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**MARKETAXESS CORPORATION
PARTICIPANT SYSTEM
GUIDELINES**

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INTRODUCTION

These Participant System Guidelines (“Guidelines”) provide information about the trading platform (the “System”) of MarketAxess Corporation¹ (“MAC”), which is a wholly owned subsidiary of MarketAxess Holdings Inc. (“MAH”). The Guidelines are applicable to all transactions effected on or through the System, including Open Trading®, ATS functionality and all other trading activities facilitated by MAC.

The Guidelines are supplemental to, and do not supersede, the applicable Onboarding Agreement entered into by each Participant with MAC or its Affiliates. Each Participant's access to and use of the System shall be governed by the applicable Onboarding Agreement and the Guidelines. Unless stated expressly otherwise herein, the Onboarding Agreement takes precedence over any inconsistent terms in the Guidelines to the extent of any inconsistency.

Information contained in the Guidelines are subject to change at any time. Please refer to the System for the latest version of the Guidelines.

ABOUT THE MARKETAXESS SYSTEM

MAC operates a leading electronic trading platform that enables fixed-income market participants to efficiently trade corporate bonds and other types of fixed-income instruments using our patented trading technology. Institutional investor and broker-dealer firms use our System to access global liquidity in U.S. high-grade corporate bonds, emerging markets and high-yield bonds, European bonds, U.S. agency bonds, U.S. Government bonds, municipal bonds, leveraged loans and other fixed-income securities. Through our Open Trading protocols, we execute bond trades between and among Investor Participants and Dealer Participants in an all-to-all anonymous trading environment in which MAC acts as the matched principal counterparty. Under our RFQ-hub protocol, market participants may effect transactions on a fully disclosed basis in exchange traded funds and other equity securities, arrange transactions in exchange-listed options and execute block futures transactions.²

MAC and its affiliates also offer a number of trading-related products and services, including CP+™ (fka Composite+) pricing and other market data products to assist clients with trading decisions; auto-execution and other execution services for clients requiring specialized workflow solutions; connectivity solutions that facilitate straight-through processing; and technology services to optimize trading environments.

Our System’s innovative technology solutions are designed to increase the number of potential trading counterparties on our System and create a menu of solutions to address different trade sizes and liquidity characteristics. Our System also provides our Dealer Participants with a solution that enables them to efficiently reach our Investor Participants for the distribution and trading of bonds. Key trading protocols on the System include:

¹ Rulebooks for MarketAxess Europe Limited, MarketAxess NL B.V., and MarketAxess Singapore Pte. Limited can be found at www.marketaxess.com

² Any block futures transactions executed under the RFQ-hub protocol remain subject to acceptance by the relevant futures exchange.

- Disclosed RFQ – Our traditional disclosed Request-For-Quote (“RFQ”) model allows our Investor Participants to simultaneously request competing, executable bids or offers from our Dealer Participants and execute trades with the broker-dealer of their choice from among those that choose to respond. Disclosed RFQ protocols include single CUSIP trading, portfolio trading and list trading.
- Open Trading – Our Open Trading protocols complement our disclosed RFQ model by increasing the number of potential counterparties and improving liquidity by allowing all participants to interact anonymously in an all-to-all trading environment.
 - Live Markets – Live Markets is an order book-based corporate bond trading protocol which enables Participants to anonymously submit live and subject bids and offers for bonds, submit limit orders to interact with resting bids and offers, and participate in both multi-party “work-up” sessions and MAC initiated “MATCH” sessions. Live Markets transactions take place via our Open Trading functionality. Live Markets is registered as an ATS as MarketAxess ATS.
 - Mid-X – Mid-X is an anonymous protocol which enables Participants to match their interests in bonds during periodic single price sessions at mid-market prices which are determined by our CP+. Mid-X is registered as an ATS as MarketAxess ATS.
 - MarketAxess Auctions – The MarketAxess Auctions protocol (“MarketAxess Auctions”) is an anonymous session-based protocol pursuant to which Participants may submit orders for corporate bonds selected by MAC where such orders may be crossed at the clearing price for such bonds. MarketAxess Auctions is registered as an ATS as MarketAxess ATS.
 - Internal Crossing – Our Internal Crossing protocol allows for Participants to execute a simultaneous purchase and sale of a bond when acting on behalf of different Principals.
 - Disclosed Open Trading – Disclosed Open Trading allows for counterparties to choose to identify themselves to potential counterparties while still taking advantage of our all-to-all Open Trading infrastructure.
- Automation Solutions – Auto-X RFQ, Auto-X Responder, and Adaptive Auto-X free up operational capacity by allowing Participants to automatically execute trades or respond to inquiries based on prespecified criteria or by using MarketAxess’ algorithmic trade execution solutions.
- Treasury Hedging – Our Treasury hedging services, Auto-hedging and Net-hedging, provide trading efficiencies by allowing Participants to automatically execute U.S. Treasury bond hedge transactions with MarketAxess to hedge the duration risk of spread-based credit trades executed on the platform.
- MarketAxess Rates – Our MarketAxess Rates service offers an alternative trading model for the U.S. Treasury market with a choice of execution models, including access to one-to-one or many-to-many trading models, facilitating a combination of anonymous and disclosed streaming of executable prices while creating a personalized order book for each Participant. For the avoidance of doubt, MarketAxess Rates is not registered as an ATS.³

³ MarketAxess Rates limits its activities to U.S. Treasuries and thus is exempted from ATS registration under 17 CFR 242.300(a)(4)(ii)(A).

We are not a party to any of the disclosed trades (other than Disclosed Open Trading Transactions) that occur on our System between Investor Participants and Dealer Participants; rather, we serve as an intermediary between broker-dealers and institutional investors, enabling them to meet, agree on a price and then transact directly with each other. However, in connection with our Open Trading protocols, we preserve anonymity by executing bond transactions between and among Investor Participants and Dealer Participants on a matched principal basis by serving as counterparty to both the buyer and the seller in matching back-to-back trades which are then settled through MAC or a third- party clearing broker.

DEFINITIONS

“Affiliate” means, with respect to any person or entity, any other person or entity directly or indirectly controlling or controlled by, or under direct or indirect common control with, such person or entity;

“Applicable Law” means all applicable laws, regulations, regulatory requirements (including any guidance, orders or other directions of a regulatory authority), market rules, sanctions, and all judgments, orders, instructions or awards of any court or competent authority and applicable to: (a) MAC; or (b) a Participant (or Principal as the case may be); and in each case having regard to the context;

“ATS” means MarketAxess ATS, an Alternative Trading System as defined by Regulation ATS under the Exchange Act;

“Confidential Information” means information about the disclosing party’s (or any of its clients’) business activities that is proprietary and confidential, which shall include all business, financial, technical and other information of a party marked or designated by such party as “confidential” or “proprietary,” or information which, by the nature of the circumstances surrounding the disclosure, ought in good faith to be treated as confidential;

“Dealer Participant” means a Participant that has executed a dealer agreement with MAC or its Affiliates;

“Disclosed RFQ” is defined in Section 8.1;

“Eligible Instrument” is defined in Section 11.2;

“ESP” means an executable streaming price;

“ERISA” means the Employee Retirement Income Security Act of 1974;

“Exchange Act” means the Securities Exchange Act of 1934;

“Fedwire” means the Fedwire Funds Service;

“FICC” means the Fixed Income Clearing Corporation;

“FINRA” means the Financial Industry Regulatory Authority;

“Insolvency Event” means the occurrence of any of the following circumstances with respect to a Participant (or a Principal, if applicable): (a) it is dissolved, declared insolvent or is unable or admits inability to pay its debts as they fall due or suspends making payments on any of its debts; (b) any step, application or proceeding has been taken by or against it or in respect of the whole or any part of its undertaking, for a voluntary arrangement or composition or reconstruction or rescheduling of its debts, winding up, bankruptcy, dissolution, administration, receivership or otherwise or any similar proceeding in any jurisdiction; (c) the appointment of a liquidator, trustee, receiver, administrative receiver or similar officer; (d) a voluntary or involuntary petition for a bankruptcy order; (e) any similar action, application or proceeding in any jurisdiction under Applicable Law to which it is subject; or (f) it takes any action in furtherance of, indicating its consent to, approval of, or acquiescence in, any of the foregoing events;

“Investor Participant” means a Participant that has executed a user agreement or subscriber agreement with MAC or its Affiliates;

“Last Look Functionality” means a functionality whereby a MarketAxess Rates Liquidity Provider is afforded the opportunity, after its price quote is accepted by a MarketAxess Rates Liquidity Consumer to confirm whether or not the MarketAxess Rates Liquidity Provider is willing to trade at that quoted price;

“Market Abuse” means any behavior that constitutes market abuse, market manipulation or insider trading or any other similar or analogous behavior prohibited or subject to sanctions under Applicable Law;

“MarketAxess Rates” means MAC’s proprietary electronic U.S. Treasury Instruments trading functionality;

“MarketAxess Rates Liquidity Consumer” means a Participant who may submit trade requests and has a trading relationship with at least one MarketAxess Rates Liquidity Provider, and/or initiate Requests for Quotes on MarketAxess Rates;

“MarketAxess Rates Liquidity Provider” means a Participant who has agreed to provide an executable streaming price and/or respond to Requests for Quotes;

“Mid-X” is defined in Section 9.2;

“NFA” means National Futures Association;

“Onboarding Agreement” means the applicable agreement between a Participant and MAC or its Affiliates relating to such Participant's use of the System, as replaced or amended from time to time, including any supplemental terms or amendments thereto;

“Onboarding Documentation” means the applicable supporting documentation that may be required by MAC from the Participant from time to time in connection with the Participant’s application to become a Participant;

“Open Trading Transaction” means any Transaction which is executed by a Participant anonymously over the System with another anonymous Open Trading Participant where MAC (or a third party) is selected by each Participant as the matched principal counterparty to such Transaction. Each Open Trading Transaction is comprised of two separate Transactions, one in which MAC buys from the selling Open Trading Participant and one in which MAC sells to the buying Open Trading Participant;

“Participant” means an entity that has been admitted to the System pursuant to Section 2 hereof. Additionally, to the extent a Participant uses the Live Markets, Mid-X or MarketAxess Auctions trading protocols, it is a Subscriber of the ATS;

“Principal” means an underlying entity, or client of a Participant, on behalf of whom a Participant executes Transactions (whether disclosed and/or identified to MAC or not);

“QIB” means a Qualified Institutional Buyer as defined in SEC Rule 144A;

“Regulation ATS” means 17 CFR 242.300 et. seq.;

“Relevant Regulator” means, when used with respect to a person or entity, any regulatory authority that has jurisdiction over such person or entity, including FINRA, MSRB, NFA and the SEC;

“**SEC**” means the Securities and Exchange Commission;

“**SMMP**” means a Sophisticated Municipal Market Professional as defined under MSRB Rule D-15;

“**Subscriber**” means a Participant who has subscribed to participate on the ATS;

“**Trading Protocols**” means, collectively, RFQ Trading Protocols (as defined in Section 8), ATS Trading Protocols (as defined in Section 9) and MarketAxess Rates Trading Protocols (as defined in Section 10);

“**Transaction**” means a transaction executed via the System by a Participant (including, for the avoidance of doubt, and unless the context expressly states otherwise, each leg of an Open Trading Transaction); and

“**U.S. Treasury Instrument(s)**” means US Treasury Bills, US Treasury Notes, US Treasury Bonds, and “When Issued” US Treasury Instruments. “When Issued” US Treasury Instruments are US Treasury securities that have been authorized, but not yet issued, by the US Treasury and are conditional upon the US Treasury completing the issuance of the security.

ACCESS TO THE SYSTEM

1. Eligibility

1.1 MAC will only consider an applicant for admission as a Participant of the System (subject to Section 2.4) if:

- (a) The applicant carries on business from an establishment maintained in a jurisdiction in which MAC is permitted to provide the System under all Applicable Laws; and
- (b) It is a broker-dealer registered under Section 15(b) of the Exchange Act, a QIB, a SMMP or otherwise, if applicant, as determined by MAC in its sole discretion, meets the criteria to be a Participant of the System.

together, the "Participant Eligibility Criteria."

2. Admission

2.1 Applicants wishing to become Participants on the System must satisfy the following conditions:

- (a) They must satisfy the Participant Eligibility Criteria;
- (b) They must have passed any required KYC, sanctions and anti-money laundering checks (including providing any such additional information as MAC may require to satisfy such checks);
- (c) For Participants who wish to access Open Trading protocols, they must have been approved by MAC as a counterparty after passing all required credit checks and any other eligibility checks MAC may reasonably require; and
- (d) They must have acknowledged that they have read, understood and agreed to be bound by the Guidelines.

together, the "Admission Criteria."

2.2 Applicants must submit the following to MAC:

- (a) A signed Onboarding Agreement applicable to the category of Participant (as shall be determined by MAC);
- (b) Completed and signed Onboarding Documentation; including, as applicable and without limitation, a signed QIB and/or SMMP certification form; and
- (c) Any such additional information as MAC may reasonably require to enable it to assess whether or not the applicant meets the Admission Criteria.

2.3 Once MAC has received all the relevant documentation and information, MAC will decide whether or not to admit an applicant as a Participant of the System. MAC may reject an applicant if it does not meet the Admission Criteria or if MAC determines in its sole discretion to not accept the applicant as a Participant.

2.4 MAC will grant a Participant access to the System on an Eligible Instrument by Eligible Instrument basis.

2.5 MAC may require additional Onboarding Documentation as a condition to grant a Participant access to certain Trading Protocols on the System.

2.6 Participation on the System at any time after the publication of a Notice constitutes deemed acknowledgement and acceptance by a Participant of such Notice ("participation" includes, for the avoidance of doubt, access to information and/or the execution of Transactions over the System by such Participant).

2.7 Notwithstanding Section 2.3, MAC will review the application of a Subscriber to the ATS in a fair and non-discriminatory manner to determine if the Admission Criteria are met.

3. Restriction, Termination or Suspension of Access

3.1 A Participant may resign from its status as a Participant by terminating its Onboarding Agreement in accordance with its terms.

3.2 MAC may restrict, suspend, or terminate a Participant's right to access and/or use the System if:

- (a) the Participant's Onboarding Agreement is terminated in accordance with its terms;
- (b) the Participant does not trade on the System for an extended period of time as determined by MAC;
- (c) the Participant (or its Principal, as applicable) is, or appears to MAC to be, unable or likely to become unable to satisfy any obligation to MAC or another Participant;
- (d) MAC becomes aware that the Participant has made a misrepresentation to MAC or another Participant, has breached Applicable Law in any material respect; or is subject to enforcement or other proceedings by a Relevant Regulator;
- (e) MAC becomes aware that an Insolvency Event has occurred in relation to the Participant (or its Principal, as applicable); or
- (f) MAC deems it necessary in its sole discretion to ensure a fair and orderly market on the System, to uphold the integrity of the System, to comply with Applicable Law, or if so, requested by a Relevant Regulator.

