

Form ATS-N filing for ATS-1 (MS Trajectory Cross)

Part Number	Item Number	Question	Answer
Part III	Item 9	Conditional Orders and IOIs	
Part III	Item 9a	<p>Does the NMS Stock ATS send or receive any messages indicating trading interest (e.g., IOIs, actionable IOIs, or conditional orders)?</p> <p>If yes, identify and explain the use of the messages, including information contained in the messages (e.g. price or size minimums), how the message is transmitted (e.g., order management system, smart order router, FIX), when the message is transmitted (e.g., automatically by the ATS, or upon the sender's request) the type of Persons that receive the message (e.g., Subscribers, Trading Centers), responses to conditional orders or IOIs (e.g. submission to firm up conditional orders), and the conditions under which the message might result in an execution in the ATS (e.g., response time parameters, interaction, and matching).</p>	<p>Yes.</p> <p>ATS-1 is a dark pool designed to provide matches over time intervals. ATS-1 executes at VWAP over the relevant time interval, as described in response to Part III, Item 11(a). ATS-1 accepts conditional indications from certain Morgan Stanley algorithms and from Subscribers and the Broker-Dealer Operator directly. ATS-1 maintains two continuous conditional books, one for Subscribers and the Broker-Dealer Operator entering conditional indications directly into ATS-1 and conditional indications entered by certain Morgan Stanley algorithms (the "MSLC" book) and a separate book for conditional indications entered solely by the Morgan Stanley algorithms (the "MSTX" book). The ATS-1 MSTX book is designed for conditional indications with a short duration trajectory (up to ten minutes) whereas the ATS-1 MSLC book is designed for conditional indications with a long duration trajectory (up to all day).</p> <p>If a user of the Morgan Stanley algorithms has designated their conditional indications and related orders to be eligible to participate in the MSLC book (as described in Part III, Item 5(c)), the applicable Morgan Stanley algorithm has the discretion to determine whether to place the conditional indication as eligible to match in the MSLC book, the MSTX book or place conditional indications in both books.</p> <p>MSTX Book:</p> <p>Before explaining the use of conditional indications, it is necessary to provide background on the interaction between the Morgan Stanley algorithms and ATS-1 and on the operation and structure of the ATS-1 MSTX book.</p>

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			<p>For context, Morgan Stanley offers certain algorithms that allow users to target certain trading benchmarks and other trading objectives. Those algorithms do so by generating a trading trajectory, which is a plan to trade certain amounts of a security over certain periods of time.</p> <p>The algorithm may then seek to trade all or a portion of the trading trajectory's planned trades in ATS-1. To do so, the algorithm will create a trajectory it is willing to enter in the ATS-1 MSTX book in the near term (up to ten minutes) and will communicate information relating to that near-term trajectory to ATS-1 in the form of a conditional indication. ATS-1 determines potential pairings of such conditional indications as described in further detail below and in response to Part III, Item 11(a). Note that the applicable algorithms determine the trading trajectory independent of ATS-1 and that ATS-1 does not alter any trading trajectory created by such algorithms.</p> <p>ATS-1 accepts conditional indications from certain Morgan Stanley algorithms that represent a non-firm willingness to trade. Each conditional indication indicates the number of shares willing to buy or sell over certain future time intervals that comprise potential durations of a crossing round. Specifically, a conditional indication will indicate the number of shares willing to buy (or sell) if a crossing round lasts one minute, the number of shares if a crossing round lasts two minutes, and so on, up to if a crossing round lasts ten minutes. Conditional indications (including buy, sell, sell short, and sell short exempt conditional indications) can be at the market or designated with a limit price.</p> <p>ATS-1 evaluates, for conditional indications within the book on each side of the market, the number of shares willing to be paired in a crossing round of various potential durations and seeks to pair them on a bilateral basis. The primary consideration in the MSTX book for the duration of a crossing round is determining the longest period of time for which the greatest number of shares per minute can be paired.</p>

