CHAPTER 11. TRADING RULES

Rule Series 11.100 General Trading Rules

Rule 11.110. Hours of Trading and Trading Days

- (a) Orders may be executed on the Exchange during the Regular Market Session and during the Pre- and Post-Market Sessions. Certain order types and functionality are available only during the Regular Market Session as described in LTSE Rule 11.190.
- (b) The Exchange will be open for the transaction of business on business days. The Exchange will not be open for business on the following federal holidays: New Year's Day, Dr. Martin Luther King Jr. Day, Presidents Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas. When any holiday observed by the Exchange falls on a Saturday, the Exchange will not be open for business on the preceding Friday. When any holiday observed by the Exchange falls on a Sunday, the Exchange will not be open for business on the following Monday, unless otherwise indicated by the Exchange.
- (c) The Chief Executive Officer of the Exchange, or his or her designee, who must be a senior officer of the Exchange, shall have the power to halt or suspend trading in any and all securities traded on the Exchange, to close some or all Exchange facilities, and to determine the duration of any such halt, suspension, or closing, when he or she deems such action necessary for the maintenance of fair and orderly markets, the protection of investors, and/or otherwise in the public interest, including special circumstances such as: (1) actual or threatened physical danger, severe climatic conditions, civil unrest, terrorism, acts of war, or loss or interruption of facilities utilized by the Exchange; (2) a request by a governmental agency or official; or (3) a period of mourning or recognition for a person or event. No such action shall continue longer than a period of two (2) days, or as soon thereafter as a quorum of Directors can be assembled, unless the Board approves the continuation of such suspension.

Rule 11.120. Securities Eligible for Trading

The Exchange shall designate securities for trading. Any classes of securities listed or admitted to unlisted trading privileges on the Exchange shall be eligible to become designated for trading on the Exchange in accordance with the Rules of Chapter 14. All securities designated for trading are eligible for odd-lot, round-lot, and mixed-lot executions, unless otherwise indicated by the Exchange, or limited pursuant to the LTSE Rules.

Rule 11.130. Access

- (a) General. The System shall be available for entry and execution of orders by Users with authorized access. To obtain authorized access to the System, each User must enter into a User Agreement with the Exchange in such form as the Exchange may provide ("User Agreement").
- (b) Sponsored Participants. A Sponsored Participant may obtain authorized access to the System only if such access is authorized in advance by one or more Sponsoring Members as follows:
 - (1) Sponsored Participants must enter into and maintain customer agreements with one or more Sponsoring Members establishing proper relationship(s) and account(s) through which the Sponsored Participant may trade on the System. Such customer agreement(s) must incorporate the Sponsorship Provisions set forth in paragraph (2) below.
 - (2) For a Sponsored Participant to obtain and maintain authorized access to the System, a Sponsored Participant and its Sponsoring Member must agree in writing to the following Sponsorship Provisions:
 - (A) Sponsored Participant and its Sponsoring Member must have entered into and maintain a User Agreement with the Exchange.
 - (B) Sponsoring Member acknowledges and agrees that:
 - (i) All orders entered by the Sponsored Participants and any person acting on behalf of or in the name of such Sponsored Participant, and any executions occurring as a result of such orders, are binding in all respects on the Sponsoring Member.
 - (ii) Sponsoring Member is responsible for any and all actions taken by such Sponsored Participant, and any person acting on behalf of or in the name of such Sponsored Participant.
 - (iii) Sponsoring Member shall comply with the Exchange's Certificate of Incorporation, Bylaws, Rules, and procedures, and Sponsored Participant shall comply with the same, as if Sponsored Participant were a Member.
 - (iv) Sponsored Participant shall maintain, keep current, and provide to the Sponsoring Member, and to the Exchange upon request, a list of Authorized Traders who may obtain access to the System on behalf of the Sponsored Participant. Sponsored Participant shall be subject to the

- obligations of LTSE Rule 11.140 with respect to such Authorized Traders. Sponsored Participant shall familiarize its Authorized Traders with all of the Sponsored Participant's obligations under this LTSE Rule 11.130 and will assure that they receive appropriate training prior to any use or access to the System.
- (v) Sponsored Participant may not permit anyone other than Authorized Traders to use or obtain access to the System.
- (vi) Sponsored Participant shall take reasonable security precautions to prevent unauthorized use or access to the System, including unauthorized entry of information into the System, or the information and data made available therein. Sponsored Participant understands and agrees that Sponsored Participant is responsible for any and all orders, trades, and other messages and instructions entered, transmitted or received under identifiers, passwords, and security codes of Authorized Traders, and for the trading and other consequences thereof. Sponsored Participant acknowledges its responsibility to establish adequate procedures and controls that permit it to effectively monitor its employees', agents', and customers' use and access to the System for compliance with the terms of the User Agreement and the LTSE Rules.
- (vii) Sponsored Participant shall pay when due all amounts, if any, payable to Sponsoring Member, the Exchange or any other third parties that arise from the Sponsored Participant's access to and use of the System. Such amounts include, but are not limited to applicable exchange and regulatory fees.
- (C) The Sponsoring Member must provide the Exchange with a written statement in form and substance acceptable to the Exchange identifying each Sponsored Participant by name and market participant identifier ("MPID"), and acknowledging its responsibility for the orders, executions, and actions of such Sponsored Participant.
- (c) Data Recipients. The System shall be available for receipt of the Exchange's data products specified in LTSE Rule 11.330 (collectively, "Exchange data products") by data recipients with authorized access ("Data Recipients"). To obtain authorized access to the Exchange data products, each Data Recipient must enter into a Data Agreement with the Exchange in such form as the Exchange may provide ("Data Agreement").

- (d) Service Bureaus. The System shall be available for entry and execution of orders by Members with authorized access via a service bureau with authorized access ("Service Bureau"). To obtain authorized access to the System, each Service Bureau must enter into a Service Bureau Agreement with the Exchange in such form as the Exchange may provide ("Service Bureau Agreement").
- (e) Extranet Providers. The System shall be available for entry and execution of orders by Members with authorized access via connectivity to the Exchange provided by an extranet provider with authorized access ("Extranet Provider"). To obtain authorized access to the System, each Extranet Provider must enter into a Connectivity Services Agreement with the Exchange in such form as the Exchange may provide ("Connectivity Services Agreement" including the "Extranet Addendum") and support a minimum data exchange rate, as may be determined by the Exchange from time-totime and disseminated in LTSE information circulars.

Rule 11.140. Authorized Traders

- (a) A Member shall maintain a list of ATs who may obtain access to the System on behalf of the Member or the Member's Sponsored Participants. The Member shall update the list of ATs as necessary. Members must provide the list of ATs to the Exchange upon request.
- (b) A Member must have reasonable procedures to ensure that all ATs comply with all LTSE Rules and all other procedures related to the System.
- (c) A Member must suspend or withdraw a person's status as an AT if the Exchange has determined that the person has caused the Member to fail to comply with the Rules of the Exchange and the Exchange has directed the Member to suspend or withdraw the person's status as an AT.
- (d) A Member must have reasonable procedures to ensure that the ATs maintain the physical security of the equipment for accessing the facilities of the Exchange to prevent the improper use or access to the systems, including unauthorized entry of information into the systems.
- (e) To be eligible for registration as an AT of a Member, a person must successfully complete the General Securities Representative Examination (Series 7) or the Securities Trader Qualification Examination (Series 57), or an equivalent foreign examination module approved by the Exchange as defined in Rule 2.160(h) and (i), and any other training and/or certification programs as may be required by the Exchange.

Rule 11.150. Registration as a Market Maker

- (a) Quotations and quotation sizes may be entered into LTSE only by a Member registered as an LTSE Market Maker or other entity approved by LTSE to function in a market-making capacity.
- (b) An LTSE Market Maker may become registered in an issue by entering a registration request via an LTSE approved electronic interface with LTSE's systems or by contacting LTSE Market Operations. Registration shall become effective on the day the registration request is entered.
- (c) An LTSE Market Maker's registration in an issue shall be terminated by LTSE if the market maker fails to enter quotations in the issue within five (5) business days after the market maker's registration in the issue becomes effective.

Rule 11.151. Market Maker Obligations

A Member registered as a Market Maker shall engage in a course of dealings for its own account to assist in the maintenance, insofar as reasonably practicable, of fair and orderly markets in accordance with this LTSE Rule.

- (a) Quotation Requirements and Obligations
 - (1) Two-Sided Quote Obligation. For each security in which a Member is registered as a Market Maker, the Member shall be willing to buy and sell such security for its own account on a continuous basis during regular market hours and shall enter and maintain a two-sided trading interest ("Two-Sided Obligation") that is identified to the Exchange as the interest meeting the obligation and is displayed in the Exchange's quotation at all times. Interest eligible to be considered as part of a Market Maker's Two-Sided Obligation shall have a quotation size of at least one normal unit of trading (or a larger multiple thereof); provided, however, that a Market Maker may augment its Two-Sided Obligation size to display limit orders priced at the same price as the Two-Sided Obligation. Unless otherwise designated, a "normal unit of trading" shall be 100 shares. After an execution against its Two-Sided Obligation, a Market Maker must ensure that additional trading interest exists in the Exchange to satisfy its Two-Sided Obligation either by immediately entering new interest to comply with this obligation to maintain continuous two-sided quotations or identify to the Exchange current resting interest that satisfies the Two-Sided Obligation.
 - (2) Pricing Obligations. For NMS stocks (as defined in Rule 600 under Regulation NMS) a Market Maker shall adhere to the pricing obligations established by this

LTSE Rule during the Regular Market Session; provided, however, that such pricing obligations (i) shall not commence during any trading day until after the first regular way transaction on the primary listing market in the security, as reported by the responsible single plan processor, and (ii) shall be suspended during a trading halt, suspension, or pause, and shall not re-commence until after the first regular way transaction on the primary listing market in the security following such halt, suspension, or pause, as reported by the responsible single plan processor.