3.3 A Participant whose right to use the System has been restricted, suspended, or terminated shall:

- (a) remain subject to the Guidelines in respect of acts and omissions that occurred prior to such time and shall comply with any request for information in relation to the period of its participation which MAC may make at any time following the restriction, suspension, or termination of its participation; and
- (b) remain subject to the Guidelines in respect of any outstanding obligations under the Guidelines until those obligations are satisfied. Without limiting the foregoing, such Participant shall remain responsible for all obligations, including settlement, relating to trades executed prior to any such restriction, suspension or termination.

3.4 MAC may restrict, suspend or terminate a Participant's right to access Open Trading protocols if:

- (a) MAC, in its sole discretion, no longer wishes to extend credit to Participant;
- (b) the Participant refuses to follow MAC's instructions or rulings in accordance with the CETP; or

- (c) any event under Section 3.2 has taken place.

4. Fees

- 4.1 A Participant shall be subject to fees as set forth in the Participant's Onboarding Agreement, which may be amended from time to time as set forth in the Participant's Onboarding Agreement.
- 4.2 If a Participant utilizes a System functionality which is not described or contemplated in the Participant's Onboarding Agreement, the Participant shall pay such fees as determined by MAC and/or notified to the Participant from time to time.
- 4.3 For certain products, MAC may electronically adjust the quotes provided by Dealer Participants, and final transaction prices, in the amount of the transaction fee set forth in the applicable fee schedule. Any such adjustment by MAC is made in lieu of MAC invoicing any Investor Participant for the transaction fee directly. The default setting for such products is for the transaction fees to be embedded in the cost of the applicable transaction and collected by Dealer Participants from Investor Participants on MAC's behalf. If any Investor Participant prefers for MAC to invoice it for the transaction fee directly, the Investor Participant shall (i) provide written notice to MAC of such preference and (ii) execute an amendment to Participant's Onboarding Agreement specifying that it will thereafter be Investor Participant's obligation to pay the transaction fee directly to MAC. Following such election, MarketAxess will cease adjusting any Dealer Participant quotes provided to the Investor Participant and MAC shall invoice the Investor Participant for such amounts on a monthly basis.
- 4.4 MAC may provide rebates or discounts on fees to Participants on the System based on the achievement of designated trading volume thresholds or other criteria.

5. Access via Third-Party Platforms

- 5.1 Subject to the foregoing, a Participant may engage in Transactions through the System via one or more third-party vendor platforms ("Third-Party Platform"), which includes third-party order management system providers.
- 5.2 Participants must, at their own cost and expense, provide all equipment, operating platforms and software to use the Third-Party Platform, which shall meet any minimum standards and requirements for such equipment, operating platforms and software as may be specified by MAC from time to time. MAC will have no liability for any such equipment or connections, nor any liability for any damage thereto.
- 5.3 Participants accept the risk of using a Third-Party Platform. MAC gives no assurance that a Third-Party Platform will be error free or operate properly in conjunction with the System. Participants will be solely responsible for any losses, damages or costs that Participants may incur as a result of accessing the System via a Third-Party Platform.
- 5.4 Participants are responsible for ensuring the System's security in connection with its use of a Third-Party Platform.
- 5.5 MAC has no responsibility for transmissions, instructions or orders that are inaccurate, altered by a Third-Party Platform or not received by MAC via the Third-Party Platform, and may execute any Transaction on the terms actually received by MAC. A Participant's obligations and responsibilities under

any Transactions shall be binding even if the information submitted by the Participant with respect thereto was inaccurate or submitted in error or if the Transaction is claimed by the Participant to have been unauthorized or unsuitable. Accordingly, each Participant must honor in full all obligations and responsibilities relating to Transactions executed by the System via a Third-Party Platform.

5.6 MAC may restrict, suspend, or terminate a Participant's access to and use of the System via the Third-Party Platform at any time, without notice or liability.

5.7 Participants must abide by the terms and conditions of their agreements with a Third-Party Platform and must immediately inform MAC if made aware of any security breach, malfunction or other material issue regarding the Third-Party Platform.

6. Access via APIs

6.1 MAC may make available to Participants certain application programming interfaces, together with supporting documentation (together, the "API"), which are a set of programming interfaces which allow Participant's software application, website or other interface owned or operated by Participant (the "Application") to integrate with the System in order to engage in Transactions (together the "API Services").

6.2 Except as otherwise permitted by MAC, Participants shall not, and will not permit any person under their control to:

- (a) tamper with, adapt, reverse engineer, translate, decompile, disassemble, modify, copy, disseminate or otherwise dispose of the API, in whole or in part;
- (b) create any upgrades or other translations, adaptation, variation, modifications or enhancements to the API;
- (c) rent, lease, or transfer any part of the API to any person or entity (other than to Third-Party Platforms) without the prior written consent of MAC;
- (d) attempt to download, connect, gain or provide access to or use the API for any purpose not expressly authorized by MAC; or
- (e) use the information received via the API for any purposes other than directly in connection with the execution of Transactions through the System.

6.3 Participants shall not, nor permit any person under their control to, re-circulate, republish, copy, distribute or otherwise provide information generated from the System, or access to the API, to any third party, including, without limitation, to any affiliates, without the prior written consent of MAC. For the avoidance of doubt, Participants are not permitted to create and redistribute derived data from System information. In this context the term "derived data" shall mean data of any kind containing System information or any part of it and/or resulting directly or indirectly from the manipulation or analysis of System information (whether generated by human or machine) whether alone or in conjunction with other data regardless of whether or not the information is in any way identifiable from or within such data by any means.

6.4 MAC reserves the right at any time, without prior notice and without any liability therefore, to temporarily or permanently suspend or terminate a Participant's use of the API.

6.5 Participants shall:

- (a) comply with all reasonable instructions notified to it by MAC from time to time in relation to Participant's access to and use of the API;
- (b) meet certain System protocols as specified by MAC in writing from time to time;
- (c) use commercially reasonable efforts to notify MAC of any defect in the API or change to the API of which Participant becomes aware;
- (d) promptly notify MAC of any unauthorized access to the API or the Application of which Participant becomes aware; and
- (e) have all necessary controls to prevent disorderly trading, low hit rates (as determined by MAC in its sole discretion) or sending messages without a bona fide intention to trade.

6.6. MAC makes the API Services available with the expectation that each Participant will execute a certain threshold of trades through the System per calendar quarter, as determined by MAC and communicated to each Participant (the "API Threshold"). If a Participant does not meet the API Threshold, MAC reserves the right to terminate a Participant's use of the API.

6.7. MAC may modify the API or any of the benefits and/or features provided in connection with use of the API at any time with notice to Participants. Modifications may affect the Application and may require Participants to make changes to their Applications at Participants' own cost to continue to be compatible with or interface with the API.

6.8. Participants shall be responsible for and agree to develop their own Application to connect their systems to the API. Participants shall be responsible (at their own expense) for conducting all design, development and maintenance work relating to the production and maintenance of their Application.

6.9. Participants must ensure that their Application meets the technical requirements specified by MAC from time to time. Participants shall be responsible for procuring, installing, operating and/or maintaining any software, hardware and Internet bandwidth, access, communications or other information technology items that are required in order to access the API. Operating instructions and a description of the minimum required configuration to access and use the API are available from MAC at any time upon reasonable request.

6.10. Participants are responsible for ensuring that their Application and/or their use of the API will not contain or transmit any computer virus or malware on the API, the System or into the software comprising the API and System.

6.11. For the avoidance of doubt, MAC shall not be responsible for any misuse or failures in the API or System which are attributable to the Participant's Application.

TRADING

7. Hours of operation

7.1. Subject to Sections 7.4 and 7.5, the System (other than the ATS and MarketAxess Rates) will be open for business Sunday to Friday (each, a "Trading Day") except that it shall not be available between 6 PM Eastern Time to 7 PM Eastern Time each Trading Day (or 5 PM Eastern Time to 6 PM Eastern Time each Trading Day for the RFQ-hub Protocol) or from 6 PM Eastern Time each Friday until 7 PM Eastern Time each Sunday, nor during any other scheduled maintenance slots or as may otherwise be determined by MAC.

7.2 Subject to Sections 7.4 and 7.5, the ATS will be open for business between 8 AM Eastern Time to 5 PM Eastern Time each Trading Day, except that it shall not be available between 5 PM Eastern Time each Friday until 8 AM Eastern Time each Monday, nor during any scheduled maintenance slots or as may otherwise be determined by MAC.

7.3 Subject to Sections 7.4 and 7.5, MarketAxess Rates will be open for business on Trading Days beginning on Sunday at 6:30 PM Eastern Time and ending on Friday at 5 PM Eastern Time, except that MarketAxess Rates shall not be available between 5:30 PM Eastern Time to 6:30 PM Eastern Time each Trading Day, nor during any other scheduled maintenance slots or as may otherwise be determined by MAC.

7.4 The System will follow the U.S. Holiday Recommendations published by the Securities Industry and Financial Markets Association (“SIFMA”) for determining trading days on which the System will be closed or have reduced trading hours.

7.5 There is nothing to prevent or restrict the right of MAC to extend (or reduce) trading hours generally, or in relation to any Eligible Instrument, during the course of any Trading Day. MAC will use reasonable efforts (under the circumstances) to provide advance notice of any extension or reduction of trading hours.

8. RFQ Trading Protocols

The System operates the following RFQ Trading Protocols (as may be amended by any technical updates, revisions or rebranding of such Trading Protocols from time to time):

8.1 "Disclosed RFQ"

Under the Disclosed RFQ Trading Protocols, the System facilitates Transactions between Participants that have established bilateral relationships for the purpose of executing trades opposite one another (“Disclosed RFQ”). Disclosed RFQ inquiries may be sent to a single Participant or to multiple Participants.

Disclosed RFQ trading is conducted on a fully disclosed basis, such that the parties disclose their identities when posting or responding to an RFQ and clearing and settlement of Transactions executed pursuant to Disclosed RFQ occurs directly between the Participants without any MAC involvement.

The terms applicable to Disclosed RFQ transactions effected under the RFQ-hub protocol are set forth in Appendix X.

8.2 "Open Trading"

"Open Trading Transactions" are Transactions which are executed by a Participant anonymously over the System with another Participant where MAC (or a third party) is selected by each Participant to the Open Trading Transaction as the matched principal counterparty to such Open Trading Transaction; provided, however, that Disclosed Open Trading Transactions allow for a Participant engaging in an Open Trading Transaction to disclose their identity to potential counterparties when posting an RFQ.

The terms applicable to Open Trading Transactions where MAC (or a third party) serves as the matched principal counterparty to the Open Trading Transaction and Disclosed Open Trading Transactions are set forth in APPENDIX I.

8.3 “Internal Crossing”

“Internal Crossing” means the simultaneous purchase and sale, on the System, of an Eligible Instrument, by a single Participant acting on behalf of different Principals, where both the buy and sell Transactions are executed with MAC at the same price (save for any fees imposed by MAC by adjusting the price of the Eligible Instrument in the amount of the applicable fee). Internal Crossing functionality is not compliant with: (i) Rule 17a-7 of the Investment Company Act of 1940; and (ii) ERISA. Participants subject to Rule 17a-7 and/or ERISA are not permitted to use this functionality. Internal Crossing takes place via Open Trading.

The terms applicable to Internal Crossing are set forth in APPENDIX II.

8.4 Automation Solutions: “Auto-X RFQ,” “Auto-X Responder,” and “Adaptive Auto-X”

“Auto-X RFQ” means an automated execution service whereby a Participant can submit requests for quotes for Eligible Instruments and the System will automatically execute transactions on those bonds if responses meet the parameters or conditions (the “Conditions”) previously entered into the System by the Participant. Auto-X RFQ may take place via Disclosed RFQ or Open Trading.

“Auto-X Responder” is a functionality that allows Participants to anonymously respond to certain RFQ inquiries based on Conditions previously entered into the System by the Participant, which may or may not lead to the execution of a transaction. Responses sent using the Auto-X Responder occur via Open Trading.

“Adaptive Auto-X” is an algorithmic electronic order routing and execution service which may, among other things, break Participant orders into smaller child orders and route the child orders over time amongst various System trading protocols, taking into account certain Conditions entered into the System by the Participant, in an effort to access liquidity, obtain price improvement, minimize market impact, or attempt to achieve a specific order execution benchmark.

The terms applicable to the Automation Solutions are set forth in APPENDIX III.

8.5 Treasury Hedging: “Auto-hedging” and “Net-hedging”

MAC’s Treasury Hedging service allows Participants to automatically execute a U.S. Treasury bond hedge transaction with MAC, acting as a matched principal counterparty, to hedge the duration risk of certain spread-based credit trades that they execute on the System (a “Hedge Transaction”). Hedge Transactions will be executed by one of the following methods:

- (a) “Auto-hedging”: a Participant will automatically execute a non-netted Hedge Transaction with MAC acting as matched principal counterparty using the estimated duration weighted hedge amount for each qualifying trade executed versus a specified Treasury benchmark; or
- (b) “Net-hedging”: MAC will sum the estimated duration weighted hedge amount for qualifying trades executed versus a specified Treasury benchmark. MarketAxess will net the duration weighted hedge amounts per benchmark for the Participant and it will automatically execute the net hedge amount with MAC acting as matched principal counterparty at each specified spot time. Net-hedging shall only be available for qualifying trades executed on the System with counterparties who have also elected to use MAC Net-hedging spot prices.

The terms applicable to Treasury Hedging are set forth in APPENDIX VII.

As an alternative to the Treasury Hedging service, Participants may utilize MAC's Internal Hedging service, through which MAC will automatically send a U.S. Treasury bond RFQ inquiry from the Participant's corporate bond trading desks to their Treasury desks in connection with the hedging of the estimated duration risk of each qualifying spread-based credit trade that they have executed on the System versus a specified Treasury benchmark.

8.6 Indian Government Bond Trading

Participants can trade Indian Government Bonds ("IGBs") electronically through MAC's direct integration with the Negotiated Dealing System – Order Matching ("NDS-OM") system owned by the Reserve Bank of India and operated by the Clearing Corporation of India Limited. The Trading Protocol (the "IGB Trading Protocol") enables Participants to use the System to connect to NDS-OM and execute IGB transactions on NDS-OM.