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			<p>There can be at most one crossing round per security at any given point in time. The duration of a crossing round may vary from crossing round to crossing round and, regardless of duration, a crossing round will not exceed the end of regular trading hours. The duration of a crossing round is not security specific and will vary for each crossing round and each security, based upon the terms of the conditional indications to be paired, as described above.</p> <p>Upon selecting a crossing round duration, ATS-1 pairs conditional indications for such duration and then generates a bilateral firm-up request for each side of each pair to the Morgan Stanley algorithms that entered the paired conditional indications. Those algorithms can then send corresponding orders to ATS-1 that are firm. Each firm-up request contains ID numbers for each bilateral pairing, the size on which each conditional indication is being requested to firm-up, and the duration of the crossing round that will occur following the entry of firm orders in response to the firm-up request. Each conditional indication expires when ATS-1 sends the firm-up request to the Morgan Stanley algorithm(s) for each side of the bilateral pairing. Firm-up requests must be responded to within one second. ATS-1 may send multiple firm-up requests for an individual conditional indication as one message; however, each resulting order will correspond to a distinct contra-side pairing. Orders resulting from paired conditional indications are matched in ATS-1 at a price equal to the interval VWAP over the crossing round, as described more fully in response to Part III, Item 11(a). If the Morgan Stanley algorithm or algorithms that entered both conditional indications that are the subject of a bilateral pairing do not respond to the firm-up request with a firm order, both conditional indications in the bilateral pairing will already have expired once the corresponding firm-up request was sent by ATS-1 and therefore will no longer exist for any subsequent pairing.</p>

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			<p>A conditional indication entered in the ATS-1 MSTX book during an ongoing crossing round is eligible to participate in the next crossing round.</p> <p>MSLC Book:</p> <p>ATS-1 maintains a separate and distinct book for conditional indications entered directly into ATS-1 by either Subscribers, the Broker-Dealer Operator or certain Morgan Stanley algorithms that allow users to target certain trading benchmarks and other trading objectives. Those algorithms do so by generating a trading trajectory, which is a plan to trade certain amounts of a security over certain periods of time.</p> <p>The algorithm may then seek to trade all or a portion of the trading trajectory's planned trades in ATS-1 in the MSLC book and/or MSTX book. To do so, the algorithm will create a trajectory it is willing to enter in the book and will communicate information relating to that trajectory to ATS-1 in the form of a conditional indication designated either for the MSTX book or MSLC book. The ATS-1 MSLC book determines potential pairings of such conditional indications as described in further detail below and in response to Part III, Item 11(a). Note that the applicable algorithms, the Broker-Dealer Operator and/or Subscribers determine the trading trajectory independent of ATS-1 and that ATS-1 does not alter any trading trajectory created by such algorithms, Broker-Dealer Operator or Subscriber.</p> <p>The ATS-1 MSLC book accepts conditional indications from certain Morgan Stanley algorithms, the Broker-Dealer Operator and Subscribers that represent a non-firm willingness to trade. Each conditional indication indicates the number of shares willing to buy or sell over certain future time intervals that comprise potential durations of a crossing round. Specifically, a conditional indication in the MSLC book will indicate the number of shares willing to buy (or sell) if a</p>

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			<p>crossing round lasts <u>one minute, the number of shares if a crossing round lasts two minutes, the number of shares if a crossing round lasts five</u> minutes, the number of shares if a crossing round lasts ten minutes, and so on, up to if a crossing round lasts all day. Conditional indications (including buy, sell, sell short, and sell short exempt conditional indications) can be at the market or designated with a limit price.</p> <p>The ATS-1 MSLC book evaluates, for conditional indications within the book on each side of the market, the number of shares willing to be paired in a crossing round of various potential durations and seeks to pair them on a bilateral basis. There can be concurrent crossing rounds per security at any given point in time. The duration of a crossing round may vary from crossing round to crossing round and, regardless of duration, a crossing round will not exceed the end of regular trading hours. The duration of a crossing round is not security specific and will vary for each crossing round and each security, based upon the terms of the conditional indications to be paired, as described above.</p> <p>Upon selecting a crossing round duration, ATS-1 pairs conditional indications for such duration and then generates firm-up requests for each side of each pair. ATS-1 will send a firm-up request to the Subscriber(s), Broker-Dealer Operator or Morgan Stanley algorithm(s) that sent the conditional indication generating the conditional match. Depending upon the source of the applicable conditional indication, such firm-up request may be sent to the Subscriber, Broker-Dealer Operator and/or to a Morgan Stanley algorithm, as applicable. Those algorithms, the Broker-Dealer Operator or Subscriber (where applicable) can then send corresponding orders to the ATS-1 MSLC book that are firm. Each firm-up request contains ID numbers for each bilateral pairing, the size on which each conditional indication is being requested to firm-up, and the duration of the crossing round that will occur following the entry of firm orders in response to the firm-up request. Each conditional indication</p>

