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Morgan Stanley

August 2019

A Message to Morgan Stanley's U.S. Institutional Equity Division Sales & Trading Clients regarding U.S. Equity Order Handling Practices [1]

Re: Equity Division Order Handling

This letter is part of our ongoing effort to provide transparency to our clients on our business practices. In order to provide our diverse client base with a comprehensive menu of execution alternatives, we continue to make investments in our technology, infrastructure and human capital.

Our number one objective in handling your orders is to deliver the highest quality executions reasonably available under the circumstances. Consistent with your instructions, we may execute your order through a variety of means, depending on the order size relative to liquidity, the prevailing market conditions and other factors. This may include immediate capital commitment by Morgan Stanley and accessing internal and external sources of liquidity. The contents of this letter, which may be updated from time to time, and additional details about Morgan Stanley's US equity order handling and routing practices, are available at Morganstanley.com/disclosures, including "Morgan Stanley's U.S. Cash Equity Order Handling & Routing Practices- Frequently Asked Questions".

Order Handling and Capital Commitment

Morgan Stanley provides client coverage for your order flow via several models. You can be covered by any combination of the high-touch desk, low-touch desk or the execution services desk, which offers blended coverage for both high and low-touch order flow. Morgan Stanley maintains information barriers between the client coverage areas and its trading desks.

We maintain an inventory of principal positions to provide our clients with opportunities for enhanced capital commitment, including from our Central Risk Book (CRB). To effectively manage these inventory positions and sustain our ability generally to provide immediate liquidity for our clients, we may trade out of risk resulting from client facilitation activity at the same time we may be handling your orders at the same price level. We will

[1] This letter applies solely to Morgan Stanley & Co. LLC, the U.S.-registered broker-dealer, and does not necessarily apply to its affiliates or subsidiaries.

trade principally alongside a client order to the extent that our principal activity either hedges or liquidates risk resulting from client facilitation. So long as either order is trading on a systematic, automated basis (e.g., through the use of a VWAP or percentage of the volume algorithm), in certain instances, principal orders entered in anticipation of future client demand may also be worked concurrently with client orders.

In accordance with market standards and best practices, we strive for allocations between client and principal orders that are fair and equitable. While we use reasonable efforts to allocate executions appropriately, and our policies require traders to provide a fair allocation, challenges presented by the current market structure and limitations of certain market centers and trading systems may in some cases render a precisely even split impracticable.

In addition to the order handling methodology outlined above, you may instruct us with respect to all or part of any of your orders that you do not wish to permit us to trade principally alongside your orders. In the event you provide us with such instruction, your executable order will take priority over Morgan Stanley principal orders within that information unit. Such instruction may impact our ability to provide capital to your order and may limit the range of execution alternatives that we are able to offer.

Automated Execution Alternatives and Liquidity Sourcing

Morgan Stanley utilizes a number of internally developed tools designed to access both external and internal sources of liquidity to obtain the most favorable execution of your orders reasonably available under the circumstances. Based on a variety of factors, including Morgan Stanley's discretion, interactions with such liquidity may vary by client.

These tools include smart order routers and automated execution strategies that route orders in accordance with your instructions or instructions otherwise placed on an order by Morgan Stanley. These tools may access internal sources of liquidity that seek anonymous crossing opportunities, which include our internal crossing systems. The contra-sides of these crosses could be Morgan Stanley clients or Morgan Stanley orders, including principal orders to hedge or liquidate facilitation positions, and principal orders entered in anticipation of future client demand.

These tools may also access internal sources of liquidity that seek Morgan Stanley principal execution via Morgan Stanley ETF (MS ETF), Morgan Stanley Automated Liquidity (MSAL) and Market-on-Close Aggregator (MOCHA). Absent instructions to the contrary, clients choosing to send flow to the Morgan Stanley high touch desk will be enabled for MS ETF and MSAL by default for such flow.

Additionally, Morgan Stanley provides a source of principal liquidity for its clients and certain internal desks via the CRB. Clients choosing to send flow to the Morgan Stanley high touch desk are enabled for CRB interaction for such flow. As part of these interactions and certain other capital commitment interactions, client identity and transaction details are provided to the CRB and the relevant Morgan Stanley risk desk.

Based on client configurations and/or instructions, these tools may also access external liquidity providers in response to inbound electronic indications of interest from such providers. Executions will reflect the individual electronic liquidity providers as the client's counterparty.

Given the variety of means that we may employ to provide your orders with the best possible execution, and absent specific instructions to the contrary, your transactions may be executed on an agency, agency cross, principal basis or a combination of these.[2] Morgan Stanley may enable interactions with the above liquidity sources for certain principal flow, including for transactions that hedge client swaps.

