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 ETS. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/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) retain a portion of such 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 ("MSBB") routes NMS equity orders to Virtu Americas, LLC ("Virtu") to facilitate liquidity provision and price improvement opportunities for its customers. MSBB 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"). MSBB receives and handles customer order flows 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 MSBB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSBB receives from Virtu.

Customers of the Full-service Channel receive services from MSBB relating to the operation, servicing, and administration of their MSBB brokerage account orders and executions and the generation of all orders for such accounts, including the services of a Financial Advisor. Among other things, MSBB 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, MSBB 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 MSBB 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 MSBB’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 order执行s. Because MSBB does not charge commissions on these Self-Directed Channel orders, MSBB 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 MSBB’s affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSBB, a limited number of Self-Directed Channel customers were customers of MSBB 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 MSBB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/quarterly-order-routing-report.

Virtu generates revenue from executing or facilitating the execution of customer orders. In exchange for routing such orders to Virtu, and solely with respect to Self-Directed Channel orders, MSBB 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 marketplace order executions paid at $1.00 per share and more or $0.003 per share for non-directed, NMS equity non-marketable limit order executions paid at $1.00 per share or more. MSBB does not receive payment from Virtu for NMS equity executions on Self Directed Channel orders priced below $1.00 per share. MSBB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and such orders will only be subject to a non-directed compensation rate of 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 providers and high queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSBB marks applicable retail orders as retail orders on an order-by-order basis. MSBB and Virtu do not have any arrangements:

A. that require MSBB to meet certain volume thresholds or that provide incentives to MSBB for meeting or exceeding certain volume thresholds;
B. that require MSBB to meet certain minimum volume thresholds or that provide disincentives to MSBB for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules;
D. that require MSBB 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. MSBB mitigates the risk of overallocation to market makers profits at the expense of providing price improvement on MSBB customer orders, and thereby does not pay a full amount of price improvement for order flow terms applicable to Virtu. A market maker may not have the ability 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 for order flow, or forgo payment for order flow and retain all anticipated profit for order flow).

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

G1 Execution Services, LLC

Morgan Stanley Smith Barney LLC ("MSBB") routes NMS equity orders to G1X Execution Services, LLC ("G1X") to facilitate liquidity provision and price improvement opportunities for its customers. MSBB 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 MSBB relating to the operation, servicing, and administration of their MSBB brokerage account from customers on a held and not held basis through both channels consistent with its duty of best execution, but there are differences in how MSBB is compensated for the services it performs, which, as described in detail below, can impact the price improvement opportunities and trade executions that MSBB receives from Virtu.

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 MSBB’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 orders. Because MSBB does not charge commissions on these Self-Directed Channel orders, MSBB 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 MSBB’s affiliate broker-dealer, E*TRADE Securities LLC ("ETS") and not MSBB, a limited number of Self-Directed Channel customers were customers of MSBB 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 MSBB. Quarterly order routing statistics for E*TRADE from Morgan Stanley Self-Directed orders routed by ETS are available at https://us.etrade.com/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, MSBB 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 or more and $0.003 per share for non-directed, NMS equity non-marketable limit order executions paid at $1.00 per share or more. MSBB does not receive payment from G1X for NMS equity executions priced below $1.00 per share. MSBB only routes Self-Directed Channel NMS equity orders to market makers that pay for customer order flow, and such orders will only be subject to a non-directed compensation rate of 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 providers and high queue priority from retail attestation programs, and to allow Virtu to access such potential benefits for Self-Directed Channel NMS equity orders, MSBB marks applicable retail orders as retail orders on an order-by-order basis. MSBB and Virtu do not have any arrangements:

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

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. MSBB mitigates the risk of overallocation to market makers profits at the expense of providing price improvement on MSBB customer orders, and thereby does not pay a full amount of price improvement for order flow terms applicable to Virtu. A market maker may not have the ability 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 for order flow, or forgo payment for order flow and retain all anticipated profit for order flow).

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 MSBB routes to Virtu, Virtu also receives remuneration from U.S. securities exchanges to which it routes or directs MSBB customer orders in the form of rebates. These U.S. exchange rebate payments could, in theory, incentivize Virtu to route higher percentages of MSBB customer orders to particular venues over others, subject to Virtu’s independent order routing and best execution obligations. MSBB does not share directly in any such rebates Virtu receives for executions of MSBB customer orders, although Virtu could potentially use such rebates to provide price improvement to MSBB customers, order flow payments to MSBB 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 Self-Directed Channel orders, or both.

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December 2022

Options

**Summary**

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<th>Non-Directed Orders as % of All Orders</th>
<th>Market Orders as % of Non-Directed Orders</th>
<th>Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Non-Marketable Limit Orders as % of Non-Directed Orders</th>
<th>Other Orders as % of Non-Directed Orders</th>
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<td>7.77</td>
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**Venues**

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<tr>
<th>Venue - Non-directed Order Flow</th>
<th>Non-Directed Orders (%)</th>
<th>Market Orders (%)</th>
<th>Marketable Limit Orders (%)</th>
<th>Non-Marketable Limit Orders (%)</th>
<th>Other Orders (%)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
<th>Net Payment Paid/Received for Market Orders(USD)</th>
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<th>Net Payment Paid/Received for Market Orders(cents per hundred shares)</th>
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Material Aspects:

Morgan Stanley & Co., LLC ("MS&Co") is an affiliate of Morgan Stanley & Co., LLC ("MS&B"). Both MS&B and MS&Co are registered broker-dealers. MS&B 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 MS&B relating to the operation, servicing, and administration of their MS&B 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.