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			<p>expires when ATS-1 sends the firm-up request for each side of the bilateral pairing. Firm-up requests must be responded to within one second. Orders resulting from paired conditional indications are matched in ATS-1 at a price equal to the interval VWAP over the crossing round, as described more fully in response to Part III, Item 11(a). If the Morgan Stanley algorithm(s), Broker-Dealer Operator or the Subscriber(s) that entered both conditional indications that are the subject of a bilateral pairing do not respond to the firm-up request with a firm order, both conditional indications in the bilateral pairing will already have expired once the corresponding firm-up request was sent by ATS-1 and therefore will no longer exist for any subsequent pairing.</p> <p>The Broker-Dealer Operator monitors firm-up and cancellation rates for Subscribers whose conditional indications receive firm-up requests. If a Subscriber engages in a pattern of not timely responding to firm-up requests or cancelling orders, the Broker-Dealer Operator will take appropriate action, which could range from contacting the Subscriber to bring about a change in the Subscriber's behaviour or designating the Subscriber as no longer eligible as a Subscriber for ATS-1.</p> <p>A conditional indication entered in ATS-1 during an ongoing crossing round is eligible to participate in the next crossing round. Additionally, a conditional indication entered in the ATS-1 for participation in the MSTX book is ineligible to participate in a crossing round on the MSLC book and a conditional indication entered for potential matching in the MSLC book is ineligible to participate in a crossing round on the MSTX book.</p>
Part III	Item 11	Trading Services, Facilities and Rules	
Part III	Item 11a	Provide a summary of the structure of the NMS Stock ATS marketplace (e.g. crossing system,	ATS-1 is a dark pool designed to provide matches over time intervals. ATS-1 executes at VWAP over a relevant time interval. ATS-1 enables the Broker-

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		<p>auction market, limit order matching book) and explain the means and facilities for bringing together the orders of multiple buyers and sellers on the NMS Stock ATS.</p>	<p>Dealer Operator to match client, affiliate, and principal orders for NMS stocks with other client, affiliate, and principal orders.</p> <p>ATS-1 receives conditional indications from certain Morgan Stanley algorithms and directly from Subscribers and the Broker-Dealer Operator, as described in response to Part III, Item 9(a). ATS-1 seeks to pair on a bilateral basis conditional indications to buy with conditional indications to sell. Once two or more conditional indications are paired, ATS-1 will initiate a crossing round within the book in which the paired conditional indications reside.</p> <p>ATS-1 maintains two continuous conditional books. The ATS-1 MSLC book accepts conditional indications from Subscribers and the Broker-Dealer Operator entering such conditional indications directly into ATS-1 as well as conditional indications entered by certain Morgan Stanley algorithms. ATS-1 maintains a separate book, MSTX, for conditional indications entered exclusively by the Morgan Stanley algorithms. The ATS-1 MSTX book is designed for conditional indications with a short duration trajectory whereas the ATS-1 MSLC book is designed for conditional indications with a long duration trajectory.</p> <p>If a user of the Morgan Stanley algorithms has designated their orders to be eligible to match in the MSLC book (as described in Part III, Item 5(c)), the applicable Morgan Stanley algorithm has the discretion to determine whether to place the conditional order into the MSLC book, the MSTX book or both.</p> <p>MSTX Book:</p> <p>The ATS-1 MSTX book is designed for orders with a shorter trading trajectory and can be accessed solely through certain Morgan Stanley algorithms. The ATS-1 MSTX book employs capacity/size/time matching priority when seeking to pair conditional indications on a bilateral basis. A conditional</p>