- (3) Bid Quotations. At the time of entry of bid interest satisfying the Two-Sided Obligation, the price of the bid interest shall be not more than the Designated Percentage lower than the then current National Best Bid, or if no National Best Bid, not more than the Designated Percentage lower than the last reported sale from the responsible single plan processor. In the event that the National Best Bid (or if no National Best Bid, the last reported sale) increases to a level that would cause the bid interest of the Two-Sided Obligation to be more than the Defined Limit lower than the National Best Bid (or if no National Best Bid, the last reported sale), or if the bid is executed or canceled, the Market Maker shall enter new bid interest at a price not more than the Designated Percentage lower than the then current National Best Bid (or if no National Best Bid, the last reported sale), or identify to the Exchange current resting interest that satisfies the Two-Sided Obligation.
- (4) Offer Quotations. At the time of entry of offer interest satisfying the Two-Sided Obligation, the price of the offer interest shall be not more than the Designated Percentage higher than the then current National Best Offer, or if no National Best Offer, not more than the Designated Percentage higher than the last reported sale received from the responsible single plan processor. In the event that the National Best Offer (or if no National Best Offer, the last reported sale) decreases to a level that would cause the offer interest of the Two-Sided Obligation to be more than the Defined Limit higher than the National Best Offer (or if no National Best Offer, the last reported sale), or if the offer is executed or canceled, the Market Maker shall enter new offer interest at a price not more than the Designated Percentage higher than the then current National Best Offer (or if no National Best Offer, the last reported sale), or identify to the Exchange current resting interest that satisfies the Two-Sided Obligation.
- (5) The National Best Bid and Offer shall be determined by the Exchange in accordance with its procedures for determining protected quotations under Rule 600 under Regulation NMS.
- (6) For purposes of this LTSE Rule, the "Designated Percentage" shall be eight (8) percentage points for securities that are included in the S&P 500® or Russell

1000® Index; 28% for securities with a price equal to or greater than \$1 per share that are not included in the S&P 500® or Russell 1000® Index; and 30% for securities with a price less than \$1 per share that are not included in the S&P 500® Index or Russell 1000® Index; except that between 9:30 a.m. and 9:45 a.m. and between 3:35 p.m. and the close of trading, the Designated Percentage shall be 20% for securities that are included in the S&P 500® or Russell 1000® Index, 28% for securities with a price equal to or greater than \$1 per share that are not included in the S&P 500® or Russell 1000® Index, and 30% for securities with a price less than \$1 per share that are not included in the S&P 500® Index or Russell 1000® Index. The Designated Percentage for rights and warrants shall be 30%.

- (7) For purposes of this LTSE Rule, the "Defined Limit" shall be 9.5% for securities that are included in the S&P 500® or Russell 1000® Index; 29.5% for with a price equal to or greater than \$1 per share that are not included in the S&P 500® or Russell 1000® Index; and 31.5% for securities with a price less than \$1 per share that are not included in the S&P 500® Index or Russell 1000® Index; except that between 9:30 a.m. and 9:45 a.m. and between 3:35 p.m. and the close of trading, the Defined Limit shall be 21.5% for securities that are included in the S&P 500® or Russell 1000® Index; 29.5% for securities with a price equal to or greater than \$1 per share that are not included in the S&P 500® or Russell 1000® Index; and 31.5% for securities with a price less than \$1 per share that are not included in the S&P 500® Index or Russell 1000® Index.
- (8) Reserved.
- (9) Reserved.
- (10) Nothing in this LTSE Rule shall preclude a Market Marker from quoting at price levels that are closer to the National Best Bid and Offer than the levels required by this LTSE Rule.
- (11) The minimum quotation increment for quotations of \$1.00 or above in all System Securities shall be \$0.01. The minimum quotation increment in the System for quotations below \$1.00 in System Securities shall be \$0.0001.
- (12) The individual Market Participant Identifier ("MPID") assigned to a Member to meet its Two-Sided Obligation pursuant to subparagraph (a)(1) of this LTSE Rule shall be referred to as the Member's "Primary MPID". Market Makers may request the use of additional MPIDs that shall be referred to as "Supplemental MPIDs." A Market Maker that ceases to meet the obligations appurtenant to its Primary MPID in any security shall not be permitted to use a Supplemental MPID for any purpose in that security.

(13) Market Makers that are permitted the use of Supplemental MPIDs pursuant to subparagraph (12) above of this LTSE Rule are subject to the same rules applicable to the Members' first quotation, with one exception: the continuous twosided quote requirement and excused withdrawal procedures described in LTSE Rule 11.152 do not apply to Market Makers' Supplemental MPIDs. Supplemental MPIDs may be identified to the Exchange as interest to satisfy a Market Maker's two-sided obligation, in which case in order to be satisfactory, the Supplemental MPID's interest must be no more than the Designated Percentage from the NBBO as described and defined in this LTSE Rule 11.151(a).

(b) Firm Quotations

- (1) All quotations and orders to buy and sell entered into the System by LTSE Market Makers are firm and automatically executable for their size in the System by all Users. A particular LTSE Market Maker's quotations may be canceled rather than executed if designated with an Anti-Internalization Group Identifier ("AGID") modifier which is the same as that of an active opposite side order and originating from the same group type as the Market Maker's order to buy or sell, as set forth in LTSE Rule 11.190(e). Notwithstanding the foregoing, Market Makers may not use AGID modifiers to evade the firm quotation obligation.
- (c) Impaired Ability to Enter or Update Quotations.
 - (1) In the event that an LTSE Market Maker's ability to enter or update quotations is impaired, the market maker shall immediately contact LTSE Market Operations to request the withdrawal of its quotations.
 - (2) In the event that an LTSE Market Maker's ability to enter or update quotations is impaired and the market maker elects to remain in LTSE, the LTSE Market Maker shall execute an offer to buy or sell received from another Member at its quotations as disseminated through the Exchange.
- (d) Reserved.
- (e) Locked and Crossed Markets.
 - (1) Locked and Crossed Markets within the System: Any quotes or orders that are entered into the System that would lock or cross another order in the System will be executed by the System.

- (2) Inter-market Locked and Crossed Markets.
 - (A) Definitions. For purposes of this LTSE Rule, the following definitions shall apply:
 - (i) The terms automated quotation, effective national market system plan, intermarket sweep order, manual quotation, NMS stock, protected quotation, the Regular Market Session, and trading center shall have the meanings set forth in Rule 600(b) of Regulation NMS under the Securities Exchange Act of 1934.
 - (ii) The term "Crossing Quotation" shall mean the display of a bid for an NMS stock during the Regular Market Session at a price that is higher than the price of an offer for such NMS stock previously disseminated pursuant to an effective national market system plan, or the display of an offer for an NMS stock during the Regular Market Session at a price that is lower than the price of a bid for such NMS stock previously disseminated pursuant to an effective national market system plan.
 - (iii) The term "Locking Quotation" shall mean the display of a bid for an NMS stock during the Regular Market Session at a price that equals the price of an offer for such NMS stock previously disseminated pursuant to an effective national market system plan, or the display of an offer for an NMS stock during the Regular Market Session at a price that equals the price of a bid for such NMS stock previously disseminated pursuant to an effective national market system plan.
 - (B) Prohibition. Except for quotations that fall within the provisions of paragraph (C) of this LTSE Rule, LTSE Members shall reasonably avoid displaying, and shall not engage in a pattern or practice of displaying any quotations that lock or cross a protected quotation, and any manual quotations that lock or cross a quotation previously disseminated pursuant to an effective national market system plan.

(C) Exceptions.

- (i) The locking or crossing quotation was displayed at a time when the trading center displaying the locked or crossed quotation was experiencing a failure, material delay, or malfunction of its systems or equipment.
- (ii) The locking or crossing quotation was displayed at a time when a Protected Bid was higher than a Protected Offer in the NMS stock.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019)

Rule 11.152. Withdrawal of Quotations

- (a) Except as provided in paragraph (b) of this LTSE Rule, a market maker that wishes to withdraw quotations in a security shall contact LTSE Regulation to obtain excused withdrawal status prior to withdrawing its quotations. Withdrawals of quotations shall be granted by LTSE Regulation only upon satisfying one of the conditions specified in this LTSE Rule.
- (b) An LTSE Market Maker that wishes to obtain excused withdrawal status based on a market maker's systemic equipment problems, such as defects in an LTSE Market Maker's software or hardware systems or connectivity problems associated with the circuits connecting Exchange systems with the LTSE Market Maker's systems, shall contact LTSE Market Operations. LTSE Market Operations may grant excused withdrawal status based on systemic equipment problems for up to five (5) business days, unless extended by LTSE Market Operations.
- (c) (1) For LTSE-Primary-Listed Securities, excused withdrawal status based on circumstances beyond the LTSE Market Maker's control, other than systemic equipment problems, may be granted for up to five (5) business days, unless extended by LTSE Regulation. Excused withdrawal status based on demonstrated legal or regulatory requirements, supported by appropriate documentation and accompanied by a representation that the condition necessitating the withdrawal of quotations is not permanent in nature, may, upon notification, be granted for not more than sixty (60) days (unless such request is required to be made pursuant to paragraph (e) below). Excused withdrawal status based on religious holidays may be granted only if written notice is received by LTSE one business day in advance and is approved by LTSE. Excused withdrawal status based on vacation may be granted only if:
 - (A) The written request for withdrawal is received by LTSE one business day in advance, and is approved by LTSE
 - (B) The request includes a list of securities for which withdrawal is requested; and
 - (C) The request is made by an LTSE Market Maker that meets the definition of a "Small Firm Member" pursuant to Definition Y of the FINRA Restated Certification of Incorporation, even if the LTSE Market Maker is not a FINRA member.