The terms applicable to the IGB Trading Protocol are set forth in APPENDIX XI.

Additionally, the System may operate other RFQ Trading Protocols in addition to those listed above.

9. ATS Trading Protocols

9.1 "Live Markets"

"Live Markets" is an order book based trading protocol subject to Regulation ATS. Live Markets will enable Participants to anonymously submit live and subject bids and offers for Eligible Instruments listed for trading on Live Markets, submit limit orders to interact with resting bids and offers on Live Markets, and participate in both multi-party "work-up" sessions at levels established by trading activity on Live Markets and MAC initiated "MATCH" sessions. Live Markets Transactions take place via Open Trading.

The terms applicable to Live Markets are set forth in APPENDIX IV.

9.2 "Mid-X"

The Mid-X protocol ("Mid-X") is a single price session-based trading protocol subject to Regulation ATS. Mid-X will enable Participants to anonymously match their interests in Eligible Instruments during periodic single price sessions and agree to the terms of a Transaction at prices which are determined in accordance with the provisions of APPENDIX VIII. Mid-X Transactions take place via Open Trading.

The terms applicable to Mid-X are set forth in APPENDIX VIII.

9.3 "MarketAxess Auctions"

The MarketAxess Auctions protocol ("MarketAxess Auctions") is an anonymous session-based protocol subject to Regulation ATS. MarketAxess Auctions will permit Participants to submit orders for corporate bonds selected by MAC where such orders may be crossed at the clearing price/level for such bonds in accordance with the provisions of APPENDIX XII. MarketAxess Auctions transactions take place via Open Trading.

The terms applicable to MarketAxess Auctions are set forth in APPENDIX XII.

MAC may operate additional ATS Trading Protocols in addition to those listed above.

10. MarketAxess Rates Trading Protocols

10.1 MarketAxess Rates facilitates RFQ Transactions and UST Live Markets Transactions.

- (a) Pursuant to the UST Live Markets protocol, MarketAxess Rates Liquidity Providers may offer an ESP and MarketAxess Rates Liquidity Consumers may execute Trade Requests against the ESP.
- (b) Pursuant to the RFQ protocol, MarketAxess Rates Liquidity Consumers may initiate an RFQ and any MarketAxess Rates Liquidity Provider to whom the request is submitted may respond with a quote.

Anonymous MarketAxess Rates Transactions take place via Open Trading.

The terms applicable to MarketAxess Rates are set forth in APPENDIX IX.

11. Securities Eligible for Trading

11.1 The decision whether or not to admit an instrument to trading on the System is at the sole discretion of MAC.

11.2 The type and nature of financial instruments available for trading on the System is limited to the following:

- (a) U.S. high-grade bonds;
- (b) U.S. high-yield bonds;
- (c) U.S. municipal bonds;
- (d) U.S. Treasury Instruments;
- (e) Sovereign, supranational and agency bonds;
- (f) Emerging market bonds;
- (g) European high-grade bonds;
- (h) European high-yield bonds;
- (i) Leveraged loans;
- (j) Convertible and crossover bonds;
- (k) Preferred stocks;
- (l) Exchange-traded funds and other equity securities;
- (m) Commodity futures contracts (block size transactions only); and
- (n) any other category of financial instrument determined and notified to Participants by MAC from time to time (together, the "Eligible Instruments").

11.3 For certain foreign government bonds that are required to be transacted on a local platform, MAC may provide access to a third-party trading venue as described below:

- (a) Access is provided via the System to the China Interbank Bond Market (CIBM), in partnership with China Foreign Exchange Trade System (CFETS) and Bond Connect Company Limited (BCCL). Access is provided via the connection between CFETS and the System under the Bond

Connect and CIBM Direct schemes. These Transactions occur on the CFETS platform and not on the System.

- (b) Access is provided via the System to NDS-OM for trading in India Government Bonds as further described in Appendix XI hereto. These Transactions occur on NDS-OM and not on the System.

11.4 Instruments offered for trading on the System may be offered only on certain trading protocols on the System. Such decisions shall be at the sole discretion of MAC.

11.5 MAC may suspend or remove a particular Eligible Instrument from trading on any or all parts of the System if MAC deems this necessary in order to comply with the Guidelines, maintain a fair and orderly market on the System, to comply with Applicable Law or in response to a request from a Relevant Regulator, or for any other reason at its discretion, including, but not limited to extreme volatility in the Eligible Instrument.

12. Clearing and Settlement

12.1 All Open Trading Transactions with MAC as counterparty settling via DTC and / or NSCC, will clear against our Participant ID of 4265. Those trades settling in Euroclear and local markets are settled by BNP Paribas on behalf of MAC through our Euroclear Participant ID of 28734. MarketAxess Rates Transactions can settle against MAC directly or against MAC's designee. Rates settlement venues will be determined during the Participant's onboarding process.

12.2 MAC may suspend a Participant's Open Trading privileges in the event that a Participant (or its Principal, if applicable) fails consistently and systematically to deliver transferable securities on the intended settlement date or otherwise in accordance with Applicable Law.

12.3 MAC shall not be a party to, or be responsible or liable to a Participant under, or in connection with, Transactions that are effected on a bilateral basis between the relevant two Participants who must be permitted to trade with each other. MAC will, however, provide or make available to each Participant the details of each Transaction in order to facilitate the prompt settlement of these Transactions by that Participant. Each Participant shall have adequate arrangements in place for the clearing and settlement of Transactions. In particular, each Participant shall ensure that every Transaction is settled in accordance with Applicable Law.

12.4 All Participants (and their Principals, if applicable) engaging in Open Trading Transactions involving Treasuries shall adhere to and follow the terms of the TMPG letter set forth in APPENDIX VI. If a Participant enters into any transaction with MAC for the delivery of Treasuries against the payment of funds or the transfer of securities on or after July 27, 2020, Participant will be subject to the Fails Charge Trading Practice as set forth in APPENDIX VI, unless explicitly agreed otherwise with respect to a specific transaction.

12.5 By entering into an Open Trading Transaction, a Participant agrees that it shall be responsible for any charges, fees, penalties, costs or other losses incurred by MAC resulting from the Participant's failure to deliver securities or cash for such transaction by the required settlement date (each, a "Fails Expense"). Participant also agrees that the failure of MAC to seek to recover any Fails Expense in any one transaction or in multiple transactions shall not constitute a waiver of the foregoing rights with regard to any other

Open Trading Transaction that results in a Fails Expense. The claim of a Fails Expense by MAC shall not be without prejudice to any other rights or remedies available to MAC and shall not constitute a waiver of MAC's right to exercise any other remedy. Please see Appendix I for more detail.

12.6 All MarketAxess Rates Transactions shall be settled promptly at either the Fixed Income Clearing Corporation ("FICC") or through Federal Reserve Wire Network ("Fedwire") and shall be submitted to and settled with FICC or via Fedwire in compliance with the rules and regulations promulgated by such service in respect of the clearance and settlement of Transactions.

13. Trade Reporting

13.1 MAC reports Open Trading Transactions in TRACE-Eligible securities to the FINRA Trade Reporting and Compliance Engine ("TRACE") and reports Open Trading Transactions in US municipal securities to the Real-time Transaction Reporting System ("RTRS"). All Participants shall also comply with any applicable FINRA and MSRB trade reporting requirements in relation to Open Trading Transactions.

13.2 MAC is not responsible for reporting Transactions that occur via any disclosed protocol where the participants settle directly against each other, including Disclosed RFQ. All Participants are responsible for complying with any applicable FINRA and MSRB trade reporting requirements in relation to Disclosed RFQ Transactions.

13.3 Transaction reports for Live Markets, Mid-X and MarketAxess Auctions Transactions will indicate that the Transactions were executed on an ATS.

14. Trade Messages and Confirmations

14.1 Following each Transaction, the System provides trade messages to each Participant containing the details of that Transaction. Subject to MAC approval and System functionality, the configuration and method of delivery of these messages will depend upon the Participant's system settings and method of connectivity to the System.

14.2 MAC is not responsible for sending confirmations pursuant to Exchange Act Rule 10b-10 and MSRB Rule G-15 for Transactions taking place via Disclosed RFQ. Participants are responsible for sending confirmations for Disclosed RFQ Transactions as required by Exchange Act Rule 10b-10 and MSRB Rule G-15.

14.3 MAC shall send confirmations for Open Trading Transactions (including Live Markets, Mid-X and MarketAxess Auctions Transactions) and Transactions utilizing the UST Live Markets Protocols as required by Exchange Act Rule 10b-10 and MSRB Rule G-15.

15. Clearly Erroneous Trade Policy

15.1 In order for MAC to provide a level of protection for Open Trading Participants, maintain a fair and orderly market, and enable MAC to manage the risks attendant in acting as a matched principal counterparty on the System, MAC utilizes a Clearly Erroneous Trade Policy ("CETP") to address trade errors and disputes involving or arising from Open Trading protocols. As set forth in the CETP, Participants agree to be bound by the CETP and any determinations made by MAC thereunder in order to utilize any Open Trading functionality.

15.2 The CETP is set forth in APPENDIX V.

16. Rule 15c2-11

16.1 MAC has determined that the use of the trading functionalities by a Dealer Participant set forth below likely implicate the requirements of SEC Rule 15c2-11:

- (a) Live Markets;
- (b) Initiating a RFQ by a Dealer Participant; and
- (c) Axe Functionality (both name disclosed and anonymous).

However, any determination of whether any of such functionalities or their particular use-case by a Dealer Participant actually implicates the requirements of Rule 15c2-11 is the sole responsibility of each Dealer Participant.

16.2 If a Dealer Participant makes such a determination then, unless an exemption from Rule 15c2-11 is available, it may not submit quotations to the System utilizing these functionalities unless it does so in compliance with Rule 15c2-11 (or in compliance with any relief from the requirements of this Rule issued by the SEC). Each Dealer Participant is responsible for its own compliance obligations with respect to this Rule.

MARKET CONDUCT

17. General

17.1 Participants are expected, in the conduct of their business and participation on the System, to observe high standards of commercial honor and just and equitable principles of trade. Participants must adhere to Applicable Law and, among other things, must not:

- (a) Engage in any activity that purports to quote the bid price or asked price, or any non-quoted interest, for any Eligible Instrument, unless such Participant believes that such quotation or interest represents a bona fide bid for, offer for, or order for such Eligible Instrument;
- (b) Request quotes for any Eligible Instrument on the System unless such activity represents a bona fide interest in engaging in a Transaction in such Eligible Instrument;
- (c) Utilize information received via the Trading Protocols to engage in transactions away from the System;
- (d) Enter into Transactions, or enter orders, that employ fictitious devices or any other form of deception or contrivance;
- (e) Engage in any type of behavior that could adversely affect fair and orderly trading on the System, including degradations of its technology platform; or
- (f) Commit any act or engage in any behavior or Market Abuse that causes or contributes to a breach of the System and/or the Guidelines, or Applicable Law by another Participant, or MAC.

17.2 MAC will monitor Participant usage of the System in order to identify breaches of the Guidelines, or Applicable Law, disorderly or disruptive trading activities, or conduct that may involve Market Abuse. In the sole discretion of MAC, any evidence suggesting inappropriate market conduct may lead to Participant suspension or removal from the System.

17.3 MAC may report such breaches as it deems necessary and appropriate to the appropriate regulatory agencies, self-regulatory organizations or law enforcement officials and provide such regulatory bodies full cooperation in investigating and prosecuting such behavior as warranted.

18. Complaints

18.1 If a Participant has a complaint about MAC, or another Participant's conduct in using the System, such complaint should be made in writing (including by electronic mail) and addressed to:

Compliance Department
MarketAxess Corporation
55 Hudson Yards
Floor 15
New York, New York 10001
Email: complianceteam@marketaxess.com

GENERAL

19. Confidentiality

19.1 Both MAC and Participant agree (i) that they will not disclose to any third party or use any Confidential Information disclosed to it by the other party, except as provided in the Onboarding Agreement or the Guidelines; and (ii) that it will take all reasonable measures to maintain the confidentiality of all Confidential Information of the other party in its possession or control, which will in no event be less than the measures it uses to maintain the confidentiality of its own information of similar importance. Please see APPENDIX IV and APPENDIX VIII for additional information related to ATS confidentiality.

20. Business Continuity Plan Disclosure Statement

20.1 Please refer to the MAC Business Continuity Plan Disclosure at: <https://www.marketaxess.com/pdf/business-continuity-plan-disclosure.pdf>

21. Third-Party Data Provider Terms and Conditions

21.1 Certain terms and conditions, available at <https://www.marketaxess.com/pdf/Third-Party-Data-Provider-Terms-and-Conditions.pdf>, are imposed by third-party data providers regarding use of their data accessed through the System. To the extent a Participant is accessing this third-party data on the System, such applicable terms and conditions apply to the use thereof, in addition to all rights and restrictions set forth in each Participant's relevant Onboarding Agreement.

22. Amendments

22.1 MAC may, in its absolute discretion, and at any time, supplement, amend, or replace the Guidelines partially or wholly.

22.2 Participants shall be notified of any such change to the Guidelines by notice (a "Notice") which will be issued to all Participants giving reasonable prior notice for any material changes. MAC may make any non-material changes without prior notice.

22.3 Any such Notices shall supplement and form part of the Guidelines effective from the date specified in the Notice. Such notification may be made by letter, e-mail or notice on the MAC Website describing the relevant changes or by otherwise sending to Participant an electronic copy of the amended Guidelines. Continued participation on the System (in accordance with Section 2.6) following the expiry of the notice period stated in the relevant Notice constitutes deemed acceptance by the Participant of the amendments and acknowledgement of the revised Guidelines. In the event there is no express notice period in a Notice, the effective date of any proposed amendment shall be the date 30 days from the date of the Notice.

23. Governing Law; Consent to Jurisdiction

23.1 The Guidelines and their enforcement will be governed by the laws of the State of New York (without giving effect to the conflict of law principles thereof). If the parties mutually agree or are both subject to mandatory arbitration in accordance with the rules of the Financial Industry Regulatory Authority (“FINRA”), disputes, claims or controversies between a Participant and MAC may be arbitrated in accordance with the rules of FINRA, as they are in effect at the time of such dispute. Alternatively, actions, suits or proceedings hereunder may only be commenced in the Federal or State courts of competent jurisdiction located in New York County, New York, which courts will have exclusive jurisdiction over any such action, suit or proceeding. Each party hereby agrees to commence actions, suits or proceedings only in such courts, and waives any objections based on venue, jurisdiction, or forum non conveniens in the event of any such action, suit or proceeding. To the extent that a Participant has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with respect to itself or its property, such Participant hereby irrevocably and unconditionally waives such immunity in respect of its obligations to MAC.