MS&B sends orders in U.S.-listed options to MS&Co to facilitate liquidity provision and price improvement opportunities for its customers. MS&B 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's 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 MS&B customer orders. MS&B does not receive payment from MS&Co for the 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 MS&B and MS&Co do not have any arrangements:

A. that require MS&B to meet certain volume thresholds or that provide incentives to MS&B for meeting or exceeding certain volume thresholds;
B. that require MS&B to meet certain minimum volume thresholds or that provide disincentives to MS&B for failing to meet certain minimum volume thresholds;
C. for volume-based tiered payment schedules; or
D. that require MS&B 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 they routes or directs MS&B customer options orders in the form of rebates, including from exchanges in which MS&B'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 MS&B 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 MS&B customer executions by the U.S. options exchanges are not passed through to MS&B, however, MS&B 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 MS&B orders routed to MS&Co for execution. In addition, MS&B 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 MS&B's corporate affiliation with MS&Co, MS&B 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 liquidity and handles non-directional options orders on a held and not held basis through both channels consistent with its duty of best execution. MSSB routes customer orders to the services it believes will most likely provide better executions than can be obtained from MSSB's own market-making; however, MSSB does not receive commission 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 balances 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 orders via the Full-service 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 reasons, through the receipt of payment for such order flow from the order makers that provide liquidity and guarantee executions on the U.S. options accounts, including Citadel. Wolferine executives routes MSSB orders to Citadel via its affiliated 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/u/monthly-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 Program disclosures. MSSB routes all orders 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 NMS options orders. Because MSSB does not charge commission on these Self-Directed Channel orders, the Firm seeks to be compensated, among other reasons, through the receipt of payment for such order flow from the order makers that provide liquidity and guarantee executions on the U.S. options accounts, including Citadel. Wolferine executives routes MSSB orders to Citadel via its affiliated 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/u/monthly-order-routing-report.

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 makers at the expense of providing price improvement on Self-Directed Channel 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 orders.

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 liquidity and handles non-directional options orders on a held and not held basis through both channels consistent with its duty of best execution. MSSB routes customer orders to the services it believes will most likely provide better executions than can be obtained from MSSB's own market-making; however, MSSB does not receive commission 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. 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 reasons, through the receipt of payment for such order flow from the order makers that provide liquidity and guarantee executions on the U.S. options accounts, including Citadel. Wolferine executives routes MSSB orders to Citadel via its affiliated 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/u/monthly-order-routing-report.
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 customers, its Execution and Order Customers, measured by 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 influence of a Financial Advisor. Self-Directed Channel orders in NMS securities that are options contracts are subject to the MSSB's SO based commission policy, pursuant to which customers generally (subject to disclosed exceptions) pay a SO commission rate of $0.48 per contract for simple and complex equity options orders. 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 G1X are available at https://us.etrade.com/q/quarterly-order-routing-report. MSSB does not route Full-Service Channel orders to G1X.

G1X generates revenue from executing or facilitating the execution of MSSB's self-directed orders. In exchange for such routing and solely with respect to Self-Directed Channel 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 exchanges, that it routes or directs Self-Directed Channel customer options orders in the form of rebates. These U.S. options exchange rebate rebates could, in theory incentivize GTX to route higher percentages of MSSB customer orders to particular venues over others, subject to GTX's independent order routing and best execution obligation. Exchange rebates routed to GTX for MSSB customer orders execution by the U.S. options exchanges are not passed through to MSSB's or its customers although GTX 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 IMC 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 influence of a Financial Advisor. The rates of an IMC Financial Advisor (subject to disclosed exceptions as described above) are available 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/q/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. GTX may also receive remuneration from the revenue it generates by executing or directing Self-Directed Channel customer options orders in the form of rebates. These U.S. options exchange rebate rebates could, in theory, incentivize GTX to route higher percentages of MSSB customer orders to particular venues over others, subject to GTX's independent order routing and best execution obligation. Exchange rebates routed to GTX for MSSB customer orders execution by the U.S. options exchanges are not passed through to MSSB's or its customers although GTX 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.

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 for such customers and to provide Dash with liquidity guarantees. These payments are based on risk sharing and are subject to disclosed exceptions as described above. Pursuant to these arrangements, Dash routes MSSB's Self-Directed Channel orders to exchanges and may prefer the liquidity providers on such applicable exchange 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's Self-Directed Channel customer orders, through reciprocal order flow arrangements between Dash and such liquidity provider or/and payment per contract to Dash in return for 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 an options market maker such as GTX 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 GTX 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 price improvement or not provide (or provide less) payment for order flow. An options market maker's (such as GTX) 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 GTX.

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 on which it routes or directs MSSB customer options orders in the form of rebates. These U.S. options exchange rebate rebates could, in theory incentivize Dash to route higher percentages of MSSB's customer orders to particular venues over others, subject to Dash's independent order routing and best execution obligations. However, MSSB does not share directly in any rebates Dash receives for executing MSSB customer orders, although Dash could potentially use these rebates to pay for order flow improvements for such 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 execution orders 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;
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.