- The withdrawal of quotations because of pending news, a sudden influx of orders or price changes, or to effect transactions with competitors shall not constitute acceptable reasons for granting excused withdrawal status.
- (2) For securities listed on exchanges other than LTSE, an LTSE Market Maker that wishes to withdraw quotations shall contact LTSE Regulation to obtain excused withdrawal status prior to withdrawing its quotations. Excused withdrawal status based on illness, vacations or physical circumstances beyond the Market Maker's control may be granted for up to five (5) business days, unless extended by LTSE Regulation. Excused withdrawal status based on investment activity or advice of legal counsel, accompanied by a representation that the condition necessitating the withdrawal of quotations is not permanent in nature, may, upon written request, be granted for not more than sixty (60) days. The withdrawal of quotations because of pending news, a sudden influx of orders or price changes, or to effect transactions with competitors shall not constitute acceptable reasons for granting excused withdrawal status.
- (d) Excused withdrawal status may be granted to an LTSE Market Maker that fails to maintain a clearing arrangement with a registered clearing agency or with a Member of such an agency and is withdrawn from participation in the trade reporting service of the Exchange, thereby terminating its registration as an LTSE Market Maker. Provided however, that if LTSE finds that the LTSE Market Maker's failure to maintain a clearing arrangement is voluntary, the withdrawal of quotations will be considered voluntary and unexcused pursuant to LTSE Rule 11.153 and the Rule 11 Series governing the Exchange. LTSE Market Makers that fail to maintain a clearing relationship will have their Exchange system status set to "suspend" and be thereby prevented from entering, or executing against, any quotes/orders in the System.
- (e) Excused withdrawal status may be granted to an LTSE Market Maker that is a distribution participant or an affiliated purchaser in order to comply with SEC Rule 101 or 104 of Regulation M under the Act on the following conditions:
 - (1) A member acting as a manager (or in a similar capacity) of a distribution of a security that is a subject security or reference security under SEC Rule 101 and any member that is a distribution participant or an affiliated purchaser in such a distribution that does not have a manager shall provide written notice to LTSE Regulation and the Market Regulation Department of FINRA no later than the business day prior to the first entire trading session of the one-day or five-day restricted period under SEC Rule 101, unless later notification is necessary under the specific circumstances.

- (A) The notice required by subparagraph (e)(1) of this Rule shall be provided by submitting a completed Underwriting Activity Report that includes a request on behalf of each LTSE Market Maker that is a distribution participant or an affiliated purchaser to withdraw the LTSE Market Maker's quotations and includes the contemplated date and time of the commencement of the restricted period.
- (B) The managing underwriter shall advise each LTSE Market Maker that it has been identified as a distribution participant or an affiliated purchaser to LTSE Regulation and that its quotations will be automatically withdrawn, unless a market maker that is a distribution participant (or an affiliated purchaser of a distribution participant) notifies LTSE Regulation as required by subparagraph (e)(2), below.
- (2) An LTSE Market Maker that has been identified to LTSE Regulation as a distribution participant (or an affiliated purchaser of a distribution participant) shall promptly notify LTSE Regulation and the manager of its intention not to participate in the prospective distribution in order to avoid having its quotations withdrawn.
- (3) If an LTSE Market Maker that is a distribution participant withdraws its quotations in an LTSE-Primary-Listed Security in order to comply with any provision of SEC Rules 101 or 104 of Regulation M and promptly notifies LTSE Regulation of its action, the withdrawal shall be deemed an excused withdrawal. Nothing in this subparagraph shall prohibit LTSE from taking such action as is necessary under the circumstances against a Member and its associated persons for failure to contact LTSE Regulation to obtain an excused withdrawal as required by subparagraphs (a) and (e) of this Rule.
- (4) Reserved.
- (5) A member acting as a manager (or in a similar capacity of a distribution subject to subparagraph (e)(1)) of this Rule shall submit a request to LTSE Regulation and the Market Regulation Department of FINRA to rescind the excused withdrawal status of distribution participants and affiliated purchasers, which request shall include the date and time of the pricing of the offering, the offering price, and the time the offering terminated, and, if not in writing, shall be confirmed in writing no later than the close of business the day the offering terminates. The request by this subparagraph may be submitted on the Underwriting Activity Report.
- (f) The LTSE Appeals Committee shall have jurisdiction over proceedings brought by LTSE Market Makers seeking review of the denial of an excused withdrawal pursuant to this LTSE Rule, or the conditions imposed on their re-entry.

(g) An LTSE Market Maker that wishes to reinstate its quotations in a security after an excused withdrawal pursuant to LTSE Rule 11.152 shall contact LTSE to notify LTSE of its intention to be reinstated. Upon confirmation by LTSE that the market maker is reinstated, the market maker will have no longer than ten minutes to meet its market making obligations under LTSE Rule 11.152.

(Amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.153. Voluntary Termination of Registration

- (a) An LTSE Market Maker may voluntarily terminate its registration in a security by withdrawing its two-sided quotation from the Exchange. An LTSE Market Maker that voluntarily terminates its registration in a security may not re-register as a market maker in that security for twenty (20) business days in the case of LTSE-Primary-Listed Securities or for one (1) business day in the case of other securities. Withdrawal from participation as an LTSE Market Maker in the Exchange shall constitute termination of registration as a market maker in that security for purposes of this LTSE Rule; provided, however, that an LTSE Market Maker that fails to maintain a clearing arrangement with a registered clearing agency or with a Member of such an agency and is withdrawn from participation in the Exchange and thereby terminates its registration as an LTSE Market Maker may register as an LTSE Market Maker at any time after a clearing arrangement has been reestablished unless LTSE finds that the LTSE Market Maker's failure to maintain a clearing arrangement is voluntary, in which case the withdrawal of quotations will be considered voluntary and unexcused.
- (b) Notwithstanding the above, an LTSE Market Maker that accidentally withdraws as an LTSE Market Maker may be reinstated if:
 - (1) The LTSE Market Maker notified Regulation of the accidental withdrawal as soon as practicable under the circumstances, but within at least one hour of such withdrawal, and immediately thereafter provided written notification of the withdrawal and reinstatement request;
 - (2) It is clear that the withdrawal was inadvertent and the LTSE Market Maker was not attempting to avoid its market making obligations; and
 - (3) The LTSE Market Maker's firm would not exceed the following reinstatement limitations:

- (A) For firms that simultaneously made markets in less than 250 stocks during the previous calendar year, the firm can receive no more than two (2) reinstatements per year;
- (4) For firms that simultaneously made markets in 250 or more but less than 500 stocks during the previous calendar year, the firm can receive no more than three (3) reinstatements per year; and
- (5) For firms that simultaneously made markets in 500 or more stocks during the previous calendar year, the firm can receive no more than six (6) reinstatements per year.
- (c) Factors that LTSE will consider in granting a reinstatement under paragraph (b) of this LTSE Rule include, but are not limited to:
 - The number of accidental withdrawals by the LTSE Market Maker in the past, as compared with LTSE Market Makers making markets in a comparable number of stocks;
 - (2) The similarity between the symbol of the stock that the LTSE Market Maker intended to withdraw from and the symbol of the stock that the LTSE Market Maker actually withdrew from;
 - (3) Market conditions at the time of the withdrawal;
 - (4) Whether, given the market conditions at the time of the withdrawal, the withdrawal served to reduce the exposure of the Member's position in the security at the time of the withdrawal to market risk; and
 - (5) The timeliness with which the LTSE Market Maker notified Regulation of the error.
- (d) For purposes of paragraph (a) of this LTSE Rule, a Market Maker shall not be deemed to have voluntarily terminated its registration in a security by voluntarily withdrawing its two-sided quotation from the Exchange if the LTSE Market Maker's two-sided quotation in the subject security is withdrawn by LTSE's systems due to issuer corporate action related to a dividend, payment or distribution, or due to a trading halt, and one of the following conditions is satisfied:
 - (1) The LTSE Market Maker enters a new two-sided quotation prior to the close of the Regular Market Session on the same day when LTSE's systems withdrew such a quotation;

- (2) The LTSE Market Maker enters a new two-sided quotation on the day when trading resumes following a trading halt, or, if the resumption of trading occurs when the market is not in regular session, the LTSE Market Maker enters a new two-sided quotation prior to the opening of the next Regular Market Session; or
- (3) Upon request from the market maker, LTSE Regulation authorizes the market maker to enter a new two-sided quotation, provided that LTSE Regulation receives the market maker's request prior to the close of the Regular Market Session on the next regular trading day after the day on which the Market Maker became eligible to re-enter a quotation pursuant to subparagraph (d)(1) or (d)(2) hereof and determines that the LTSE Market Maker was not attempting to avoid its market making obligations by failing to re-enter such a quotation earlier.
- (e) The LTSE Appeals Committee shall have jurisdiction over proceedings brought by LTSE Market Makers seeking review of their denial of a reinstatement pursuant to paragraphs (b) or (d) of this LTSE Rule.

(Amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.154. Suspension and Termination of Quotations

LTSE may, pursuant to the procedures set forth in Chapter 9, suspend, condition, limit, prohibit or terminate the authority of an LTSE Market Maker or Member to enter quotations in one or more authorized securities for violations of applicable requirements or prohibitions.

Rule 11.160. Notification Requirements for Offering Participants

(a) General.

This LTSE Rule 11.160 sets forth the notice requirements applicable to all Members participating in offerings of listed securities for purposes of monitoring compliance with the provisions of SEC Regulation M. In addition to the requirements under this LTSE Rule 11.160, Members also must comply with all applicable rules governing the withdrawal of quotations in accordance with SEC Regulation M.

(b) Definitions.

For purposes of this Rule, the following terms shall have the meanings as set forth in Rules 100 and 101 of SEC Regulation M: "actively traded", "affiliated purchaser", "covered security", "distribution", "distribution participant", "offering price", "penalty bid", "restricted period", "selling security holder", "stabilizing" and "syndicate covering transaction".