24. Contact Us

Website:	www.marketaxess.com
Main Telephone Number:	212-813-6000
Client Services:	877-638-0037
Production Support:	212-813-6222
Open Trading Support:	212-813-6262
Mailing Address:	55 Hudson Yards Floor 15 New York, New York 10001
Email:	marketaxess@marketaxess.com

APPENDIX I – OPEN TRADING TERMS OF USE

1. Application

1.1 Open Trading functionality allows Participants to execute Transactions with MAC or a third party pre-approved by a Participant as the matched principal counterparty to such Transactions. Open Trading Transactions are conducted on an anonymous basis whereby each of the two counterparties to the Open Trading Transaction do not know the identity of the contra party at any point; provided however that

(a) Disclosed Open Trading Transactions allow for a Participant engaging in an Open Trading Transaction to disclose their identity to potential counterparties when posting an RFQ; and

(b) if an Open Trading Transaction involves a Participant that is a regulated trading venue, MAC may disclose the identity of the Participants to the regulated trading venue for regulatory or compliance reasons; provided that the regulated trading venue has agreed in writing not to disclose the identity of the Participant to the users of the regulated trading venue.

1.2 MAC hereby extends the License in the Onboarding Agreement to cover a Participant's use of the System for the purposes of entering into Open Trading Transactions via the System, subject to

(a) counterparty credit risk approval; and

(b) any other approval which may be deemed necessary by MAC as a prerequisite for entering into Open Trading Transactions.

1.3 Terms applicable to Open Trading are set out in this Appendix I and only apply where a Participant executes an Open Trading Transaction.

1.4 The terms in this Appendix I are supplemental to the Onboarding Agreement and apply to a Participants' use of Open Trading. Subject to Section 1.2 of APPENDIX I (with respect to the Onboarding Agreement only), in the event that a Participant has already entered into supplemental Open Trading terms with MAC and where such terms have not been expressly terminated, such terms shall apply to the extent those terms are inconsistent with this APPENDIX I.

1.5 MAC shall not be obliged to identify any Participant involved in an Open Trading Transaction to the other Participant under any circumstances.

2. Instructions

2.1 In respect of any instruction transmitted by a Participant to execute an Open Trading Transaction ("OT Instruction"):

(a) each Participant will be responsible for and bound by all contracts, obligations, costs and expenses entered into in consequence of or in connection with OT Instructions; and

(b) MAC may, in its absolute discretion, decline to accept any Open Trading Instruction a Participant may give, or having accepted it, refuse to act on it, if MAC believes that the Open Trading Instruction concerned (or the consequences of it) would be improper, unlawful or clearly erroneous in accordance with the MAC Clearly Erroneous Trade Policy as set forth in APPENDIX V.

3. Agency and Allocation

3.1 In the event that a Participant, acting as agent, executes an Open Trading Transaction on behalf of a Principal, the Participant will allocate the Open Trading Transaction either to a single Principal or to more than one Principal and shall notify MAC, or MAC's settlement agent (as notified by MAC) of such allocation. The allocation and notification shall be made as soon as possible and, in any event before the close of business on the Open Trading Transaction date. Pursuant to such allocation, each Principal shall be responsible only for that part of the Open Trading Transaction allocated to it.

3.2 Where a Participant is acting as agent on behalf of a Principal, then with effect from execution of the Open Trading Transaction, a contract on the terms of the Open Trading Transaction shall be deemed to have been entered into between MAC and each Principal or Principals in question, regardless of the whether or not the Principal was disclosed or identified at the time of execution of the Open Trading Transaction. A Participant that executes such Transactions in such capacity shall be deemed to represent and warrant to MAC on a continuing basis that such Transactions are the legal, valid and binding obligations of the Principal(s) enforceable against the Principal(s) in accordance with their terms, that the Principal(s) have the resources necessary to permit them to satisfy their obligations to MAC under such Transactions and are not subject to an Insolvency Event, that it has obtained and recorded evidence of the identity of the Principal(s) in accordance with Applicable Law and regulations (including, without limitation, anti-money laundering regulations), and that it will take all steps as MAC may reasonably require with respect to any Principal in order to minimize any losses that MAC may incur in connection with such Transactions. For the avoidance of doubt, the Clearly Erroneous Policy set forth in Annex V shall apply to all Open Trading Transactions between MAC and any Principal.

3.3 An Open Trading Transaction entered by Participant (or its Principal(s), as applicable) may indirectly involve a matching trade with an ultimate counterparty located in another jurisdiction. In such cases, in addition to MAC acting as a matched principal to that transaction, any of MAC's Affiliates may also act as a matched principal counterparty to that transaction.

3.4 For certain Open Trading protocols (including, but not limited to, MarketAxess Rates UST Live Markets and the diversity dealer program), a designee of MAC pre-approved by the Participant in advance may act as the matched principal counterparty to the Open Trading Transaction.

3.5 For the avoidance of doubt, neither MAC nor any of its Affiliates shall act as agent for any Participant under Open Trading.

4. Remedies

4.1 In addition to any rights available to it under the Onboarding Agreement, in the event MAC restricts, suspends or terminates a Participant's right to access and/or use the System (the "Affected Participant") and subject to and in addition to remedies available under Applicable Law, MAC may close out, terminate, void or reverse all or any part of any Open Trading Transaction to which the Affected Participant (or its Principal(s), as applicable) is a party or decline to settle all or any part of such Open Trading Transaction. The Affected Participant (or its Principal(s), as applicable) shall indemnify MAC for any loss, damage, cost, or expense MAC incurs as a result of taking any of the foregoing actions promptly upon demand.

4.2 Without limiting the provisions of Section 4.1, and to the extent permitted under Applicable Law, (i) if a Participant (or its Principal(s), as applicable) is acting as a buyer of securities and fails to pay MAC any amount required to be paid under a transaction within two business days after the settlement date, MAC may close out the transaction by selling, in a recognized market (or otherwise in a commercially reasonable manner) at such price or prices as it may reasonably deem satisfactory, any or all of the securities that it was obligated to deliver to the Participant (or its Principal(s), as applicable) and apply the proceeds thereof to the aggregate unpaid purchase price and any other amounts owing by the Participant (or its Principal(s), as applicable) to MAC; and (ii) if a Participant (or its Principal(s), as applicable) is acting as a seller of securities and fails to make any delivery of securities required to be made under a transaction within two business days after the settlement date, MAC may close out the transaction by purchasing, in a recognized market (or otherwise in a commercially reasonable manner) at such price or prices as it may reasonably deem satisfactory, securities that were not delivered by the Participant (or its Principal(s), as applicable) to MAC as required thereunder.

4.3 By entering into an Open Trading Transaction, a Participant agrees that it shall be responsible for any charges, fees, penalties, losses, costs or expenses (including but not limited all reasonable legal expenses) (collectively, "Losses") incurred by MAC resulting from the Participant's failure to deliver securities or cash for such transaction by the required settlement date or in connection with the actions taken by MAC under Sections 4.1 and 4.2 above (each, a "Fails Expense"). Participant also agrees that the failure of MAC to seek to recover any Fails Expense in any one transaction or in multiple transactions shall not constitute a waiver of the foregoing rights with regard to any other Open Trading Transaction that results in a Fails Expense. The claim of a Fails Expense by MAC shall not be without prejudice to any other rights or remedies available to MAC and shall not constitute a waiver of MAC's right to exercise any other remedy.

4.4 MAC may set off any obligation, including any obligation with respect to securities, money or other property, of MAC to a Participant (or its Principal(s), if applicable) hereunder against any of the Participant's (or its Principal(s), if applicable) obligations to MAC hereunder.

5. Clearing and Settlement

5.1 In respect of all Open Trading Transactions subject to these terms, MAC will be responsible for all obligations, including settlement, relating to its side of the Open Trading Transaction.

5.2 As set forth in Section 12 of the Guidelines, all Open Trading Transactions with MAC as counterparty settling via DTCC (clearing number 04265), including those clearing in NSCC and FICC, are settled directly against MAC; those settling in Euroclear and local markets are settled by BNP Paribas on behalf of MAC; and those settling directly at the Fed are settled by BMO Harris on behalf of MAC. The counterparty MPID to all non-ATS broker-dealer trades with MAC as counterparty is "MKTX"; provided; however; that the counterparty MPID to MarketAxess Rates Open Trading Transactions with MAC as counterparty is "LQED" and the counterparty MPID to all ATS broker-dealer trades with MAC as counterparty is "MKAA", and settlement of such trades is subject to the procedures of such firms in the normal course of business.

6. Fees

6.1 MAC will adjust quotes displayed to an Open Trading Participant in the amount of the applicable Open Trading Transaction fee payable to MAC for Open Trading Transactions. Any additional fees shall be as set forth in the Participant's Onboarding Agreement.

7. Other

7.1 Participants are responsible for determining whether any tax liability may arise from their Transactions, and for applying for any relevant exemption from such taxes. Participants are solely liable for the payment of any taxes in relation to their Transactions.

7.2 The Clearly Erroneous Trade Policy set out in APPENDIX V shall apply to Open Trading.

7.3 Open Trading Transactions initiated by a Dealer Participant may prompt a multiparty "work-up" session at the price or spread of the last trade. All Subscribers will have the ability to submit buy or sell orders during this "work-up" session. Counterparties to the initial Open Trading Transaction will be allowed an initial exclusive "work-up" session and then will have time priority once the multiparty "work-up" session begins.

APPENDIX II – INTERNAL CROSSING TERMS

- 1.1 Internal Crossing is only available to Participants that have been approved for Open Trading, and shall be conditional upon ongoing satisfaction of MAC compliance requirements, which may include, without limitation, a requirement to provide an attestation letter representing that: (i) it is the sole responsibility of the Participant to determine the appropriate price to complete any cross, as well as any related compliance obligations that apply to any cross and (ii) each trade is being undertaken to transfer the beneficial ownership of the bond(s).
- 1.2 The Clearly Erroneous Trade Policy referenced in APPENDIX V and the Open Trading Terms set out in APPENDIX I shall each apply to Internal Crossing.
- 1.3 Each Participant must satisfy itself that it can and shall comply with any Applicable Law relating to Internal Cross Trades as such rules apply to itself or its Principals.
- 1.4 All Internal Cross Transactions are executed at a price determined by the Participant and not by MAC. MAC will check prices in accordance with its internal processes and purposes to confirm that they are within context of recent trades or our CP+ pricing evaluation for the bond. If MAC is unable to satisfactorily conduct this confirmation, MAC will not execute the Internal Cross Transaction.
- 1.5 The Internal Cross Transaction will be executed on the System at the price determined by the process described in Section 1.4 of APPENDIX II, and will be adjusted to reflect an administrative charge, which will be disclosed electronically to a Participant prior to or at the point of trading.
- 1.6 The action of confirming prices as set forth in Section 1.4 of APPENDIX II does not constitute investment advice on the part of any MAC or any Affiliates, to execute an Internal Cross Transaction at that price.
- 1.7 In all cases, MAC reserves the right to refuse to facilitate or act as matched principal counterparty to any Internal Cross Transaction, or to temporarily or permanently suspend the provision of Internal Crossing for any reason and without liability.
- 1.8 MAC may cancel any Internal Cross Transaction in its sole discretion if the Participant (or its Principal(s), as applicable) does not or cannot settle either side of the Transaction.
- 1.9 INTERNAL CROSS TRANSACTIONS ARE NOT COMPLIANT WITH RULE 17A-7 OF THE INVESTMENT COMPANY ACT OF 1940 OR ERISA AND PARTICIPANTS SUBJECT TO THIS RULE AND/OR ERISA ARE NOT PERMITTED TO USE THIS FUNCTIONALITY.
- 1.10 Internal Cross Transactions shall take place via Open Trading.

APPENDIX III – AUTOMATION SOLUTIONS TERMS OF USE

1. Auto-X RFQ and Auto-X Responder Services

1.1 MAC will provide an automated execution service to Participant (the “Auto-X RFQ Service”) whereby Participant will have the ability to submit requests for quotes on the System for bonds, and the System will automatically execute transactions on those bonds if responses meet the parameters or conditions (the “Conditions”) previously entered into the System by the Participant. The Conditions may include trading terms such as price, size and number of responses, among others.

1.2 MAC will provide a functionality to Participants (the “Auto-X Responder Service”) whereby Participants will have the ability to anonymously respond to certain RFQ inquiries based on Conditions previously entered into the System by the Participant, which may or may not lead to the execution of a Transaction.

1.3 Participant shall provide to MAC, in such format specified by MAC, a list of bonds that it may seek to transact through the Auto-X RFQ and Auto-X Responder Services, or in the alternative, Participant may select from a subset of bonds that meet the minimum liquidity requirements for the Auto-X RFQ and Auto-X Responder Services, as determined by MAC.

2. Adaptive Auto-X Service

2.1 MAC will provide an algorithmic electronic order routing and execution service (the “Adaptive Auto-X Service”, and together with Auto-X RFQ and Auto-X Responder, the “Automation Solutions”), whereby Participant will have the ability to submit orders on the System for bonds, and the System may, among other things, use an algorithm to break the Participant’s parent order into smaller child orders and route the child orders over time amongst various System trading protocols, taking into account the Conditions entered into the System by the Participant, in an effort to access liquidity, obtain price improvement, minimize market impact, or attempt to achieve a specific order execution benchmark. While the System will seek to achieve the foregoing objectives, each parent order shall be not-held and there is no guarantee that such objectives will be achieved, and it is possible that Participant would have achieved a better result if the System had routed its orders at a different time or in a different manner. For the avoidance of doubt, a Participant is responsible for determining the security, direction (in terms of buying or selling), and maximum quantity as specified by the Participant’s parent order. The functions and capabilities of the Adaptive Auto-X Service may change or be amended from time to time without notice. The Participant is solely and exclusively responsible for any hardware, software, communication equipment, communication services, information formatting requirements or other items or services necessary for accessing and using the Adaptive Auto-X Service. Participant agrees to comply with any conditions or restrictions on its use of the Adaptive Auto-X Service communicated to it by MAC from time to time. Participant further acknowledges and agrees that if a transaction is executed through the Adaptive Auto-X Service via MAC’s Open Trading protocols, such transaction is subject to the CETP, and Participant’s failure to request a trade review in a timely manner for any such transaction in accordance with the CETP may preclude MAC’s ability to review or cancel such transaction.