Guaranteed Benchmark Trades and Blind Risk Bids

In connection with transactions in which Morgan Stanley agrees to guarantee an execution that is tied to a particular benchmark or price level, which is an unconditional contract, we may transact for our own account using similar means as described above. When we accept an order for execution on a guaranteed benchmark basis (for example, a guaranteed opening, closing, volume weighted average price or other guaranteed transaction), we will typically attempt to offset the risk incurred as a result of such guarantee by transacting in the market on a principal basis, or accessing internal liquidity sources, in the benchmark security or a related instrument, although we may choose not to perfectly hedge our exposure. In addition, in advance of publicly available rebalance events, we may acquire principal positions in anticipation of market demand. Regardless of whether or how we choose to hedge, any resulting profit or loss will accrue to Morgan Stanley. For certain types of guaranteed trades, for example, guaranteed closing price transactions, average price stops and blind risk portfolio stops, we may agree to improve the price you receive to incorporate some level of outperformance relative to the agreed price level.

After a client requests a bid on a blind risk portfolio, we may engage in hedging activity once we have committed capital to the client's order (*i.e.*, when we give the client a price). As noted above, we maintain an inventory of principal positions to better enable us to supply capital to our clients. In formulating our bid for a client's blind risk portfolio, we assess how the risks of our inventory may match the incoming exposure of the trade. Consistent with market practice, when we commit capital to the client's order, we may then hedge our potential exposure to offset the risk of such commitment. In connection with your request for a blind

[2] Morgan Stanley is a member of every U.S. stock and options exchange, is a participant in certain external crossing systems that permit sell-side involvement and may source liquidity from certain external liquidity providers. Morgan Stanley carefully evaluates and selects such external alternative liquidity sources based on whether they agree to act in a manner that mitigates the risk of information disclosure, preserves anonymity and delivers the highest quality executions reasonably available under the circumstances.

risk bid, you may instruct us not to engage in such hedging; however, our bid price will reflect the additional risk of the unhedged capital commitment.

While our hedging activities may influence the prices you receive on your guaranteed benchmark or blind risk trades, we employ reasonable efforts to minimize market impact. Unrelated Morgan Stanley activity on a principal or agency basis in the same securities or related instruments may also impact your execution price.

Indications of Interest (IOIs)

Consistent with client instructions, Morgan Stanley employs a variety of communication media to source liquidity and attract contra side trading interest. Our primary method is electronic indications of interest, or IOIs. Morgan Stanley's "natural" IOIs represent expressions of client interest and genuine Morgan Stanley trading interest disseminated through electronic means. Therefore, resulting transactions may be executed on an agency cross basis, principal basis or a combination of these. Morgan Stanley's "non-natural" IOIs or "Super Messages" represent a more generalized willingness to transact.

Use of Information

Protecting the confidentiality and security of client order, execution, position and related information is an important part of how Morgan Stanley conducts its business, and Morgan Stanley has implemented controls that are reasonably designed to protect such information. Morgan Stanley may use such information for a variety of purposes including client coverage, supervision, risk management, liquidity provision, and business strategy, and may disclose such information in connection with its global regulatory obligations, pursuant to client instructions and in performing normal course brokerage functions. Morgan Stanley may also use or disclose internally created aggregated and anonymized information for these purposes and in connection with other products and services.

Orders Handled on the NYSE Floor

Orders traded on the floor of the New York Stock Exchange are subject to certain unique handling requirements. For example, absent floor broker consent, an NYSE specialist/DMM may not trade for its own account on parity with client orders. When we route an order to the NYSE to be traded on the floor, we may, in the exercise of our brokerage judgment, and consistent with your instructions and our best execution obligations, permit the specialist/DMM to trade on parity with the order.

In Conclusion

Morgan Stanley is dedicated to upholding the highest level of integrity in our dealings with clients. We maintain a strong system of supervisory controls and compliance oversight to monitor client, Firm and employee trading activity. Morgan Stanley relies on the apparent authority of your personnel when placing orders with Morgan Stanley and expects you to notify us in the event an individual is no longer authorized to transact on behalf of your firm.

We take seriously our responsibility to employ best practices associated with client execution, and this letter is meant to underscore Morgan Stanley's continuing commitment to the transparent application of these principles.

If you have questions regarding our handling of your orders, coverage or our execution strategies and practices generally, please contact your Morgan Stanley representative.

Thank you for your business, and we look forward to working with you to meet your transaction needs.