(c) Notice Relating to Distributions of Listed Securities Subject to a Restricted Period Under SEC Regulation M

Rule 11.160. Notification Requirements for Offering Participants

- (1) A Member acting as a manager (or in a similar capacity) of a distribution of any listed security that is a covered security subject to a restricted period under Rule 101 of SEC Regulation M shall provide written notice to the Exchange, in such form as specified by the Exchange, of the following:
 - (A) the Member's determination as to whether a one-day or five-day restricted period applies under Rule 101 of SEC Regulation M and the basis for such determination, including the contemplated date and time of the commencement of the restricted period, the listed security name and symbol, and identification of the distribution participants and affiliated purchasers, no later than the business day prior to the first complete trading session of the applicable restricted period, unless later notification is necessary under specific circumstances;
 - (B) the pricing of the distribution, including the listed security name and symbol, the type of security, the number of shares offered, the offering price, the last sale before the distribution, the pricing basis, the SEC effective date and time, the trade date, the restricted period, and identification of the distribution participants and affiliated purchasers, no later than the close of business the next business day following the pricing of the distribution, unless later notification is necessary under specific circumstances;
 - (C) the cancellation or postponement of any distribution for which prior notification of commencement of the restricted period has been submitted under paragraph (c)(1)(A) above, immediately upon the cancellation or postponement of such distribution; and
 - (D) If no Member is acting as a manager (or in a similar capacity) of such distribution, then each Member that is a distribution participant or affiliated purchaser shall provide the notice required under this paragraph (c)(1), unless another Member has assumed responsibility in writing for compliance therewith.
- (2) Any Member that is an issuer or selling security holder in a distribution of any listed security that is a covered security subject to a restricted period under Rule 102 of SEC Regulation M shall comply with the notice requirements of paragraph (c)(1), unless another Member has assumed responsibility in writing for compliance therewith.
- (d) Notice Relating to Distributions of "Actively Traded" Securities Under SEC Regulation M

Rule 11.160. Notification Requirements for Offering Participants

A Member acting as a manager (or in a similar capacity) of a distribution of any listed security that is considered an "actively traded" security under Rule 101 of SEC Regulation M shall provide written notice to the Exchange, in such form as specified by the Exchange, of the following:

- (1) the Member's determination that no restricted period applies under Rule 101 of SEC Regulation M and the basis for such determination; and
- (2) the pricing of the distribution, including the listed security name and symbol, the type of security, the number of shares offered, the offering price, the last sale before the distribution, the pricing basis, the SEC effective date and time, the trade date, and identification of the distribution participants and affiliated purchasers.

Such notice shall be provided no later than the close of business the next business day following the pricing of the distribution, unless later notification is necessary under specific circumstances.

If no Member is acting as a manager (or in a similar capacity) of such distribution, then each Member that is a distribution participant or an affiliated purchaser shall provide the notice required under this paragraph (d), unless another Member has assumed responsibility in writing for compliance therewith.

(e) Notice of Stabilizing Bids, Penalty Bids and Syndicate Covering Transactions in Listed Securities

A Member placing or transmitting a stabilizing bid, imposing a penalty bid, or engaging in a syndicate covering transaction in connection with an offering of a listed security pursuant to Rule 104 of SEC Regulation M shall, unless another Member has assumed responsibility in writing for compliance with this paragraph (e), provide written notice to the Exchange, in such form as specified by the Exchange, of the following:

- (1) the Member's intention to conduct such activity, prior to placing or transmitting the stabilizing bid, imposing the penalty bid or engaging in the first syndicate covering transaction, including identification of the listed security and its symbol and the date such activity will occur; and
- (2) confirmation that the Member has placed or transmitted a stabilizing bid, imposed a penalty bid or engaged in a syndicate covering transaction, within one business day of completion of such activity, including identification of the listed security and its symbol, the total number of shares and the date(s) of such activity.

Rule 11.170. Reserved

Rule 11.180. Units of Trading

- (a) One hundred (100) shares shall constitute a "round lot," any amount less than 100 shares shall constitute an "odd lot," and any amount greater than 100 shares that is not a multiple of a round lot shall constitute a "mixed lot." Certain securities, as designated by their listing markets, have a normal unit of trade of less than 100 shares, and so the Exchange shall conform to the direction of the listing markets in those instances.
- (b) The minimum unit of trading on the System shall be one share.

Rule 11.190. Orders and Modifiers

Users may enter into the System the types of orders listed in this LTSE Rule 11.190, subject to the limitations set forth in this LTSE Rule 11.190 or elsewhere in the LTSE Rules. Order, modifier, and parameter combinations which are disallowed by the Exchange may be rejected, ignored, or overridden by the Exchange, as determined by the Exchange to facilitate the most orderly handling of User instructions. All orders resting on the Order Book shall be displayable; this requirement shall not preclude the use of market orders, Immediate-or-Cancel Orders, or Inter-market Sweep Orders which, by their terms, are ineligible to rest on the Order Book.

(a) General Order Types

- (1) Limit Order. An order to buy or sell a stated amount of a security at a specified price ("limit price") or better. A "marketable" limit order is a limit order to buy (sell) at or above (below) the lowest (highest) Protected Offer (Bid) for the security. A limit order:
 - (A) May have any time-in-force ("TIF") supported by the System as described in section (c) of this LTSE Rule 11.190.
 - (B) All orders will be treated as LTSE Only, as defined in LTSE Rule 11.190(b)(6).
 - (C) May be an ISO, as defined in paragraph (b)(12) below. ISOs must be marked with a TIF of IOC, as defined in LTSE Rule 11.190(c)(1).
 - (D) Must be submitted with a limit price.
 - (E) May be entered during the Pre-Market Session, Regular Market Session, and Post-Market Session.
 - (i) Limit orders marked IOC are accepted and eligible to trade during the Pre-Market Session, Regular Market Session, and Post-Market Session.

- (ii) Limit orders marked DAY, as defined in section (c) of this LTSE Rule 11.190, submitted before the open of the Regular Market Session are queued by the System until the Opening Auction (or Halt Auction, as applicable), pursuant to LTSE Rule 11.350, or the Regular Market Session Opening Process, pursuant to LTSE Rule 11.231. Limit orders marked DAY submitted during the Regular Market Session are accepted and begin trading immediately. Limit orders entered into the System marked DAY, if not fully executed or canceled by the User, expire at the end of the Regular Market Session. Limit orders marked DAY are rejected in the Post-Market Session.
- (iii) Limit orders marked GTT, as defined in section (c) of this LTSE Rule 11.190, are accepted and eligible to trade during the Pre-Market Session, Regular Market Session, and Post-Market Session. Limit orders entered into the System marked GTT begin trading immediately and, if not fully executed or canceled by the User, expire at the earlier of the expiration time assigned by the User or the end of the Post-Market Session.
- (iv) Limit orders marked GTX, as defined in section (c) of this LTSE Rule 11.190, submitted before the open of the Regular Market Session, are queued by the System until the Opening Auction (or Halt Auction, as applicable), pursuant to LTSE Rule 11.350, or the Regular Market Session Opening Process, pursuant to LTSE Rule 11.231. Limit orders marked GTX submitted during the Regular Market Session and Post-Market Session are accepted and begin trading immediately. Limit orders entered into the System marked GTX, if not fully executed or canceled by the User, expire at the end of the Post-Market Session.
- (v) Limit orders marked SYS, as defined in section (c) of this LTSE Rule 11.190, are accepted and eligible to trade during the Pre-Market Session, Regular Market Session, and Post-Market Session. Limit orders entered into the System marked SYS begin trading immediately and, if not fully executed or canceled by the User, expire at the end of the Post-Market Session
- (F) May be a MQTY, as defined in paragraph (b)(11) below.
- (G) Must be displayed.
- (2) Market Order. An order to buy or sell a stated amount of a security that is to be executed at or better than the NBBO at the time the order reaches the Exchange.

Market orders shall not trade through Protected Quotations. Any portion of a market order that is designated as "LTSE Only" will be canceled if upon receipt by the System, it cannot be executed by the Exchange in accordance with LTSE Rule 11.230. A market order:

- (A) Must have a TIF of IOC or DAY.
- (B) All orders will be treated as LTSE Only, as defined in LTSE Rule 11.190(b)(6).
- (C) May not be an ISO, as defined in paragraph (b)(12) below.
- (D) May not be submitted with a limit price.
- (E) May only be submitted during the Regular Market Session. Market orders submitted in the Pre-Market Session or Post-Market Session will be rejected by the System.
 - (i) Market orders marked IOC are rejected during the Pre-Market Session and Post-Market Session. Market orders marked IOC are accepted and eligible to trade during the Regular Market Session.
 - (ii) Market orders marked DAY are rejected during the Pre-Market Session and Post-Market Session. Market orders marked DAY are eligible to trade during the Regular Market Session and treated by the System as having a TIF of IOC.
 - (iii) Market orders marked GTT are rejected.
 - (iv) Market orders marked GTX are rejected.
 - (v) Market orders marked SYS are rejected.
 - (vi) May be a MQTY, as defined in paragraph (b)(11) below.
 - (vii) Market orders are never displayable.
- (3) All Orders are processed, prioritized, time-stamped, and managed as described in LTSE Rule 11.220.
- (b) Order Parameters
 - (1) Reserved.
 - (2) Reserved.
 - (3) Reserved.