2.2 Participant agrees that MAC may, in its sole discretion, refuse to accept or act on any trading instruction or execute any order submitted by Participant to the Adaptive Auto-X Service. MAC shall endeavor when practicable under the circumstances to contact Participant to provide notice thereof, but

such notice shall not be a condition to MAC's right to refuse to accept or act on any trading instruction or execute any order.

2.3 Transactions executed via the Adaptive Auto-X Service will settle in accordance with the Guidelines. Settlement counterparties may vary for each child order routed by and executed through the Adaptive Auto-X Service depending on the trading protocol used for each child order.

2.4 Participant understands that when it places a request to cancel an order, the cancellation of that order is not guaranteed. An order (including, for clarity, any child order routed by the Adaptive Auto-X Service) will only be cancelled if the request is received and matched with the order to be canceled before it is executed. No order or other instruction transmitted by Participant to MAC will be deemed cancelled unless Participant has received a notice of cancellation from MAC via a System message.

2.5 **Data.** Without limiting MAC's ownership rights to certain data as provided under the Onboarding Agreement, and without regard to any confidentiality obligations arising under the Onboarding Agreement or Guidelines, Participant hereby grants MAC, its affiliates and any licensor engaged in providing the Adaptive Auto-X Service, a non-exclusive, perpetual, royalty free, worldwide, irrevocable and non-transferable worldwide license to collect, store and utilize any information relating to the trading instructions or orders submitted by Participant to the Adaptive Auto-X Service, including any resultant System data (the "Participant Transaction Data"), solely to the extent necessary to (i) to operate and manage the Adaptive Auto-X Service for Participant; (ii) monitor, process and support directions or as necessary to effect, administer, or enforce a transaction or directive that Participant otherwise requests or authorizes; (iii) to comply with legal or regulatory obligations applicable to the Adaptive Auto-X Service, including financial reporting and retention of related data; and (iv) in de-identified and anonymized form in aggregation with other clients' data, to improve and develop MAC's services. Without limiting the foregoing, Participant agrees that MAC may transfer the Participant Transaction Data to its affiliates and any person engaged in providing or supporting the Adaptive Auto-X Service, provided such affiliates and persons are subject to confidentiality obligations substantively similar to those of MAC hereunder.

3. Use of the Automation Solutions

3.1 Participant may provide its own target price for each bond that Participant may seek to transact through the Automation Solutions, or, if made available by MAC and chosen by Participant, Participant may use MAC's composite price product ("CP+") to supply a target price. In the event that Participant chooses CP+ or other price suggested by MAC as its price target, Participant acknowledges and agrees that it is solely responsible for confirming that such price is an appropriate price target. MAC is providing CP+ solely on the condition that Participant agrees that MAC shall not be responsible for any losses or claims related to Participant's use of CP+.

3.2 Participant shall be solely responsible for setting the Conditions of each request for quote and/or response placed through the Automation Solutions, including any reliance on CP+. Participant acknowledges that submission of a request for quote through the Automation Solutions may result in an automatic execution without further action by Participant, and that submission of such orders, including orders placed in error, shall be at Participant's sole risk.

3.3 Participant represents that with respect to its use of CP+ and any Automation Solution, it: (a) is an institutional account, as such term is defined in the FINRA Rule 4512(c); (b) is capable of evaluating

investment risks independently, both in general and with regard to particular transactions using CP+ and/or executed by any Automation Solution; and (c) exercises independent judgment in evaluating CP+ and any Automation Solution. Participant agrees to provide any documentation that MAC may reasonably request in order to comply with any Applicable Law, rule or regulation related to the Automation Solutions, including those related to customer suitability under FINRA Rule 2111.

3.4 Participant agrees that CP+ is provided solely for purposes ancillary to the execution of transactions on the System. CP+ shall be considered Confidential Information of MAC and shall not be distributed to third parties without MAC's written consent.

3.5 Transactions taking place via the Auto-X RFQ Service or Adaptive Auto-X Service may take place via Open Trading or Disclosed RFQ based on the Conditions entered by the Participant. Transactions taking place via the Auto-X Responder Service shall take place via Open Trading based on the Conditions entered by the Participant.

3.6 MAC reserves the right at any time, in the exercise of its sole and reasonable discretion, without any liability whatsoever, to suspend or otherwise impose limitations on access to or use of the Automation Solutions by Participant, so long as such suspension is not arbitrary or capricious. MAC shall use reasonable efforts to notify Participant of any such suspension.

4. Responsibility for Use. Participant accepts full responsibility for its employees', customers' and agents' connection to and use of the Automation Solutions and for their compliance with the Onboarding Agreement and the Guidelines. MAC has no responsibility for or any duty to inquire as to the authority, validity, propriety, suitability, accuracy, correctness or completeness of any trading instructions received from Participant, and MAC is entitled to rely upon any such instructions without inquiry or investigation. Without limiting the foregoing, Participant must verify all information contained in any instructions submitted through the Automation Solutions or otherwise provided to MAC, and MAC shall have no responsibility for any errors in submission or transmission of trading instructions caused directly or indirectly by Participant or its employees, agents or underlying customers and may act on such instructions on such terms as actually received by MAC. Participant shall be solely responsible for any losses, damages or costs that Participant may incur as a result of errors made by, or the failure of, the software or equipment that Participant uses to access the Automation Solutions.

5. Security. Participant shall ensure the security of any software related to the Automation Solutions on its systems, protect and not violate MAC's proprietary rights in the Automation Solutions, and comply with all of MAC's requests to protect MAC's contractual, statutory and common law rights in the Automation Solutions. If Participant becomes aware of any violation of such rights, Participant will promptly notify MAC in writing. Participant shall maintain confidential all information made available to it on or through the Automation Solutions and not use it for any purpose not contemplated herein.

6. Fees. MAC may apply fixed and/or variable fees (each, "Service Fees") for use of the Automation Solutions in amounts as shall be communicated to the Participant in writing on not less than thirty (30) days' notice; provided, however, that such Service Fees will not apply until MAC provides written notice that it is implementing such Service Fees as set forth in this paragraph. Notwithstanding the foregoing, in

addition to Service Fees, any fees applicable to transactions on MAC's various trading protocols from time to time shall be applied in the same manner to transactions executed pursuant to orders routed to such protocols via use of the Automation Solutions.

7. Disclaimers; Limitation of Liability

7.1 EXCEPT AS EXPRESSLY SET FORTH IN THIS APPENDIX, AS IT RELATES TO THE AUTOMATION SOLUTIONS, MAC DISCLAIMS ANY AND ALL WARRANTIES AND REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING THE AUTOMATION SOLUTIONS AND ANY DATA OR INFORMATION PROVIDED THEREIN, THEIR PERFORMANCE, AND THE RESULTS OBTAINED BY THEIR USE, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR TITLE. PARTICIPANT EXPRESSLY ACKNOWLEDGES AND AGREES THAT, EXCEPT AS EXPRESSLY SET FORTH HEREIN, ANY SERVICES OR SOFTWARE PROVIDED BY THE MAC PARTIES (AS DEFINED HEREIN) OR THEIR THIRD-PARTY PROVIDERS AND LICENSORS ARE PROVIDED ON AN "AS IS" BASIS AND THAT NO MAC PARTY, NOR ANY OF THEIR THIRD-PARTY LICENSORS OR PROVIDERS, GUARANTEES THE ADEQUACY, ACCURACY, RELIABILITY, SECURITY, PERFORMANCE, TIMELINESS, COMPLETENESS OR CONTINUED AVAILABILITY OF THE AUTOMATION SOLUTIONS OR ANY PORTION THEREOF OR ANY RESULTS OBTAINED BY THEIR USE OR THAT THE AUTOMATION SOLUTIONS WILL OPERATE ERROR FREE OR WITHOUT INTERRUPTION. PARTICIPANT'S USE OF THE AUTOMATION SOLUTIONS IS AT PARTICIPANT'S OWN RISK. PARTICIPANT SHALL BE SOLELY RESPONSIBLE FOR VERIFYING ANY PRICING INFORMATION PROVIDED BY MAC. MAC SHALL NOT BE RESPONSIBLE FOR ANY MISSED TRADING OPPORTUNITIES OR OTHER LOSSES CAUSED BY PARTICIPANT'S RELIANCE ON THE AUTOMATION SOLUTIONS.

7.2 None of MAC, its employees, officers, control persons, partners, members, directors, successors, assigns, consultants, contractors, agents and clearing firms (each a "**MAC Party**" and collectively, the "**MAC Parties**") shall be liable to Participant for any losses, damages, costs or expenses arising from any failure, malfunction, fault in delivery, delay, omission, suspension, inaccuracy, interruption, termination of the Automation Solutions or any other cause in connection with the furnishing, performance, operation, maintenance, use of or inability to use all or any part of the Automation Solutions and any supporting services, equipment or facilities, including any such event caused by any third parties including, but not limited to, independent software vendors and network providers. The foregoing limitation of liability shall apply whether a claim arises in contract, tort, negligence, strict liability, contribution or otherwise and whether the claim is brought directly or as a third party claim. In no event shall the collective total aggregate liability of the MAC Parties for any claims hereunder exceed the amount of Service Fees paid by Participant in the twelve (12) month period immediately preceding the event giving rise to any claim for liability, except to the extent such liability directly results from the gross negligence or willful misconduct of the MAC Parties, as determined by a final, non-appealable decision of a court of competent jurisdiction. For purposes of calculating such limit, Service Fees shall be limited to the fees directly applicable to the use of the Automation Solutions and shall not include fees applied generally to transactions effected through the use of the System or underlying trading protocols.

7.3 The MAC Parties shall not be liable for any consequential, incidental, special, exemplary, punitive, or any similar damages incurred by Participant relating to or resulting from its use of the Automation Solutions.

7.4 The MAC Parties shall have sole and complete control over, and reserve the right at any time, without prior notice, to make any changes to the configuration, appearance, content and functionality of

the Automation Solutions and to modify or substitute the equipment used in providing the Automation Solutions, *provided* that MarketAxess shall endeavor to ensure such changes do not materially impair Participant's ability to access and use the Automation Solutions and that MAC shall notify Participant as promptly as reasonably practicable prior to the implementation of changes in the Automation Solutions that would materially affect Participant's ability to access and use the Automation Solutions or as otherwise required in accordance with this Appendix.

8. Representations. Participant represents that it: (x) has had the opportunity to review and test the performance of the Automation Solutions; (y) has appropriate risk controls in place with respect to its usage of the Automation Solutions; and (z) will continuously monitor its usage of the Automation Solutions and notify MAC immediately of any concerns that it may have with respect to such services.

9. No Investment Advice. MAC is not, by virtue of providing the Automation Solutions, acting as an investment adviser, financial adviser, manager or fiduciary to Participant, any underlying customer or client of Participant, or any other person. Participant acknowledges that it is making its own independent decision regarding access to and use of the Automation Solutions provided hereunder and is solely responsible for all investment and trading decisions in connection therewith. Participant understands that MAC is not advising Participant concerning the nature, potential value or suitability of any transaction or investment strategy. Participant agrees that MAC is not responsible for determining whether any transaction is suitable, appropriate or advisable for Participant, its underlying customers and clients, or anyone else. Participant may not use the Automation Solutions unless it is capable of evaluating investment risk independently.

APPENDIX IV – LIVE MARKETS TERMS OF USE

1.1 The Live Markets protocol (“Live Markets”) is an ATS registered with the SEC and will only be available to Participants that have: (i) been approved for Open Trading and (ii) provided written notice to MAC that they wish to transact via this protocol.

1.2 The Clearly Erroneous Trade Policy set out in APPENDIX V and the Open Trading Terms set out in APPENDIX I, shall each apply to Live Markets.

1.3 Live Markets will facilitate trading in a subset of US high-grade and high-yield bonds, emerging market bonds and European high-grade and high-yield bonds chosen by MAC based on individual levels of liquidity, overall market conditions, length of time from the date of issuance and Subscriber demand. MAC will have sole discretion as to which instruments will be available for trading on Live Markets and may add or remove an individual instrument from Live Markets at any time. Instruments must have a CUSIP in order to be selected to appear on Live Markets.

1.4 Live Markets will support limit-based orders. When posting a resting order or submitting an aggressing order, a limit level will be required. Execution will take place at a level no worse than the limit level set on each individual order. All limit levels will undergo a check against the MAC bid-ask tolerance range prior to posting. The MAC bid-ask tolerance range is based on CP+ and will vary by bond and side (bid/ask) and will be updated every 15 seconds. If CP+ is not available, the Open Trading desk will use reasonable efforts to manually set the MAC bid-ask tolerance range. Limit levels that fall outside the MAC bid-ask tolerance range will be rejected, provided, however, that aggressing orders outside of the MAC bid-ask tolerance range may be manually approved by the Open Trading desk on a case-by-case basis.

1.5 Live Markets will support posting live resting orders. Live resting orders are firm, actionable, and will execute as soon as they are aggressed against.

1.6 Live Markets will facilitate multiparty “work-up” sessions at the price or spread of the last trade. All Subscribers will have the ability to submit buy or sell orders to be matched on time priority.

1.7 Live Markets will also facilitate “MATCH” sessions for individual corporate bonds at a price or spread determined by MAC where all Subscribers will have the ability to submit buy or sell orders to be matched on time priority. These prices and spreads may be derived from recent transactions having taken place on Live Markets or elsewhere on the System, trades which have been reported to TRACE, CP+ levels, and general market context. For the avoidance of doubt, in certain cases, prices and spreads may be based on the input from a single market participant, including, but not limited to, a Live Markets Subscriber. Prices or levels determined by MAC for individual corporate bonds for Live Markets MATCH sessions will be checked against CP+ and prices or levels that vary materially from CP+ will be rejected.

1.6 Live Markets is an ATS and, as such, is subject to Rule 15c3-5. As such, Participants shall adopt, implement and enforce control procedures that, at a minimum: (i) prevent unauthorized access to, use or misuse of Live Markets, (ii) limit access to Live Markets to authorized persons of Participant and (iii) prevent entry of orders that exceed any internal risk-based limits.

1.7 Live Markets Transactions shall take place via Open Trading.

1.8 MAC reserves the right at any time, without prior notice and without any liability of MAC, to temporarily or permanently restrict, suspend or terminate Participant's use of Live Markets.