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			<p>indication that ATS-1 receives for an account of an affiliate of the Broker-Dealer Operator on behalf of that affiliate's client(s) is classified as an agency conditional indication. A conditional indication that ATS-1 receives for an account of an affiliate trading for the affiliate's own account for the affiliate's client facilitation/market making activity (which the Broker-Dealer Operator handles as agent for its affiliate) yields priority to other agency conditional indications (and is classified as an agency conditional indication for counterparty selection/opt-out purposes as described in response to Part II, Item 3). A conditional indication that ATS-1 receives for an account of an affiliate and for that affiliate's own account other than for the affiliate's client facilitation/market making activity is deemed a principal conditional indication for priority and for counterparty selection/opt-out purposes, notwithstanding that the Broker-Dealer Operator's capacity otherwise would be as agent for its affiliate.</p> <p>Each conditional indication indicates the number of shares willing to buy or sell over certain future time intervals that comprise potential durations of a crossing round. Specifically, a conditional indication will indicate the number of shares willing to buy (or sell) if a crossing round lasts one minute, the number of shares if a crossing round lasts two minutes, and so on, up to if a crossing round lasts ten minutes. ATS-1 evaluates, for conditional indications on each side of the market, the number of shares willing to be paired in a crossing round of various potential durations and seeks to pair them on a bilateral basis. The primary consideration for choosing the duration of a crossing round is determining the longest period of time for which the greatest number of shares per minute can be paired. There can be at most one crossing round per security within the MSTX book at any given point in time. The duration of a crossing round may vary from crossing round to crossing round and, regardless of duration, a crossing round will not exceed the end of regular trading hours. The duration of a crossing round is not security specific and will vary for each</p>

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			<p>crossing round and each security, based upon the terms of the conditional indications to be paired, as described above.</p> <p>Upon selecting a crossing round duration, the ATS-1 MSTX book pairs conditional indications for such duration and issues firm-up requests to the Morgan Stanley algorithms that entered those conditional indications. ATS-1 matches on a bilateral basis orders entered in response to such firm-up requests for the duration of the crossing round. Such match occurs at the interval VWAP over the crossing round, as described in more detail below.</p> <p>One or more bilateral matches can conclude before the scheduled end time of that crossing round under certain circumstances. For example, if an order is cancelled during the crossing round, that may result in a partial match or no match for that pairing. Also, ATS-1 evaluates the marketability of limit orders with respect to the price quoted for the security in the consolidated quotation system and a limit order received following a firm-up request that is the subject of a pairing could become non-marketable during a crossing round, resulting in a partial match or no match for the pairing.</p> <p>Given the forward-looking nature of the crossing rounds, the ATS-1 MSTX book makes certain assumptions regarding forward-looking volume and price when determining quantity eligible for pairing for each crossing round. As a result, conditional indications (or portions thereof) that may otherwise be eligible to be paired in the ATS-1 MSTX book may not be paired in a crossing round. For example, where a conditional indication with a limit order is priced close to the then-current market for the subject NMS stock (such that, for example, the limit order could become non-marketable during the forward looking crossing round), ATS-1 may not consider all or a portion of the conditional indication as eligible for the crossing round. This applies without regard to the capacity of the conditional indication.</p>