- (4) Odd Lot Order. An order to buy or sell an odd lot as defined by Rule 11.180.
- (5) Mixed Lot Order. An order to buy or sell a mixed lot as defined by Rule 11.180.
 Odd lot portions of mixed lot orders are only eligible to be Protected Quotations if aggregated to form a round lot.
- (6) LTSE Only Order. Any order that is submitted into the System. LTSE Only Orders are ranked and executed on the Exchange pursuant to LTSE Rule 11.220 and LTSE Rule 11.230(a). An LTSE Only Order posting to the Order Book will be subject to the price sliding process as set forth in section (g).
- (7) Reserved.
- (8) Reserved.
- (9) Reserved.
- (10) Reserved.
- (11) Minimum Quantity Order ("MQTY"). An order which must have at least the minimum indicated share size satisfied in order to execute. Upon order entry or order amendment by the User the "effective minimum quantity" of an order is equal to the lesser of the submitted minimum quantity or the total share size of the order. A MQTY:
 - (A) May be a market order or limit order.
 - (B) Will have a TIF of IOC as described in LTSE Rule 11.190(c)(1).
 - (C) Reserved.
 - (D) May not be an ISO, as defined in paragraph (b)(12) below.
 - (E) May be submitted with or without a limit price.
 - (F) May be entered during the Pre-Market Session, Regular Market Session, and Post-Market Session.
 - (G) May be an odd lot, round lot, or mixed lot.
- (12) Inter-market Sweep Orders. The System will accept incoming Inter-market Sweep Orders ("ISO") (as such term is defined in Regulation NMS). In order to be eligible for treatment as an ISO, the limit order must be marked "ISO," and the User entering the order must simultaneously route one or more additional limit orders marked "ISO," as necessary, to away markets to execute against the full

displayed size of any Protected Quotation for the security with a price that is superior to the limit price of the Inter-market Sweep Order entered in the System. Such orders, if they meet the requirements of the foregoing sentence, may be executed at one or multiple price levels in the System without regard to Protected Quotations at away markets consistent with Regulation NMS (i.e., may trade through such quotations). The Exchange relies on the marking of an order as an ISO order when handling such order, and thus, it is the entering User's responsibility, and not the Exchange's responsibility, to comply with the requirements of Regulation NMS relating to ISOs. An ISO:

- (A) Must be a limit order.
- (B) Must have a TIF of IOC.
- (C) Reserved.
- (D) Must be submitted with a limit price.
- (E) May be submitted during the Pre-Market Session, Regular Market Session, and Post-Market Session.
- (F) May not be marked MQTY.
- (G) May be an odd lot, round lot, or mixed lot.
- (c) Time-in-Force. Orders must have one of the following TIF instructions:
 - (1) Immediate-or-Cancel ("IOC"). Orders entered into the System marked IOC are executed on the Exchange, in whole or in part, as soon as such order is received, and the portion not so executed is canceled. Orders marked IOC are never posted to the Order Book.
 - (2) Day ("DAY"). Orders entered into the System marked DAY may queue during the Pre-Market Session. When queued, orders will participate in the Opening Process before becoming available for the Regular Market Session. Orders marked DAY are only available for trading during the Regular Market Session, and expire at the end of the Regular Market Session.
 - (3) Good 'til Extended Day ("GTX"). Orders entered into the System marked GTX may queue during the Pre-Market Session. When queued, orders will participate in the Opening Process before becoming available for the Regular Market Session. Orders marked GTX are available for trading during both the Regular Market Session and Post-Market Session, and expire at the end of the Post-Market Session.

- (4) System Session ("SYS"). Orders entered into the System marked SYS may trade during System Hours and expire at the end of the Post-Market Session.
- (5) Good 'til Time ("GTT"). Orders entered into the System marked GTT may trade during System Hours and expire at the earlier of the User specified expire time, or the end of the Post-Market Session.
- (d) Cancel and Cancel/Replace ("Order Amendment") Messages. A User may, by appropriate entry in the System, cancel or replace an existing order entered by the User, subject to the following limitations.
 - (1) Orders may only be replaced if the order has a TIF instruction other than IOC, and if the order has not yet been fully executed. Market orders may not be replaced.
 - (2) Reserved.
 - (3) Supported Fields. Only the limit price and the order quantity size of the order may be changed by a Replace Message and are considered supported fields. If a User desires to change any other terms of an existing order, the existing order must be canceled and a new order must be entered.
 - (4) Invalid Fields. Symbol, side, execution instruction, order type, and TIF are considered invalid fields. If a User attempts to modify an invalid field by submitting a Replace Message, the order amendment will be rejected by the Exchange. If a User desires to modify an invalid field on an order, the existing order must be canceled, and a new order must be entered.
 - (5) Unsupported Fields. All fields not listed in paragraph (3) and (4) above are considered unsupported fields. If a User desires to modify an unsupported field, the existing order must be canceled and a new order must be entered.
 - (6) If an Order Amendment contains an invalid field, as defined in paragraph (4) above, alone or in conjunction with a supported field, defined in paragraph (3) above, the Exchange will reject the amendment. If an Order Amendment contains an unsupported field alone, defined in paragraph (5) above, the Exchange will reject the amendment. If an Order Amendment contains an unsupported field and a supported field, the Exchange will amend the supported field and ignore the unsupported field. The Exchange will periodically update its FIX specification to specify supported fields, invalid fields, and unsupported fields.
 - (7) Cancel and Cancel/Replace messages will be processed in the order in which they are received by the System.

- (8) Notwithstanding anything to the contrary in these LTSE Rules, no cancellation or replacement of an order will be effective until such message has been received and processed by the System
- AGID Modifier. Any active order designated with an AGID modifier will be prevented from executing against a resting opposite side order also designated with the same AGID modifier and originating from the same MPID or Exchange User (any such identifier, a "group type"). In situations when two orders subject to anti-internalization would match, the older of the orders is canceled. A determination of "older" in this regard is based upon the time the order is received by the System, including by initial order entry or User revision (i.e., Cancel/Replace). The group type elected by a Member controls the interaction between two orders marked with AGID modifiers.
 - (1) Group Type. The User group type will prevent any two orders from matching that are marked with the same AGID modifier originating from the same User. The MPID group type will also prevent any two orders from matching that are marked with the same AGID modifier originating from the same MPID.
 - (2) Default Order Marking. Based on User instruction, the Exchange may mark orders with a default AGID modifier by FIX session (i.e., order entry port). Principal and Agency/Riskless Principal orders may have different default settings.
 - (3) Free-to-Trade Identifier. Users may designate an order as available to match with opposite side orders within the elected group type by marking the AGID modifier of the order with the "free-to-trade" identifier.
 - Compatibility with MQTY, as described in paragraph (b)(11) above. In the event (4) an active order subject to anti-internalization is a MQTY the Exchange will determine satisfaction of the size requirement without excluding any resting orders from the same User or MPID that would otherwise be canceled under antiinternalization. This may result in total executed shares being less than the minimum quantity size value in an amount equal to the shares prevented from executing resulting from anti-internalization.

* * * * * Supplementary Material * * * *

.01 Best Execution

The Exchange notes that use of the AGID modifier does not relieve or otherwise modify the duty of best execution owed to orders received from customers. As such, market participants using the AGID modifier will need to take appropriate steps to ensure customer orders that do not execute because they were subject to anti-internalization ultimately receive the same execution price (or

better) than they would have originally obtained if execution of the order was not inhibited by antiinternalization.

.02 Firm Quote Obligations

Market Makers and other Users must not use the AGID modifier to evade the firm quotation obligation, as specified in LTSE Rule 11.151(b).

.03 Just and Equitable Principles of Trade

The AGID modifier must be used in a manner consistent with just and equitable principles of trade.

(f) Order Price Collars and Constraints

- Order Collar. Except for orders that are eligible for the Opening Process for Non-(1) LTSE-Primary-Listed Securities or the Auction Book pursuant to LTSE Rule 11.350(a)(1) during the auction process for LTSE-Primary-Listed Securities, the Exchange Order Collar prevents any incoming order or order resting on the Order Book, including those marked ISO, from executing at a price outside the Order Collar price range, i.e. prevents buy orders from trading at prices above the collar and prevents sell orders from trading at prices below the collar. The Order Collar price range is calculated using the numerical guidelines for clearly erroneous executions. Executions are permitted at prices within the Order Collar price range, inclusive of the boundaries. Any portion of a market order that would execute at a price beyond the Order Collar is canceled. Any remainder of a limit order that would execute at a price beyond the Order Collar is posted to the Order Book or canceled as per User instructions. Limit orders may post on the Order Book at the Order Collar Price, but never more aggressive. Such orders may be re-priced to a compliant price within or at the Order Collar as the Order Collar price changes due to changing market conditions.
 - (A) The Order Collar Reference Price is equal to the most current of the following:
 - (i) Consolidated last sale price disseminated during the Regular Market Session on trade date.
 - (ii) Last trade price disseminated outside of the Regular Market Session (Form T, as communicated by the relevant SIP) on trade date which other than for the Form T designation would have been considered a valid last sale price.

- (iii) If neither (i) or (ii) are available, prior day's Official Closing Price from the listing exchange, adjusted to account for corporate actions, news events, etc.
- (B) In the absence of an Order Collar Reference Price, the Exchange will either prevent trading in a security (by rejecting orders for the security) or suspend the Order Collar function, in the interest of maintaining a fair and orderly market in the impacted security.
- (C) The Exchange calculates the Order Collar price range for a security by applying the Numerical Guideline for the appropriate market session and reference price (see table below) to the Order Collar Reference Price, as defined in paragraph (A) above. The result is added to the Order Collar Reference Price to determine the Order Collar Price for buy orders, while the result is subtracted from the Order Collar Reference Price to determine the Order Collar Price for sell orders. The appropriate Order Collar Price is assigned to all orders upon entry and enforced throughout the life of an order; the Order Collar Price is updated each time the Order Collar Reference Price is updated by the System.
- (D) The Numerical Guideline used in the Order Collar Price calculation is based on the table below:

ORDER COLLAR REFERENCE PRICE	REGULAR MARKET SESSION NUMERICAL GUIDELINES	PRE-MARKET AND POST- MARKET SESSIONS NUMERICAL GUIDELINES
Greater than \$0.00 up to and including \$25.00	10%	20%
Greater than \$25.00 up to and including \$50.00	5%	10%
Greater than \$50.00	3%	6%

These percentages are based upon the numerical guidelines for clearly erroneous executions under LTSE Rule 11.270.

(2) Reserved

(3) Crossed Market Collar. In the event that a Protected Bid is crossing a Protected Offer, the System does not execute any portion of an active buy order at a price more than the greater of five cents (\$0.05) or one half of a percent (0.5%) higher than the lowest Protected Offer, or any portion of an active sell order at a price more than the greater of five cents (\$0.05) or one half of a percent (0.5%) lower

than the highest Protected Bid, unless such order is marked ISO. When an order posts to or is resting on the Order Book while a Protected Bid is crossing a Protected Offer, the order will price slide in accordance with the price sliding process, pursuant to LTSE Rule 11.190(g).