APPENDIX V – CLEARLY ERRONEOUS TRADE POLICY

Effective March 10, 2025

Clearly Erroneous Trade Policy for Open Trading Transactions on the MarketAxess System⁴

MarketAxess Corporation (“MarketAxess”) offers trading protocols in which MarketAxess is interposed as the trading counterparty on a matched principal basis between the two relevant participants (or their principals, as applicable, collectively referred to hereafter as “Participants”) who have agreed to the parameters of the transaction in order to broaden the pool of potential trading parties available on the MarketAxess System (referred to as “Open Trading”). In order for MarketAxess to provide a level of protection for Participants, maintain a fair and orderly market and enable MarketAxess to manage the risks attendant in acting as a matched principal counterparty on the MarketAxess System (the “System”), MarketAxess will use this Clearly Erroneous Trade Policy (“Policy”) to address trade errors and disputes involving or arising from Open Trading protocols. MarketAxess only acts as counterparty in order to facilitate Open Trading and MarketAxess makes Open Trading protocols available solely on the condition that each Participant has agreed to abide by MarketAxess’ determinations under this Policy.

BY USING ANY OF MARKETAXESS’ OPEN TRADING PROTOCOLS IN WHICH MARKETAXESS (OR ITS DESIGNEE) IS A COUNTERPARTY TO A TRADE, EACH MARKETAXESS PARTICIPANT AGREES TO BE BOUND BY, AND COMPLY WITH, THIS POLICY. IF YOU DO NOT AGREE TO BE BOUND BY, AND COMPLY WITH, THIS POLICY, DO NOT USE ANY OPEN TRADING PROTOCOLS OR FUNCTIONALITY. THIS POLICY IS SUPPLEMENTAL TO, AND DOES NOT SUPERCEDE, THE APPLICABLE USER OR DEALER AGREEMENT ENTERED INTO BY EACH PARTICIPANT WITH MARKETAXESS.

1. Policy and Definitions

If MarketAxess determines, in its sole discretion, that an Open Trading transaction is a Clearly Erroneous Trade (as defined below) or is impacted by a System Disruption or Malfunction (as defined below), MarketAxess may either (i) cancel the trade or (ii) modify the terms of the trade, *provided* that any such modification shall be subject to consent by the Participants that are parties to the applicable Open Trading transaction and, if such agreement is not reached, MarketAxess may cancel the trade. In addition, in the event of a Catastrophic Error (as defined below), MarketAxess shall have the right to (i) initiate a review of any Open Trading transaction, and (ii) determine that all Open Trading transactions impacted by the Catastrophic Error shall be cancelled.

A “Clearly Erroneous Trade” is defined as a trade that MarketAxess determines, in its sole discretion:

⁴ This Clearly Erroneous Trade Policy applies only to clients for whom MarketAxess Corporation (or its designee) acts as the Open Trading intermediary, including clients contracted with MarketAxess Corporation, MarketAxess Canada Company, and MarketAxess Plataforma de Negociação Ltda. The clearly erroneous trade policies for participants of MarketAxess’ European MTF and Singapore RMO are located in Appendix 1 to each of the MTF Rulebook and RMO Rulebook, respectively, which are located in the Legal and Regulatory Center of www.marketaxess.com.

- (i) to have been executed at a pricing level (e.g., price, spread, yield, discount margin or other applicable pricing convention) that is clearly inconsistent with the current or expected market for that security at the time of execution;⁵
- (ii) to have been executed on any term (e.g., identification of the security, side, size, benchmark, trading with or without accrued interest) that is inconsistent with prevailing market practice or that MarketAxess believes would have reasonably appeared to the contra-Open Trading participant to have been entered or calculated in error under the given circumstance;
- (iii) has been rejected by the relevant clearinghouse or MarketAxess' designated third-party clearing firm or is otherwise incapable of normal settlement and clearing by the relevant clearinghouse, MarketAxess or MarketAxess' designated third-party clearing firm (e.g., for reasons, including but not limited to below minimum size, and/or that the instrument or the counterparty is subject to government sanctions), including the leg involving the contra-Open Trading participant; or
- (iv) would be detrimental to market integrity or inconsistent with just and equitable principles of trade.

A "System Disruption or Malfunction" is defined as:

- (i) any disruption, malfunction or technical failure in the System, including any electronic communications, which MarketAxess determines, in its sole discretion, results in the System, or any part of the System, not operating as intended by MarketAxess or a trading instruction being incorrectly processed by the System;
- (ii) the incorporation into, or use by, the System of any incorrect calculation, reference price (including, without limitation, CP+) or reference data that MarketAxess determines, in its sole discretion, to be incorrect, stale or otherwise erroneous;
- (iii) in relation to any automated trading protocols, the failure, as determined by MarketAxess in its sole discretion, of the System to correctly apply the trading criteria, defaults or settings entered by the Participant; or
- (iv) for instruments trading on a spread to treasury basis, the failure, as determined by MarketAxess in its sole discretion, of the System to use the benchmark treasury accepted by the bond market as the convention for such instrument or the failure of the System to use current prices of such benchmark treasury during the spotting process.

2. Live Markets

- (i) Bid-Ask Tolerance Range: The Live Markets⁶ protocol incorporates price controls designed to prevent the entry or maintenance of orders that are outside of MarketAxess' bid-ask

⁵ MarketAxess reserves the right, in its sole discretion, to determine that a trade was not clearly erroneous and should not be canceled when the market for the security at the time of execution of the trade was too volatile or illiquid for MarketAxess to discern the then-current or expected market level of the security. Although the MarketAxess system may provide a pre-trade warning that the market for a security is, or recently has been, volatile, the absence of such a warning does not mean that MarketAxess will be able to discern the then-current or expected market level of the security in the event of a trade review.

⁶ Live Markets is an Open Trading functionality that enables Participants to utilize an order book-based trading protocol to anonymously submit live and subject bids, offers and limit orders. Live Markets is registered as an Alternative Trading System with the Securities and Exchange Commission.

tolerance range⁷. Accordingly, any trades executed via the Live Markets protocol will be presumed to be at a pricing level that is consistent with the current or expected market for that security at the time of execution. Trades executed via Live Markets will only be found to be Clearly Erroneous pursuant to clause (i) of the definition of a “Clearly Erroneous Trade” in the event that MarketAxess determines, in its sole discretion, that one of the following circumstances occurred and, as a result, the trade was executed at a pricing level that was clearly inconsistent with the current or expected market for that security at the time of execution:

- The Live Markets bid-ask tolerance range was either not available for the instrument at issue, failed to update in the normal course or was otherwise erroneously calculated; or
- Material news impacting the pricing level of the instrument had been released within 15 minutes prior to the time of execution and the Live Markets bid-ask tolerance range did not update to reflect the post-news tolerance range, if different than the pre-news tolerance range.⁸

In order to request a trade review of a Live Markets trade on the basis that it was Clearly Erroneous, a Participant must follow the procedures set forth in Section 6 (Request for Review) within fifteen (15) minutes of the execution of the trade.

- (ii) Fill Limit Control: The Live Markets protocol incorporates functionality that allows designated market makers who have contractually agreed to provide live markets in a broad range of bonds to manage their risk by limiting the number of fills above a designated threshold of volume within a rolling window of time (the “Fill Limit Control”). If a market maker’s pre-determined threshold is reached, the System will block further executions and any remaining resting orders by such market maker will be cancelled until the market maker resets the Fill Limit Control. In the event of a System Disruption or Malfunction that impacts the proper operation of a Fill Limit Control, MarketAxess shall have the right to determine that all trades in excess of the market maker’s designated volume threshold shall be cancelled in accordance with Section 8 (Determinations), even if such trades are not otherwise Clearly Erroneous Trades.

⁷The bid-ask tolerance range is based on MarketAxess’ CP+ algorithmic pricing tool. The CP+ price range will vary by bond and side (bid/ask) and will be updated every 15 seconds.

⁸ In determining whether material news has been released under this Policy, MarketAxess will consider news disseminated by generally recognized national news sources or wire services which are reasonably designed to provide broad, non-exclusionary distribution of the information to the public (e.g., EDGAR, Dow Jones, Bloomberg, PR Newswire). Participants that wish to have MarketAxess consider news disseminated by other sources in local jurisdictions will be responsible for identifying these sources and providing the relevant information to MarketAxess.

3. Treasuries

- (i) Notwithstanding anything to the contrary set forth herein, MarketAxess will not cancel any Open Trading transaction involving U.S. Treasuries if MarketAxess determines, in its sole discretion, that (i) the instrument has traded on the System at least ten (10) times in the two hours prior to the execution time of the trade at issue and (ii) the execution price of the trade at issue is within the “No Action Range” set forth below for the relevant instrument, as determined by MarketAxess in its sole discretion.

Instrument	No Action Range
T-Bills	5 Basis Points
2 Year	2/32nds
3 Year	2/32nds
5 Year	3/32nds
7 Year	3/32nds
10 Year	4/32nds
20 Year	6/32nds
30 Year	6/32nds

- (ii) The No Action Range shall be measured from the average execution price of the last ten trades for such instruments that were executed on the System prior to the execution time of the trade at issue.
- (iii) In the event that the criteria set forth in Section 3(i) above has not been met, then MarketAxess shall review Open Trading transactions involving U.S. Treasuries in accordance with the terms and conditions of this Policy.

4. Corporate Actions

MarketAxess may deactivate a bond from Open Trading that is the subject of a corporate action (e.g., tender or exchange offer, call, partial call) until the action is complete or the details of the corporate action have been broadly disseminated. Participants should be aware that, in the event that MarketAxess does not deactivate the bond prior to the execution of a trade, MarketAxess may cancel the trade if MarketAxess determines, in its sole discretion, that (i) such trade is a Clearly Erroneous Trade (as defined above), (ii) the pendency of the corporate action creates any risk of loss to MarketAxess or (iii) the Participant that is the buyer in the transaction would be negatively impacted by the timing of the corporate action in relation to the time of execution of the trade (e.g., partial call has reduced position). If a Participant’s failure to settle a trade in a timely manner in relation to a bond that is subject to a corporate action negatively impacts the contra-Open Trading participant’s ability to participate in the corporate action, such failing Participant shall be liable

for any losses, costs or expenses that MarketAxess or the contra-Open Trading participant incurs as a result of such Participant's settlement failure.

5. Catastrophic Errors

In the event of a Catastrophic Error, MarketAxess shall have the right to (i) initiate a review of any Open Trading transaction regardless of whether a party to the transaction has timely requested a review and (ii) determine that all Open Trading transactions impacted by the Catastrophic Error, as determined by MarketAxess in its sole discretion, shall be cancelled in accordance with Section 8 (Determinations). A "Catastrophic Error" will be deemed to have occurred when (i) the transactions of 4 or more Participants or 10 or more transactions are impacted by a System Disruption or Malfunction, even if such trades are not otherwise Clearly Erroneous Trades or (ii) the actions of a single Participant causes, or is involved in, 10 or more Clearly Erroneous Trades.

6. Request for Review

Review of any trade may be initiated by a Participant that is a party to the applicable Open Trading transaction pursuant to Section 7 (Review Process) below or by MarketAxess. MarketAxess reserves the right to initiate a review of a trade prior to trade settlement, regardless of whether a party to the trade has requested a review, if MarketAxess determines, in its sole discretion, that circumstances warrant such a review.

In all circumstances, the trade will remain an obligation of the Participants that are the parties to the Open Trading transaction and subject to any agreements between MarketAxess and such Participants until MarketAxess notifies such Participants by e-mail that the trade has been adjusted or cancelled pursuant to this Policy.

7. Review Process

To request a trade review, a Participant that is a party to the applicable Open Trading transaction must notify MarketAxess by telephone at 212-813-6262, via email to tradingdesk@marketaxess.com, or directly via Bloomberg message to a member of MarketAxess' Open Trading desk. If the request is sent via Bloomberg message, it shall not be considered to be received unless and until MarketAxess responds to the message acknowledging receipt. Trade review requests received within (i) fifteen (15) minutes of the execution of the trade for Live Markets and Treasuries trades and (ii) thirty (30) minutes of the execution of the trade for all other Open Trading transactions will be automatically reviewed by MarketAxess and trade review requests received outside of these windows will be reviewed at the discretion of MarketAxess. Review requests must include the following information:

- Trade ID (s)
- Issuer Name and CUSIP/ISIN
- Number of bonds
- Spread/Price(s)
- Side (bought or sold)
- Factual basis for believing that the execution is either a Clearly Erroneous Trade or the result of a System Disruption or Malfunction

In determining whether a trade is either a Clearly Erroneous Trade or impacted by a System Disruption or Malfunction, MarketAxess will utilize any information, and consult with any relevant parties, that in its sole discretion it deems adequate or appropriate, including, without limitation:

- Trades on the System or publicly reported trades which occurred prior to and following the alleged error trade;
- Indicative pricing available on the System or sourced from third parties;
- Outgoing calls to independent third-party participants on the System to determine the expected level for the security traded at the time in question;
- MarketAxess' in-house market knowledge and expertise;
- Whether the Participant requesting the review is the liquidity provider or the liquidity taker;
- Whether any material news had been disseminated by or about the particular security or the issuer of the security prior to the time of execution, as well as the timing of such news dissemination; and
- The promptness of the trade review request.

Any electronic or other communications involving the terms of a trade will also be a significant consideration in determining whether such trade is considered a Clearly Erroneous Trade or impacted by a System Disruption or Malfunction.

8. Determinations

Each trade review request will be considered on a case-by-case basis by an authorized principal of MarketAxess. In the event that a party properly requests a trade review or if MarketAxess initiates a trade review, MarketAxess will promptly notify the trading desk or trade support operations of the other party to the trade by phone or electronic communication. MarketAxess will use its commercially reasonable efforts to resolve any trade review within four business hours of the time that the trade review is commenced. MarketAxess will notify the involved parties of any final determination by an electronic communication. All decisions by MarketAxess pursuant to this Policy are final and not subject to further review or appeal. The party requesting a trade review may withdraw its request by telephone at 212-813-6262 or via email to tradingdesk@marketaxess.com at any time prior to the time MarketAxess notifies the parties to the transaction of its final determination.

Upon the communication by MarketAxess of any final determination of a trade review, each Participant shall promptly implement the determination. If the final determination by MarketAxess is that an Open Trading transaction shall be cancelled, MarketAxess and each affected Participant shall cancel all trade legs associated with the Open Trading transaction at issue (including any back-to-back transactions) and amend any previously submitted transaction reports, as applicable, in accordance with market convention (unless both Participants have agreed to modify the terms of the trade in accordance with Section 1 (Policy and Definitions) of this Policy). If the final determination by MarketAxess is that an Open Trading transaction shall stand, the relevant Participants shall take such steps as may be necessary to settle such transaction in accordance with market convention.