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			<p>Executions in ATS-1 occur at an interval VWAP calculated by ATS-1 based on the average price for each NMS stock weighted by the volume of shares executed in that NMS stock that were reported to the consolidated tape during the crossing round (or such shorter period for an early termination). Such calculation is subject to certain conditions designed to avoid calculating prices that may be less representative of interval VWAP.</p> <p>MSLC Book:</p> <p>ATS-1 maintains the MSLC book which is designed for longer duration orders that can be accessed directly by Subscribers of the ATS and the Broker-Dealer Operator or through certain Morgan Stanley algorithms. The ATS-1 MSLC book employs capacity/marketability/duration/size/time priority when seeking to pair conditional indications on a bilateral basis.</p> <p>Capacity: Priority is given to conditional indications placed on an agency basis. A conditional indication that ATS-1 receives for an account of an affiliate of the Broker-Dealer Operator on behalf of that affiliate's client(s) is classified as an agency conditional indication. A conditional indication that ATS-1 receives for an account of an affiliate trading for the affiliate's own account for the affiliate's client facilitation/market making activity (which the Broker-Dealer Operator handles as agent for its affiliate) yields priority to other agency conditional indications (and is classified as an agency conditional indication for counterparty selection/opt-out purposes as described in response to Part II, Item 3). A conditional indication that ATS-1 receives for an account of an affiliate and for that affiliate's own account other than for the affiliate's client facilitation/market making activity is deemed a principal conditional indication for priority and for counterparty selection/opt-out purposes, notwithstanding that the Broker-Dealer Operator's capacity otherwise would be as agent for its affiliate.</p>

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			<p>Marketability: A conditional indication will be given a marketability category based on the price, and relative volatility of the security. Note that conditional indications can be in the same marketability category, even if the conditional indications have different prices.</p> <p>Duration: The ATS-1 MSLC book will give priority to conditional indications that can match for the longest duration. For instance, a 15-minute crossing round has higher priority than a 10-minute crossing round.</p> <p>Size: Conditional indications with the greater number of shares will be prioritized over conditional indications with a smaller number of shares.</p> <p>Each conditional indication indicates the number of shares willing to buy or sell over certain future time intervals that comprise potential durations of a crossing round. Specifically, a conditional indication will indicate the number of shares willing to buy (or sell) if a crossing round lasts <u>one minute, the number of shares if a crossing round lasts two minutes, the number of shares if a crossing round lasts</u> five minutes, the number of shares if a crossing round lasts ten minutes, and so on, up to if a crossing round lasts all day. ATS-1 evaluates, for conditional indications on each side of the market within the book, the number of shares willing to be paired in a crossing round of various potential durations and seeks to pair them on a bilateral basis. There can be concurrent crossing rounds per security at any given point in time in the MSLC book. The duration of a crossing round may vary from crossing round to crossing round and, regardless of duration, a crossing round will not exceed the end of regular trading hours. The duration of a crossing round is not security specific and will vary for each crossing round and each security, based upon the terms of the conditional indications to be paired, as described above.</p> <p>Upon selecting a crossing round duration, ATS-1 pairs conditional indications for such duration and</p>

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			<p>then generates firm-up requests for each side of each pair. ATS-1 will send a firm-up request to the Subscriber(s), the Broker-Dealer Operator or Morgan Stanley algorithm(s) that sent the conditional indication generating the conditional match. Depending upon the source of the applicable conditional indication, such firm-up request may be sent to the Subscriber(s), the Broker-Dealer Operator or to a Morgan Stanley algorithm(s), as applicable. Those algorithms, the Broker-Dealer Operator or Subscriber(s) (where applicable) can then send corresponding orders to the ATS-1 MSLC book that are firm. ATS-1 matches on a bilateral basis orders entered in response to such firm-up requests for the duration of the crossing round. Such match occurs at the interval VWAP over the crossing round, as described in more detail below.</p> <p>One or more bilateral matches can conclude before the scheduled end time of that crossing round under certain circumstances. For example, if an order is cancelled during the crossing round, that may result in a partial match or no match for that pairing. Also, ATS-1 evaluates the marketability of limit orders with respect to the price quoted for the security in the consolidated quotation system and a limit order received following a firm-up request that is the subject of a pairing could become non-marketable during a crossing round, resulting in a partial match or no match for the pairing.</p> <p>Executions in ATS-1 occur at an interval VWAP calculated by ATS-1 based on the average price for each NMS stock weighted by the volume of shares executed in that NMS stock that were reported to the consolidated tape during the crossing round (or such shorter period for an early termination). Such calculation is subject to certain conditions designed to avoid calculating prices that may be less representative of interval VWAP.</p>