- (4) One-Sided Markets. One-Sided Markets are markets which lack either a Protected Bid or a Protected Offer.
 - (A) Reserved.
 - (B) In a One-Sided Market, orders are handled in the following manner:
 - (i) When LTSE receives a limit order marked LTSE Only on the same side of the market as the Protected Bid or Protected Offer the limit order marked LTSE Only posts and displays at the most aggressive allowable price.
 - (ii) When LTSE receives a limit order marked LTSE Only on the side of the market opposite a best Protected Quote, the limit order marked LTSE Only is eligible to trade with interest that is present on the Exchange and will post any unexecuted shares, order instructions allowing, subject to price sliding, as per section (g) below.
- (g) Price Sliding. The System will process orders pursuant to the "price sliding process," which includes the following:
 - (1) Price Sliding.
 - (A) An order that, at the time of entry, would create a violation of Rule 610(d) of Regulation NMS by locking or crossing a Protected Quotation of an external market will be ranked and displayed by the System at one (1) minimum price variant ("MPV") below the current NBO (for bids) or one (1) MPV above the current NBB (for offers) ("price sliding").
 - (B) An order subject to price sliding will retain its limit price irrespective of the price at which such order is ranked and displayed. In the event the NBBO changes such that an order subject to price sliding would no longer lock or cross the Protected Quotation of an external market, the order will receive a new timestamp, and will be displayed at the most aggressive permissible price. Such orders may be repriced once or multiple times, depending on changing market conditions and the order's limit price.
 - (C) The following orders are subject to price sliding:

- (i) LTSE Only orders are always subject to price sliding, as applicable.
- (2) Reserved.
- (3) Locked and Crossed Markets.
 - (A) In the event that the market becomes locked, the System will observe the following practices:
 - (i) Resting orders at the price of the locking quotation ("locking price") as defined in LTSE Rule 11.310 that were originally in compliance with rules and regulations of the Exchange and the Act will maintain their displayed price and quantity.
 - (ii) Orders posting to the Order Book on the same side as an order which is locked, as per subparagraph (i) above, are not permitted to join the locking price. Such orders will be displayed and ranked by the System pursuant to the Exchange's price sliding practices described in paragraph (1) above.
 - (B) In the event that the market becomes crossed, the System will observe the following practices:
 - (i) Resting orders that are displayed at a price which has become crossed and were originally in compliance with rules and regulations of the Exchange and the Act will maintain their displayed price and quantity.
 - (ii) Buy (sell) orders being posted to the Order Book during a crossed market will be displayed and ranked by the System one (1) MPV below (above) the lowest Protected Offer (highest Protected Bid).
- (4) Short Sale Price Sliding. The re-pricing described in this subparagraph constitutes "short sale price sliding" for short sale orders.
 - (A) For purposes of this LTSE Rule, the terms "covered security", "listing market", and "national best bid" shall have the same meaning as in Rule 201 of Regulation SHO. The term Short Sale Period is defined in LTSE Rule 11.290(d). The term Short Sale Price Test is defined in LTSE Rule 11.290(b).
 - (B) During a Short Sale Period, any active short sale order not marked short exempt is prevented by the System from executing at or below the current NBB.

- (C) A short sale order not marked short exempt that, at the time of entry, could not be executed or displayed in compliance with Rule 201 of Regulation SHO will be repriced and ranked by the System on the Order Book at a price equal to one MPV above the current NBB (the "Permitted Display Price"). To reflect declines in the NBB, the System will continue to re-price a resting short sale order not marked short exempt to be equal to the higher of the order's limit price or a Permitted Display Price.
- (D) During a Short Sale Period, the System may execute a short sale order not marked short exempt below the Permitted Display Price if, at the time of initial display of such short sale order, the order was displayed at a price above the then current NBB.
- (5) During a Short Sale Period, orders marked "short exempt" will not be subject to short sale price sliding. The System will accept orders marked "short exempt" at any time when the System is open for order entry, regardless of whether the Short Sale Price Test has been triggered.
- (6) Limit Up-Limit Down Price Constraint. For purposes of this LTSE Rule 11.190, the terms "Plan" and "Limit Up-Limit Down Plan" mean the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS. The term "Lower Price Band" and "Upper Price Band" (each a "Band Price") shall be defined as per the Plan. An order that would post to the Order Book with a limit price more aggressive than the applicable Upper Price Band (for buy orders) or Lower Price Band (for sell orders) will be posted, and displayed if applicable, at the Price Band. An order subject to Limit Up-Limit Down Price Constraint will retain its limit price irrespective of the prices at which such order is ranked. In the event the Band Price changes such that an order subject to Limit Up-Limit Down Price Constraint would no longer be more aggressive than the Band Price, the order will be re-priced to the most aggressive allowable price and receive a new timestamp.

* * * * * Supplementary Material * * * *

.01 Price Sliding and Time Priority.

Due to the way in which LTSE processes actions to resting orders, specifically when re-pricing, orders' relative time priority is generally preserved. LTSE assigns time priority, specifically a resting order's time priority, as the time when it is posted to the book at a given price, and each time the System re-prices an order, it necessarily receives a new time priority (i.e. timestamp).

Please note that except in the rare instance of Limit Up-Limit Down Band Prices and LTSE Order Collars requiring it, LTSE will otherwise never re-price a order already posted on the Order Book to a

less aggressive price. Orders already posted are otherwise only ever re-priced to more aggressive prices, as allowed by the prevailing market and the limit price indicated by Users on those orders.

.02 Price Sliding of Displayed Orders Resting on the Order Book.

Orders displayed on the Exchange which were displayed at a price compliant with Regulation NMS are generally permitted to maintain their price in the event an away trading center locks or crosses the price of the LTSE order

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(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019; amended by SR-LTSE-2020-08 eff. March 27, 2020; amended by SR-LTSE-2020-14 eff. August 28, 2020; amended by SR-LTSE-2020-15 eff. September 3, 2020; amended by SR-LTSE-2020-19 eff. October 6, 2020)

Rule Series 11.200. Order Guidelines

Rule 11.210. Minimum Price Variant

- (a) Bids, offers or orders in securities traded on the Exchange shall not be made in an increment smaller than:
 - (1) \$0.01 if those bids or offers are priced equal to or greater than \$1.00 per share; or
 - (2) \$0.0001 if those bids or offers are priced less than \$1.00 per share, and the security is an NMS stock pursuant to Regulation NMS Rule 600(b)(47), and is trading on the Exchange; or
 - (3) Any other increment established by the Commission for any security which has been granted an exemption from the minimum price increments requirements of Regulation NMS Rule 612(a) or 612(b).

Rule 11.220. Priority of Orders

- (a) Determination of Rank.
 - (1) Orders resting in the Order Book shall be ranked and maintained based on the following priority:
 - (A) Price. Orders are ranked by the price at which they are resting on the Order Book ("Resting Price"). The best priced order (the highest priced resting order to buy or the lowest priced resting order to sell) shall have priority over all other orders to buy (or orders to sell) in all cases.

- (B) Reserved.
- (C) Time. The System shall rank equally priced trading interest within the System in time priority. Subject to the Execution Process described below, where orders to buy (or sell) are resting at the same price, the order clearly established as the oldest in the System at such particular price shall have precedence, up to the number of shares of stock specified in the order. Orders are ranked by the time at which they are posted to the Order Book at a given price, the first to be posted at a given price being the oldest. Orders maintain their time priority once booked until one of the following occur, at which time the order will receive a new timestamp:
 - (i) Order is incremented by the User by means of a Cancel/Replace pursuant to LTSE Rule 11.190(d).
 - (ii) Order is re-priced by the User by means of a Cancel/Replace pursuant to LTSE Rule 11.190(d).
 - (iii) Reserved.
 - (iv) Order is incremented by the System
 - (v) Reserved.
 - (vi) Order is re-priced by the System pursuant to LTSE Rule 11.190(g).
- Orders queued for the Regular Market Session Opening Process for Non-LTSE-Primary-Listed Securities shall be ranked and maintained in time priority. The order established as the oldest in the System shall have precedence among those queued for the Opening Process, up to the number of shares of security specified in the order. Orders are ranked by the time at which they are submitted to the queue, the first to be queued being the oldest. Orders maintain their time priority once queued unless an amendment to the order is submitted by the User by means of a Cancel/Replace pursuant to LTSE Rule 11.190(d), except in the event that the only change to the order is a decrease in share quantity, in which case the order will not receive a new timestamp.
- (3) Decrementing Order Quantity and Priority. In the event that less than the full size of an order is executed, the unexecuted size of the order shall retain priority at the same resting price in accordance with paragraph (1) above. In the event that an order is decremented by the User by means of a Cancel/Replace pursuant to LTSE Rule 11.190(d), the order will not receive a new timestamp.

- (4) Price Sliding and Priority. The Exchange assigns time priority, specifically a resting order's time priority, as the time when it is posted to the Order Book at a particular price, and each time the System re-prices an order, it necessarily receives a new time priority (i.e. timestamp).
- (5) Surrendering Precedence. In the event a resting order having precedence on the Order Book cannot be executed due to its order instructions, the resting order surrenders its precedence in the Order Book only for the duration of the System processing the current active order. In the event a resting order having precedence on the Order Book cannot be executed due to the active order's order instructions, that resting order does not surrender its precedence, and the active order stops executing for this Order Book processing action.
- (6) Order Book Action Priority.
 - (A) Order Book Actions are actions taken by the System on orders resting in the Order Book and include:
 - (i) Re-pricing of orders.
 - (B) Each time the System initiates a Book Action pursuant to LTSE Rule 11.220(a)(6) on an order resting on the Order Book, it does so pursuant to the Order Book priority pursuant to LTSE Rule 11.220(a)(1), with the timestamp of the order or the portion of the order upon which the action is taken being used to determine time priority and the order's Resting Price on the Order Book being used to determine price priority.
- (7) Anti-Internalization. Pursuant to LTSE Rule 11.190(e), Users may direct that orders entered into the System not execute against orders entered under the same AGID modifier. In such a case, the System will not permit such orders to execute against one another, regardless of priority ranking.
- (8) Incoming Messages.
 - (A) New Orders, Cancel and Cancel/Replace messages received from Users, market data messages, and System component generated messages are processed by the System in strict time sequence.
- (b) Dissemination. The best-ranked order(s) are disseminated pursuant to LTSE Rule 11.240(c)(1).