Notwithstanding anything to the contrary herein, a trade may not be canceled or modified under this Policy after the earlier of: (x) the time that either leg of the Open Trading transaction at issue is accepted for clearing by the relevant clearinghouse; or (y) the time that the trade has settled.

9. Voluntary Accommodations

In the event that a trade is not eligible for review under this Policy (e.g., due to a review request being initiated later than the applicable deadline after the trade), a Participant to such trade may request that MarketAxess attempt to reach a mutually agreed upon trade adjustment, cancellation or reversal with the contra-Open Trading participant, although MarketAxess will be under no obligation to do so. In such instance, MarketAxess solely facilitates such requests by contacting the counterparty for assent to voluntarily adjust, cancel or reverse the subject transaction; however, MarketAxess will not have any discretion over the actions of counterparties in this regard.

10. Participant Responsibilities

Participants are responsible for ensuring the accuracy and completeness of all information transmitted to the System. Accordingly:

- Traders should inspect each order, request for quote (“RFQ”) and/or response to a RFQ prior to submitting it to the MarketAxess platform;
- Traders should use available software warnings and protections;
- Traders should review trade details promptly after execution; and
- An assertion that a Participant made a mistake in entering an order, RFQ or a quote, or that a Participant failed to pay attention or update a quote, may not be sufficient for MarketAxess to determine that a trade is considered a Clearly Erroneous Trade.

No price adjustment or cancellation can be assured or guaranteed, and a trade will stand unless and until MarketAxess notifies the Participants by e-mail that the trade has been adjusted or cancelled.

11. Refusal to Abide by MarketAxess Determinations; Disputes

Use of any of MarketAxess’ Open Trading protocols constitutes acceptance of MarketAxess’ right to cancel or adjust any trade as described in this Policy, including trades in which a designee of MarketAxess pre-approved by the Participant has acted as matched principal for the applicable trade. MarketAxess shall not be liable for losses or damages arising as a result of MarketAxess’ action or inaction pursuant to this Policy. Each Participant shall reimburse MarketAxess for any losses, costs or expenses MarketAxess incurs as a result of such Participant’s failure to abide by MarketAxess’ determinations under this Policy.

12. Amendments to the Policy

MarketAxess may amend, modify, supplement, or replace this Policy upon notice to Participants, without Participants’ explicit affirmative consent, upon 30 days’ advance notice of the effective date of the amendment, modification, supplement, or replacement of the Policy. Such notice may be made by letter, e-mail or notice on the MarketAxess Website describing the relevant changes.

APPENDIX VI – TMPG LETTER

IMPORTANT – NOTICE REGARDING CHARGES FOR FAILURES TO DELIVER U.S. TREASURY SECURITIES

Dear [Client/Counterparty]:

We are writing to inform you of an important change that we are making with respect to our transactions involving U.S. Treasury securities (“Treasuries”). As you may know, the Treasury Market Practices Group (the “TMPG”) and the Securities Industry and Financial Markets Association (“SIFMA”) have published a “U.S. Treasury Securities Fails Charge Trading Practice” (as modified and in effect from time to time and published by the TMPG and SIFMA at http://www.sifma.org/capital_markets/docs/Fails-Charge-Trading-Practice.pdf, the “Fails Charge Trading Practice”). We have decided to adopt this Fails Charge Trading Practice for purposes of our transactions with you, and accordingly, are notifying you that any delivery-versus-payment or delivery-versus-transfer transaction in Treasuries entered into between you and us on or after 12:01 a.m. New York time on July 27th, 2020 (the “Effective Date”) shall be deemed to be subject to the Fails Charge Trading Practice, unless otherwise agreed in respect of a particular transaction, as described more fully below.

By way of background, the Fails Charge Trading Practice provides a standardized procedure that market participants may elect to follow in order to assess and pay “Fails Charges” in connection with delivery failures involving Treasuries. The TMPG and SIFMA have recommended the Fails Charge Trading Practice in order to reduce the overall incidence of fails in the marketplace, which prevent efficient market clearing and undermine overall market liquidity, and to compensate a non-failing counterparty for the potential economic harm to it resulting from a fail (which is difficult to ascertain). The Federal Reserve Bank of New York participated in the development of and endorses the Fails Charge Trading Practice and has indicated that it will adopt it in connection with its transactions in Treasuries.

By entering into any transaction with us for the delivery of Treasuries against the payment of funds or the transfer of securities on or after the Effective Date (including any cash purchase or sale, forward purchase or sale, Treasury option, repurchase (“repo”) or reverse repo transaction, or bonds borrow or loan transaction), you will be deemed to have agreed that such transaction will be subject to the Fails Charge Trading Practice, unless explicitly agreed otherwise with respect to a specific transaction. Similarly, by entering into any such transaction, we shall be deemed to have agreed that such transaction will be subject to the Fails Charge Trading Practice, unless explicitly agreed otherwise with respect to a specific transaction. Both of us also shall be deemed to have agreed for any such transactions that the failure to enforce such a Fails Charge in any one transaction or in multiple transactions shall not constitute a waiver of the foregoing rights with regard to any other transactions subject to a Fails Charge. The claim of a Fails Charge shall be without prejudice to any other rights or remedies under the applicable agreement governing the transaction or applicable law and shall not constitute a waiver of the non-failing party’s right to exercise any other remedy.

We appreciate your anticipated cooperation and understanding and thank you for your continued business and support. Should you have any questions regarding the foregoing, please contact MarketAxess Middle Office and Settlements at 212-813-6150.

Very truly yours,
MarketAxess

APPENDIX VII – TREASURY HEDGING SERVICE TERMS

1. General

1.1 **Scope.** In order to provide trading efficiencies to Participants, MarketAxess will provide a Treasury hedging service (the “Treasury Hedging Service”) whereby MarketAxess, acting as a matched principal intermediary, will execute U.S. Treasury bond hedge transactions with Participants to hedge the duration risk of certain spread-based credit trades that they execute on the System (each, a “Hedge Transaction”). Upon commencement of the Treasury Hedging Service for Participants, MarketAxess will use its best efforts to execute a Hedge Transaction with these Participants when they execute a spread-based credit trade on the System that meets both (i) the Eligibility Parameters (defined in Section 2.2 below) and (ii) the requirements described herein (each, a “Qualifying Trade”). MarketAxess will provide Participants with access to the U.S. Treasuries product on the System for the purpose of viewing Hedging Transactions.

1.2 **Application.** This Appendix solely applies when Participants utilize the Treasury Hedging Service, and not to any other service offered to them by MarketAxess.

2. Treasury Hedging Service

2.1 **Procedures.** MarketAxess will use its best-efforts to execute a Hedge Transaction with a Participant upon execution of each Qualifying Trade that they execute on the System if the Qualifying Trade (or the calculated duration weighted hedge amount associated with the Qualifying Trade, as applicable) meets Eligibility Parameters that they select in advance. MarketAxess will act as a riskless principal intermediary for each Hedge Transaction. Hedge Transactions executed by MarketAxess shall not be final until a confirmation is posted on the System. MarketAxess will notify Participants via the System if MarketAxess is unable to perform a Hedge Transaction for a Qualifying Trade. In addition, procedures specific to Auto-hedging and Net-hedging, as described below, are as follows:

(a) **Auto-hedging:** MarketAxess will use the estimated duration weighted hedge amount for each Qualifying Trade executed versus a specified Treasury benchmark to execute a non-netted Hedge Transaction.

(b) **Net-hedging:** Spread-based credit trades executed for a specific delayed spot time on the platform will be hedged as follows. MarketAxess will sum the estimated duration weighted hedge amount for each credit trade executed versus a specified Treasury benchmark. MarketAxess will net the duration weighted hedge amounts per benchmark for the Participant and execute the net hedge amount at each specified spot time. Qualifying Trades for Net-hedging shall only include transactions on the System with counterparties who have also opted into Net-hedging.

2.2 **Eligibility.** MarketAxess may impose a minimum trade size for each Hedge Transaction that shall be communicated to Participants in advance and may be amended by MarketAxess upon prior written notice to such Participants. U.S. Treasury benchmarks may be added or removed in MarketAxess’ discretion. Only Qualifying Trades executed between 8 AM and 5 PM ET on weekdays are eligible for the Treasury Hedging Service (subject to the System being open for business and the applicability of the SIFMA

U.S. Holiday Recommendations). MarketAxess may adjust the trading hours, add or remove trading protocols, products, or fixed income instruments eligible for the Treasury Hedging Service in its discretion. Participants must identify to MarketAxess a list of Authorized Persons who will be activated for the Treasury Hedging Service, and of any parameters relating to their use of the Treasury Hedging Service as requested by MarketAxess (the “Eligibility Parameters”), by initially submitting such information in the form requested by MarketAxess and, subsequently, by having a their system administrator submit updates to the Eligibility Parameters via email to marketaxess@marketaxess.com. MarketAxess will use its best efforts to process updates to the Eligibility Parameters by the following trading day. Additional Eligibility Parameters may be made available in MarketAxess’ sole discretion.

2.3 Hedge Transaction Price. Each Hedge Transaction will be executed at a price obtained by MarketAxess from a third-party that is rounded conservatively based on trade direction to a standard increment as described in the Fees section below (the “Hedge Transaction Price”). Participants agree that they will honor the Hedge Transaction Prices obtained by MarketAxess unless MarketAxess determines in its sole discretion that these prices have been provided in manifest error. MarketAxess is providing the Treasury Hedging Service solely on the condition that Participants agree that MarketAxess shall not be responsible for any losses or claims based on MarketAxess’ use of a particular Hedge Transaction Price.

2.4 Interruption or Termination of Service. MarketAxess reserves the right at any time, without prior notice and without any liability of MarketAxess, to temporarily or permanently restrict, suspend or terminate a Participant’s use of the Treasury Hedging Service, including in the event MarketAxess believes that Hedge Transaction Prices obtained by a third-party are inaccurate or unreliable. A Participant may terminate its use of the Treasury Hedging Service upon written notice by a system administrator to MarketAxess, however, no such termination shall affect its liability with respect to a Hedge Transaction entered into prior to termination.

2.5 Cancelled or Amended Trades. By utilizing the Treasury Hedging Service, a Participant acknowledges that (i) it is responsible for all Hedge Transactions even if the Qualifying Trade(s) that initiated the Hedge Transaction is cancelled or amended, and (ii) MarketAxess shall be subject to the rules of any platform on which it executes transactions in order to provide the contra-side leg for the Hedge Transactions. Accordingly, MarketAxess may cancel or amend a Hedge Transaction with a Participant if MarketAxess is required to cancel or amend the contra-side leg of the Hedge Transaction by such rules, if applicable.

2.6 Live Markets. MarketAxess shall make Auto-hedging available for spread-based transactions executed on Live Markets. The terms of this Appendix shall apply to such transactions except that, for Treasury Hedging on Live Markets:

- (a) Authorized Persons who are enabled by the Participant’s system administrator to trade U.S. Treasuries on the System will be enabled by MarketAxess to perform Hedge Transactions; and
- (b) Authorized Persons need to select whether to perform Hedge Transactions on an order-by-order basis.

3. Fees

3.1 MarketAxess may receive a markup/markdown Fee for each Hedge Transaction as a result of rounding the price received from the contra-side leg of the Hedge Transaction conservatively based on trade direction to a standard tick size increment. Standard tick size increments utilized by MarketAxess as of the date of these Guidelines are set forth below, which may be amended by MarketAxess in its sole discretion:

<u>Maturity</u>	<u>Standard Increment</u>
2, 3, 5 yr	1/8 th of a 32 nd
7, 10 yr	1/4 th of a 32 nd
20, 30 yr	1/2 of a 32 nd

3.2 MarketAxess may amend Fees applicable to the Treasury Hedging Service on not less than thirty (30) days' written notice to a Participant.

4. Settlement by MarketAxess. MarketAxess shall act as counterparty for Hedge Transactions on a matched principal basis. Subject to the application of any trade error or similar policy in effect from time to time, MarketAxess shall honor its settlement obligations with respect to the Hedge Transactions. Settlement will occur through customary industry means for the instruments involved.

5. Exclusion of Warranties. THE TREASURY HEDGING SERVICE IS PROVIDED "AS IS." THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES OR REPRESENTATIONS MADE BY MARKETAXESS AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTIES, CONDITIONS, GUARANTEES OR REPRESENTATIONS, WHETHER EXPRESS OR IMPLIED, IN LAW OR IN FACT, ORAL OR IN WRITING. PARTICIPANT HEREBY ACKNOWLEDGES THAT IT HAS NOT RELIED UPON ANY WARRANTY, CONDITION, GUARANTEE OR REPRESENTATION MADE BY MARKETAXESS IN CONNECTION WITH THE TREASURY HEDGING SERVICE. MARKETAXESS SHALL NOT BE RESPONSIBLE FOR ANY LOSSES CAUSED BY PARTICIPANT'S RELIANCE ON THE TREASURY HEDGING SERVICE. PARTICIPANT ACKNOWLEDGES AND AGREES THAT MARKETAXESS SHALL NOT BE LIABLE IF MARKETAXESS DOES NOT, IS UNABLE OR IS UNWILLING, IN ITS REASONABLE DISCRETION, TO EXECUTE ANY HEDGE TRANSACTION.

6. Variation. MarketAxess reserves the right to modify this Appendix from time to time at its sole discretion by providing 30 days' written notice to Participants, and the continued use of the Treasury Hedging Service following such modification shall constitute acceptance of such modifications.

APPENDIX VIII – MID-X

1.1 The Mid-X protocol (“Mid-X”) is an ATS registered with the SEC and will only be available to Participants that have: (i) been approved for Open Trading and (ii) provided written notice to MAC that they wish to transact via this protocol.

1.2 The Clearly Erroneous Trade Policy set out in APPENDIX V and the Open Trading Terms set out in APPENDIX I, shall each apply to Mid-X.

1.3 Mid-X is an anonymous protocol pursuant to which Participants may match their interests in Eligible Instruments during periodic single price sessions and agree the terms of the Transaction at prices which are determined in accordance with the provisions of Section 1.4 of APPENDIX VIII.

1.4 The price at which Transactions are executed pursuant to Mid-X shall be determined by reference to our CP+ pricing evaluation for the bond or other proprietary price discovery tool (if available). The Participant may choose to execute at the price so specified or choose not to execute through the Mid-X Protocol.

1.5 Use of CP+ shall be subject to the terms of APPENDIX III.

1.6 Mid-X is an ATS and, as such, is subject to Rule 15c3-5. As such, Participants shall adopt, implement and enforce control procedures that, at a minimum: (i) prevent unauthorized access to, use or misuse of Mid-X, (ii) limit access to Mid-X to authorized persons of Participant and (iii) prevent entry of orders that exceed any internal risk-based limits.

1.7 Mid-X Transactions shall take place via Open Trading.

1.8 MAC reserves the right at any time, without prior notice and without any liability of MAC, to temporarily or permanently restrict, suspend or terminate Participant’s use of Mid-X.

APPENDIX IX – MARKETAXESS RATES

1. General

1.1 MarketAxess Rates functionality allows Participants to engage in Transactions in U.S. Treasury Securities with other Participants.

1.2 Participants have the ability to provide liquidity as a MarketAxess Rates Liquidity Provider, and to take liquidity as a MarketAxess Rates Liquidity Consumer, and to define the groups of other Participants with whom the Participant desires to execute Transactions.

1.3 Participants have the ability to disclose their identity, or to remain anonymous in the pre-trade and post-trade state depending on the type of MarketAxess Rates trading protocol utilized. Anonymous MarketAxess Rates Transactions shall take place via Open Trading and the Open Trading Terms set out in APPENDIX I shall apply.

2. Trading Protocols

2.1 There are two methods in which a Transaction can occur:

(1) **UST Live Markets Protocol (Executable Streaming Prices):**

- (a) MarketAxess Rates Liquidity Providers have the ability to offer an ESP.
- (b) An ESP enables a MarketAxess Rates Liquidity Consumer to submit orders against live prices, refreshed in real time, by one or more of a Participant's approved MarketAxess Rates Liquidity Providers or against other MarketAxess Rates Liquidity Consumers.
- (c) The prices offered by MarketAxess Rates Liquidity Providers are firm and orders are executed based on price-time priority.
- (d) Last Look Functionality is available to all MarketAxess Rates Liquidity Providers utilizing the ESP API. Under this functionality, a MarketAxess Rates Liquidity Provider has up to 200 milliseconds to confirm that it will accept an order. If the MarketAxess Rates Liquidity Provider fails to respond within 200 milliseconds, the order is automatically rejected and the Transaction is not completed. All Transactions that are rejected or remain unconfirmed within the 200 milliseconds window shall be designated as 'No Fill'.
- (e) A MarketAxess Rates Liquidity Consumer can elect to opt out of receiving Last Look liquidity from a MarketAxess Rates Liquidity Provider at any time.

- (f) The System does not permit a MarketAxess Rates Liquidity Provider to stream the same price to any other Participant on MarketAxess Rates while a particular trade request is subject to the Last Look Functionality.
 - (g) All MarketAxess Rates Liquidity Providers utilizing Last Look Functionality expressly acknowledge and agree that (i) they will not and shall not utilize the functionality with the intent to manipulate or to commit any disruptive trading practices; (ii) they are an entity with total assets of at least US \$10,000,000; and (iii) if such Participant is using a clearing broker, the Participant has been authorized by its clearing broker to enter into give-up transactions with each counterparty with whom that Participant enters into Transactions.
- (2) **Request for Quote (RFQ):**
- (a) MarketAxess Rates Liquidity Providers can respond to the requests of MarketAxess Rates Liquidity Consumers that are initiated as Requests for Quote.
 - (b) When a MarketAxess Rates Liquidity Consumer creates an RFQ, the MarketAxess Rates Liquidity Provider to whom the request is submitted may respond with a quote.

3. Supported Instruments and Parameters

3.1 Security types:

MarketAxess Rates will offer both “on the run” and “off the run” U.S. Treasury Instruments for trading. MarketAxess Rates reserves the right to offer or remove individual U.S. Treasury Instruments from the System from time to time without prior notice to Participants.

3.2 Maximum Order Size Limits (“Fat Finger Controls”)

- 3.2.1 Participant has the ability to specify a maximum order input size.
- 3.2.2 This limit is a single notional amount that applies to all orders entered on MarketAxess Rates.
- 3.2.3 Maximum order size is set individually on a session or user level by MAC based upon the amount specified by each Participant.

4. Trade Cancellation and Error Trades

4.1 The Clearly Erroneous Trade Policy set out in APPENDIX V shall apply to transactions executed via MarketAxess Rates.

5. Masking IDs

5.1 Participants that anonymously trade via the UST Live Markets protocol are assigned a unique anonymized tag, referred to as a “Masking ID.” The Masking ID is made available to other Participants for the purpose of evaluating trade executions and allowing Participants the ability to differentiate the pricing they assign to specific Masking IDs.

5.2 Masking IDs do not appear anywhere during the trading day and are only present in end-of-day or other periodic reports. They are randomly generated and are not correlated to a Participant’s identity. They allow a Participant to see their trading activity with a particular anonymous counterparty on a trade-by-trade basis on a particular day and over time. Aggregated metrics on the trading activity of Masking IDs are periodically shared with Participants.

APPENDIX X – RFQ-HUB PROTOCOL

1.1 The RFQ-hub protocol enables Participants to facilitate Transactions on a fully disclosed basis (“RFQ-hub protocol”). Clearing and settlement of Transactions facilitated via the RFQ-hub protocol occurs directly between the Participants without any MAC involvement.

1.2 The RFQ-hub protocol is only available to Participants that have been approved by MAC to utilize this protocol.

1.3 Participant agrees that in respect of each request for quote, order or other communication submitted by Participant via the RFQ-Hub protocol and each Transaction executed pursuant thereto, Participant shall, to the extent required by Applicable Law, be solely responsible for: (i) maintaining any transaction or other records that it may be required to maintain under Applicable Law or any agreements binding on it, (ii) issuing transaction confirmations, (iii) complying with any transaction or regulatory reporting obligations, and (iv) complying with Regulation SHO under the Securities Exchange Act of 1934. Each time Participant submits a request for quote, order or other communication via the RFQ Hub Protocol, Participant will be deemed to represent to MAC that it is acting in compliance with Applicable Law.

1.4 Participant acknowledges and agrees that neither MAC nor any of its Affiliates will (i) be a principal or counterparty to any transaction entered into by Participant via the RFQ-hub protocol, (ii) be responsible for the execution or clearing of any trades nor the delivery of any required confirmations or account statements; or (iii) otherwise liable or responsible for (or be deemed to guarantee) the performance or execution of any Transaction entered into via with the RFQ-hub protocol. In addition, Participant acknowledges and agrees that MAC is not acting as Participant’s agent with respect to any request for quote, order or other communication transmitted via the RFQ-hub protocol.

1.5 Participant is solely responsible for entering into trading agreements with counterparties with whom Participant will interact via the RFQ-hub protocol. The execution, clearing and settlement of transactions in connection with the use of the RFQ-hub protocol, and any disputes arising out of or related to such matters, are governed by such separate agreements between Participant and other Participants. MAC is not a party to such agreements and makes no representations with respect thereto to any Participant or counterparty that utilizes the RFQ-hub protocol.

1.6 Participant is solely responsible for conducting reviews regarding any counterparty with whom it interacts via the RFQ-hub protocol in accordance with Applicable Law, which may include, but is not limited to, laws, rules and regulations relating to “know-your-customer” (KYC), customer identification program (CIP Rule) requirements under the USA PATRIOT Act, anti-money laundering, counter-terrorist financing, suspicious activity reporting, and programs administered by Office of Foreign Assets Control (OFAC), among others. Participant represents and warrants that it complies and shall continue to comply with such laws, rules and regulations.

1.7 If a Participant uses the RFQ-hub protocol to facilitate the execution of block futures transactions (whether as principal or as agent for one or more third parties), such Participant hereby represents, warrants and agrees that: (a) each time it submits a request for quote, order or other communication via the RFQ-hub Protocol in connection with a block futures transaction, it is an Eligible Contract Participant

(as defined under Section 1a(18) of the Commodity Exchange Act and CFTC regulations thereunder); and (b) if it will use the RFQ-hub protocol to effect block futures transactions as agent for one or more third parties, each time it submits a request for quote, order or other communication via the RFQ-hub protocol in connection with a block futures transaction as agent for a third party, such third party is an Eligible Contract Participant.

1.8 MAC reserves the right at any time, without prior notice and without any liability of MAC, to temporarily or permanently restrict, suspend or terminate Participant's use of the RFQ-hub protocol.

APPENDIX XI – IGB TRADING PROTOCOL

1. General

The India Government Bond (“IGB”) Trading Protocol provides connectivity to NDS-OM, which is an electronic system owned by the Reserve Bank of India (“RBI”) and operated by the Clearing Corporation of India Limited (“CCIL”) for secondary market trading in IGBs. The IGB Trading Protocol is designed to enable Participants to negotiate the terms of transactions in IGBs with dealers participating in Indian local markets for execution on NDS-OM.

2. Terms and Conditions

By utilizing the IGB Trading Protocol, Participants shall be deemed to agree to the following:

2.1 Participants are responsible for satisfying any applicable eligibility requirements for NDS-OM, including completing any required registrations and documentation required by NDS-OM.

2.2 The IGB Trading Protocol is purely an arrangement that facilitates the negotiation of transactions in IGBs between Participants and dealers via NDS-OM. Access to NDS-OM, including any resulting transactions and regulatory reporting obligations, is subject to Indian law and the rules of NDS-OM, with which the Participant must comply. Transactions executed via the IGB Trading Protocol are cleared and settled by the CCIL and subject to Indian law and the CCIL’s “Bye-laws, Rules and Regulations” which are accessible via CCIL’s website (<https://www.ccilindia.com/web/ccil/bye-laws-rules-regulations>).

2.3 Participants acknowledge and agree that neither MAC nor any of its affiliates will be (i) a principal or counterparty to any transaction entered into in connection with the IGB Trading Protocol; (ii) be responsible for the execution or clearing of any trades nor the delivery of any required confirmations or account statements; or (iii) otherwise liable or responsible for (or be deemed to guarantee) the performance or execution of any transaction entered into in connection with the IGB Trading Protocol. In addition, Participants acknowledge and agree that MAC is not acting as agent with respect to any order, quotation, or other information transmitted under the IGB Trading Protocol. With respect to Participants in the U.S., your counterparties or their affiliates will be responsible for satisfying Rule 15a-6 under the Securities Exchange Act of 1934.

2.4 In no event shall MAC be liable to Participants for any NDS-OM system failures or interruptions which cause loss, corruption, inaccuracy or incompleteness of trade-related data transmitted to or received by Participants.

2.5 Participants shall indemnify MAC and its affiliates from and against any and all losses, liabilities, judgments, suits, actions, proceedings, claims, penalties, damages or costs (including attorneys' fees as incurred) resulting from or arising out of its use of the IGB Trading Protocol, except to the extent caused by gross negligence, fraud or willful default by MAC or its affiliates.

2.6 Use of the IGB Trading Protocol constitutes each Participant’s consent to disclose order/trade information and identification details (including NDS-OM IDs) to third parties, including, but not limited to, NDS-OM and the CCIL, solely to the extent necessary to facilitate the performance of the services or to comply with applicable laws.

2.7 In the event a Participant has a complaint or dispute in connection with MAC's connectivity to NDS-OM, such complaint or dispute shall be subject to MAC's dispute resolution processes and such Participant shall not have any recourse to either CCIL or RBI, *provided however* that insofar as any complaint or dispute relates to transaction activity outside of the connectivity solution to NDS-OM (including clearing, settlement or custody arrangements outside the MAC System), the rules and guidelines of NDS-OM and CCIL shall apply.

APPENDIX XII – MARKETAXESS AUCTIONS

1.1 The MarketAxess Auctions protocol (“MarketAxess Auctions”) is an anonymous session-based protocol pursuant to which Participants may submit orders for eligible corporate bonds (as determined by MAC) where such orders may be crossed at the clearing price (hereafter, “Level”) for such bonds.

1.2 MarketAxess Auctions transactions shall take place via Open Trading. MarketAxess Auctions will only be available to Participants that have: (i) been approved for Open Trading and (ii) provided written notice to MAC that they wish to transact via this protocol. The Open Trading Terms set forth in Appendix I and the Clearly Erroneous Trade Policy set out in Appendix V shall each apply to MarketAxess Auctions.

1.3 Information regarding session times, minimum order and transaction sizes, minimum size increments and other related matters will be specified by MAC prior to the commencement of a session.

1.4 Upon the start of a MarketAxess Auctions session, Participants will be able to enter orders for the corporate bonds selected by MAC for trading in that session. MarketAxess Auctions will accept three types of orders: Pegged, Limit and Offsetting Only.

- Pegged Orders – Pegged Orders are orders that are entered into the MarketAxess Auctions and pegged to the opposite side of CP+. For example, a Pegged Order to buy would “peg” to the CP+ offer side level for that bond in the session. Pegged Orders can be entered, modified or cancelled until five minutes before the session close.
- Limit Orders – Limit Orders are orders that are entered into the MarketAxess Auctions with an established limit level. Limit Orders can be entered up until the session close. Limit Orders can be entered, modified or cancelled up until two minutes prior to the session close. Any Limit Order that varies materially from the CP+ price for the bond will be rejected.
- Offsetting Only Orders – Offsetting Only Orders are orders that are entered into the MarketAxess Auctions to offset any open auction imbalances remaining at the close of a session. Offsetting Only Orders are accepted up until the session close and can be entered, modified or cancelled up until the end of the session.

Orders will be filled at the clearing Level based on their priority as follows: (1) order type (Pegged Orders will have priority over Limit Orders, and Limit Orders will have priority over Offsetting Orders); (2) size (largest to smallest); and (3) time.

1.5 The clearing Level for each bond will be the Level at which the most volume of submitted orders would naturally cross. If the largest volume of submitted orders can cross at two Levels, the clearing Level will be determined by selecting the higher Level. If the largest volume of submitted orders can cross at more than two Levels, the clearing Level is determined by selecting the Level closest to the midpoint of all such Levels.

1.6 MarketAxess Auctions will operate separately and independently of the Live Markets protocol. Orders submitted to MarketAxess Auctions will not interact with the orders submitted to the Live Markets protocol, and vice-versa.

1.7 MAC may, in its absolute discretion and without prior notice or liability, modify any aspect of an auction (including, but not limited to, the suspension or cancellation of an auction or suspension or termination of a Participant's eligibility to participate in an auction) at any time. MAC shall be entitled, in its sole discretion and without liability, to take or not take any such action for any reason.

1.8 MarketAxess Auctions is an ATS and, as such, is subject to SEC Rule 15c3-5. As such, Participants shall adopt, implement and enforce control procedures that, at a minimum: (i) prevent unauthorized access to, use or misuse of MarketAxess Auctions, (ii) limit access to MarketAxess Auctions to authorized persons of the Participant and (iii) prevent entry of orders that exceed any internal risk-based limits.