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2020-08 eff. March 27, 2020)

Rule 11.230. Order Execution

Subject to the restrictions under these Exchange Rules or the Act, and the rules and regulations thereunder, orders shall be matched for execution in accordance with this LTSE Rule 11.230.

- (a) Execution Against the LTSE Order Book. For purposes of this LTSE Rule 11.230, any order falling within the parameters of this paragraph shall be referred to as "executable." An order will be canceled back to the User if, based on market conditions, User instructions, applicable LTSE Rules, and/or the Act and the rules and regulations thereunder, such order is not executable and cannot be posted to the Order Book.
 - (1) Compliance with Rule 201 of Regulation SHO. For any execution of a short sale order to occur on the Exchange when a short sale price test restriction is in effect, the execution price must be higher than (i.e., above) the NBB, unless the sell order was initially displayed by the System at a price above the then current NBB or is marked "short exempt" pursuant to Regulation SHO. Short sale orders are subject to the short sale price sliding process pursuant to LTSE Rule 11.190(g)(4), as well as any other applicable price sliding process.
 - (2) Compliance with Regulation NMS and Trade-Through Protection.
 - (A) Regular Market Session. For any execution to occur during the Regular Market Session, the price must be equal to or better than the Protected NBBO, unless the order is marked ISO, or unless the execution falls within another exception set forth in Rule 611(b) of Regulation NMS.
 - (B) Pre-Market Session and Post-Market Session. For any execution to occur during the Pre-Market Session or Post-Market Session, the price must be equal to or better than the highest Protected Bid or lowest Protected Offer, unless the order is marked ISO, or a Protected Bid is crossing a Protected Offer.
 - (C) Crossed Markets. Notwithstanding sub-paragraphs (A) and (B) above, in the event that a Protected Bid is crossing a Protected Offer, whether during or outside of the Regular Market Session, unless an order is marked ISO, the Exchange will enforce the Crossed Market Collar pursuant to LTSE Rule 11.190(f)(3) and the price sliding process pursuant to LTSE Rule 11.190(g)(3).
 - (3) Compliance with Limit Up-Limit Down. For any executions to occur during the Regular Market Session, such executions must comply with the Plan, as set forth

- in LTSE Rule 11.281 and the price sliding process pursuant to LTSE Rule 11.190(g)(5).
- (4) Execution against the LTSE Book. An incoming active order will first attempt to be matched for execution against orders in the LTSE Book, as described below.
 - (A) Buy Orders. An incoming order to buy will be automatically executed to the extent that it is priced at an amount that equals or exceeds the resting price of any order to sell in the Order Book and is executable, as defined above. Such order to buy shall be executed at the price(s) of the lowest priced order(s) to sell having priority in the Order Book.
 - (B) Sell Orders. An incoming order to sell will be automatically executed to the extent that it is priced at an amount that equals or is less than the resting price of any other order to buy in the Order Book and is executable, as defined above. Such order to sell shall be executed at the price(s) of the highest priced order(s) to buy having priority in the Order Book.
- (b) Reserved.
- (c) Reserved.
- (d) Self-Help. The Exchange shall take advantage of the self-help provisions of Regulation NMS. Pursuant to the self-help provisions, the System may execute a transaction that would constitute a trade-through of a Protected Quotation displayed on an away trading center if such away trading center is experiencing a failure, material delay, or malfunction of its systems or equipment. If an away trading center publishing a Protected Quotation repeatedly fails to respond within one second to orders sent by the System to access such away trading center's Protected Quotation, the System may disregard those Protected Quotations when displaying, canceling or executing orders on the Exchange. When invoking self-help, the Exchange will:
 - (1) Notify the non-responding away trading center immediately after (or at the same time as) electing self-help; and
 - (2) Assess whether the cause of the problem lies with the System and, if so, taking immediate steps to resolve the problem instead of invoking self-help.
- (e) Reserved.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-03 eff. October 18, 2019)

Rule 11.231. Regular Market Session Opening Process for Non-LTSE-Primary-Listed Securities

- (a) Pre-Market Order Queue. Orders for Non-LTSE-Primary-Listed Securities not eligible for trading prior to the commencement of the Regular Market Session that are received and queued during the Pre-Market Session as described in Rule 11.190(a) are queued in the time sequence of their receipt by the System, pursuant to Rule 11.220(a)(2).
- (b) Queued Order Modification. Orders in the Pre-Market Session order queue prior to the Regular Market Session may be modified consistent with Rule 11.190(d). Any modification to an order so queued may result in the time of receipt being updated to the time of receipt of the last modification consistent with the application of a new timestamp, pursuant to Rule 11.220(a)(2).
- (c) Queued Order Opening Process. At the commencement of the Regular Hours Trading, orders for Non-LTSE-Primary-Listed Securities in the Pre-Market Session order queue are processed as incoming orders, consistent with Rules 11.190 and 11.230 in their relative time priority, pursuant to Rule 11.220(a)(2).
- (d) All messages in Non-LTSE-Primary-Listed Securities relevant to the Order Book received after the commencement of the Regular Market Session will be processed after the completion of the Regular Market Session Opening Process.
- (e) If a security is subject to a halt, suspension, or pause in trading during the Pre-Market Session, the Exchange will not accept orders for that security for the Regular Market Session Opening Process or otherwise. If the halt, suspension, or pause remains in effect at the time of the Regular Market Session Opening Process, the Opening Process will not occur at the normally scheduled time. Once the security resumes trading, the Exchange will conduct the Regular Market Session Opening Process for any orders in the Pre-Market Session order queue, then accept and execute orders as usual in accordance with prevailing market session rules.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019; amended by SR-LTSE-2020-08 eff. March 27, 2020)

Rule 11.240. Trade Execution, Reporting, and Dissemination of Quotations

(a) Executions occurring as a result of orders matched against the LTSE Order Book shall be reported by the Exchange to an appropriate consolidated transaction reporting system to the extent required by the Act and the rules and regulations

- thereunder. The Exchange shall promptly notify Users of all executions of their orders as soon as such executions take place.
- (b) The Exchange shall identify all trades executed pursuant to an exception or exemption from Rule 611 of Regulation NMS in accordance with specifications approved by the operating committee of the relevant national market system plan for an NMS stock. If a trade is executed pursuant to both the ISO exception of Rule 611(b)(5) of Regulation NMS and the self-help exception of Rule 611(b)(1) of Regulation NMS, such trade shall be identified as executed pursuant to the ISO exception.
- (c) Display of Automated Quotations. The System will be operated as an "automated market center" within the meaning of Regulation NMS, and in furtherance thereof, will display "automated quotations" within the meaning of Regulation NMS at all times except in the event that a systems malfunction renders the System incapable of displaying automated quotations.
 - (1) Dissemination of Quotation Information. The aggregate of the best-ranked order(s), pursuant to LTSE Rule 11.220, to buy, and the best-ranked order(s) to sell in the Order Book, shall be collected and made available to quotation vendors for dissemination pursuant to the requirements of Rule 602 of Regulation NMS. The Exchange will maintain connectivity and access, pursuant to the Consolidated Tape Association ("CTA") Plan and Unlisted Trading Privileges ("UTP") Plan (collectively, "the SIPs") for dissemination of quotation information.
- (d) Dissemination of Last Sale Information. Executions occurring as a result of orders matched against the Order Book, pursuant to LTSE Rule 11.230, shall be collected and made available to last sale vendors for dissemination. The Exchange will maintain connectivity and access, pursuant to the SIPs for dissemination of last sale (i.e., execution) information.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019)

Rule 11.250. Clearance and Settlement; Anonymity

(a) Each User must either (1) be a member of a registered clearing agency that uses a continuous net settlement ("CNS") system, or (2) clear transactions executed on the Exchange through another User that is a member of such a registered clearing agency. The Exchange will maintain connectivity and access to the Universal Trade Capture ("UTC") of the National Securities Clearing Corporation ("NSCC"), a subsidiary of the Depository Trust & Clearing Corporation ("DTCC"), for transmission of executed transactions. If a User clears transactions through another User that is a member of a registered clearing agency (the "clearing member"), the clearing member

shall affirm to the Exchange in writing, through letter of authorization, letter of guarantee, or other agreement acceptable to the Exchange, its agreement to assume responsibility for clearing and settling any and all trades executed by the User designating it as its clearing firm. The rules of any such clearing agency shall govern with respect to the clearance and settlement of any transactions executed by the Member on the Exchange.

- (1) Solely at the discretion of the Exchange, a User may clear transactions executed on the Exchange through a non-Member that is a member of a foreign clearing agency with which a registered clearing agency has an agreement of mutual recognition, and is permitted to clear transactions of the Member in the registered clearing agency's CNS system.
- (b) Each transaction executed within the System is executed on a locked-in basis and shall be automatically processed for clearance and settlement.
- (c) The transaction reports produced by the System will indicate the details of transactions executed in the System but shall not reveal contra party identities. Except as set forth in paragraph (d) below, transactions executed in the System will also be cleared and settled anonymously.
- (d) Except as required by any registered clearing agency, the Exchange will reveal the identity of a User or User's clearing firm in the following circumstances:
 - (1) For regulatory purposes or to comply with an order of a court or arbitrator; or
 - (2) When a registered clearing agency ceases to be the User's clearing firm, and determines not to guarantee the settlement of the User's trades.

Rule 11.260. Limitation of Liability

- (a) NEITHER THE EXCHANGE, NOR ANY OF ITS AGENTS, EMPLOYEES,
 CONTRACTORS, OFFICERS, DIRECTORS, SHAREHOLDERS, COMMITTEE
 MEMBERS OR AFFILIATES ("EXCHANGE-RELATED PERSONS"), WILL BE LIABLE
 TO ANY USER, OR SUCCESSORS, REPRESENTATIVES, OR CUSTOMERS
 THEREOF, OR ANY PERSONS ASSOCIATED THEREWITH, FOR ANY LOSS,
 DAMAGES, CLAIMS, OR EXPENSES:
 - (1) GROWING OUT OF THE USE OR ENJOYMENT OF ANY FACILITY OF THE EXCHANGE, INCLUDING, WITHOUT LIMITATION, THE SYSTEM; OR
 - (2) ARISING FROM OR OCCASIONED BY ANY INACCURACY, ERROR OR DELAY IN, OR OMISSION OF OR FROM THE COLLECTION, CALCULATION, COMPILATION, MAINTENANCE, REPORTING, OR DISSEMINATION OF ANY INFORMATION DERIVED FROM THE SYSTEM OR ANY OTHER FACILITY OF

THE EXCHANGE, RESULTING EITHER FROM ANY ACT OR OMISSION BY THE EXCHANGE OR ANY EXCHANGE-RELATED PERSON, OR FROM ANY ACT, CONDITION, OR CAUSE BEYOND THE REASONABLE CONTROL OF THE EXCHANGE OR ANY EXCHANGE-RELATED PERSON, INCLUDING, BUT NOT LIMITED TO, FLOOD, EXTRAORDINARY WEATHER CONDITIONS, EARTHQUAKE OR OTHER ACTS OF GOD, FIRE, WAR, TERRORISM, INSURRECTION, RIOT, LABOR DISPUTE, ACCIDENT, ACTION OF GOVERNMENT, COMMUNICATIONS OR POWER FAILURE, OR EQUIPMENT OR SOFTWARE MALFUNCTION.

- (b) EACH MEMBER EXPRESSLY AGREES, IN CONSIDERATION OF THE ISSUANCE OF ITS MEMBERSHIP IN THE EXCHANGE, TO RELEASE AND DISCHARGE THE EXCHANGE AND ALL EXCHANGE-RELATED PERSONS OF AND FROM ALL CLAIMS AND DAMAGES ARISING FROM THEIR ACCEPTANCE AND USE OF THE FACILITIES OF THE EXCHANGE (INCLUDING, WITHOUT LIMITATION, THE SYSTEM).
- (c) NEITHER THE EXCHANGE NOR ANY EXCHANGE-RELATED PERSON MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS TO USERS AS TO RESULTS THAT ANY PERSON OR PARTY MAY OBTAIN FROM THE SYSTEM FOR TRADING OR FOR ANY OTHER PURPOSE, AND ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, TITLE, AND NON-INFRINGEMENT WITH RESPECT TO THE SYSTEM ARE HEREBY DISCLAIMED.
- (d) NOTWITHSTANDING PARAGRAPH (a) ABOVE, AND SUBJECT TO THE EXPRESS LIMITS SET FORTH BELOW, THE EXCHANGE MAY COMPENSATE USERS FOR LOSSES DIRECTLY RESULTING FROM THE SYSTEMS' ACTUAL FAILURE TO CORRECTLY PROCESS AN ORDER, MESSAGE, OR OTHER DATA, PROVIDED THE EXCHANGE HAS ACKNOWLEDGED RECEIPT OF THE ORDER, MESSAGE OR DATA.
 - (1) AS TO ANY ONE OR MORE CLAIMS MADE BY A SINGLE USER UNDER THIS LTSE RULE 11.260 ON A SINGLE TRADING DAY, THE EXCHANGE SHALL NOT BE LIABLE IN EXCESS OF THE LARGER OF \$100,000, OR THE AMOUNT OF ANY RECOVERY OBTAINED BY THE EXCHANGE UNDER ANY APPLICABLE INSURANCE MAINTAINED BY THE EXCHANGE.
 - (2) AS TO THE AGGREGATE OF ALL CLAIMS MADE BY ALL USERS UNDER THIS LTSE RULE ON A SINGLE TRADING DAY, THE EXCHANGE SHALL NOT BE LIABLE IN EXCESS OF THE LARGER OF \$250,000 OR THE AMOUNT OF ANY RECOVERY OBTAINED BY THE EXCHANGE UNDER ANY APPLICABLE INSURANCE MAINTAINED BY THE EXCHANGE.

- (3) AS TO THE AGGREGATE OF ALL CLAIMS MADE BY ALL USERS UNDER THIS LTSE RULE 11.260 DURING A SINGLE CALENDAR MONTH, THE EXCHANGE SHALL NOT BE LIABLE IN EXCESS OF THE LARGER OF \$500,000, OR THE AMOUNT OF ANY RECOVERY OBTAINED BY THE EXCHANGE UNDER ANY APPLICABLE INSURANCE MAINTAINED BY THE EXCHANGE.
- (e) IN THE EVENT THAT ALL OF THE CLAIMS MADE UNDER THIS LTSE RULE 11.260 CANNOT BE FULLY SATISFIED BECAUSE IN THE AGGREGATE THEY EXCEED THE APPLICABLE MAXIMUM LIMITATIONS PROVIDED IN THIS LTSE RULE 11.260, THEN THE MAXIMUM PERMITTED AMOUNT WILL BE PROPORTIONALLY ALLOCATED AMONG ALL SUCH CLAIMS ARISING ON A SINGLE TRADING DAY OR DURING A SINGLE CALENDAR MONTH, AS APPLICABLE, BASED ON THE PROPORTION THAT EACH SUCH CLAIM BEARS TO THE SUM OF ALL SUCH CLAIMS.
- (f) ALL CLAIMS FOR COMPENSATION PURSUANT TO THIS LTSE RULE 11.260 SHALL BE IN WRITING AND MUST BE SUBMITTED NO LATER THAN 4:00 P.M. EASTERN TIME ON THE SECOND BUSINESS DAY FOLLOWING THE DAY ON WHICH THE USE OF THE EXCHANGE GAVE RISE TO SUCH CLAIMS, OR NO LATER THAN 1:00 P.M. EASTERN TIME IN THE EVENT OF AN EARLY MARKET CLOSE ON THE SECOND BUSINESS DAY FOLLOWING THE DAY ON WHICH THE USE OF THE EXCHANGE GAVE RISE TO SUCH CLAIMS.
- (g) ONCE IN RECEIPT OF A CLAIM, THE EXCHANGE WILL VERIFY THAT: (i) A VALID ORDER WAS ACCEPTED INTO THE EXCHANGE'S SYSTEMS; AND (II) AN EXCHANGE SYSTEM FAILURE OR A NEGLIGENT ACT OR OMISSION OF AN EXCHANGE EMPLOYEE OCCURRED DURING THE EXECUTION OR HANDLING OF THAT ORDER.

Rule 11.270. Clearly Erroneous Executions

- (a) Definition. For the purposes of this LTSE Rule 11.270, the terms of a transaction executed on the Exchange are "clearly erroneous" when there is an obvious error in any term, such as price, number of shares or other unit of trading, or identification of the security. A transaction made in clearly erroneous error and cancelled by both parties or determined by the Exchange to be clearly erroneous will be removed from the Consolidated Tape.
- (b) Request and Timing of Review. A Member that receives an execution on an order that was submitted erroneously to the Exchange for its own or customer account may request that the Exchange review the transaction under this LTSE Rule 11.270. An Officer of the Exchange or such other employee designee of the Exchange ("Official")

shall review the transaction under dispute and determine whether it is clearly erroneous, with a view toward maintaining a fair and orderly market and the protection of investors and the public interest. Such request for review shall be made in writing via e-mail or other electronic means specified from time to time by the Exchange in a circular distributed to Users.

- (1) Requests for Review. Requests for review must be received by the Exchange within thirty (30) minutes of execution time and shall include information concerning the time of the transaction(s), security symbol(s), number of shares, price(s), side (bought or sold), and factual basis for believing that the trade is clearly erroneous. Upon receipt of a timely filed request that satisfies the numerical guidelines set forth in paragraph (c) of this LTSE Rule 11.270, the counterparty to the trade, if any, shall be notified by the Exchange as soon as practicable, but generally within thirty (30) minutes. An Official may request additional supporting written information to aid in the resolution of the matter. If requested, each party to the transaction shall provide any supporting written information as may be reasonably requested by the Official to aid resolution of the matter within thirty (30) minutes of the Official's request. Either party to the disputed trade may request the supporting written information provided by the other party on the matter.
- (2) Reserved.
- (c) Thresholds. Determinations of whether an execution is clearly erroneous will be made as follows:
 - (1) Numerical Guidelines. Subject to the provisions of paragraph (c)(3) below, a transaction executed during the Regular Market Session or during the Pre-Market or Post-Market Session shall be found to be clearly erroneous if the price of the transaction to buy (sell) that is the subject of the complaint is greater than (less than) the reference price by an amount that equals or exceeds the numerical guidelines set forth below. The execution time of the transaction under review determines whether the threshold is the Regular Market Session or during the Pre-Market or Post-Market Sessions (which occur before and after the Regular Market Session). The Reference Price will be equal to the consolidated last sale immediately prior to the execution(s) under review except for: (A) multi-stock events involving twenty or more securities, as described in paragraph (c)(2) below; and (B) in other circumstances, such as, for example, relevant news impacting a security or securities, periods of extreme market volatility, sustained illiquidity, or widespread system issues, where use of a different Reference Price is necessary for the maintenance of a fair and orderly market and the protection of investors and the public interest.

Reference Price, Circumstance or Product	Regular Market Hours Numerical Guidelines (Subject transaction % difference from the Reference Price)	Pre-Market and Post-Market Session Numerical Guidelines (Subject transaction % difference from the Reference Price)
Greater than \$0.00 up to and including \$25.00	10%	20%
Greater than \$25.00 up to and including \$50.00	5%	10%
Greater than \$50.00	3%	6%
Multi-Stock Event Filings involving five or more, but less than twenty, securities whose executions occurred within a period of five minutes or less	10%	10%
Multi-Stock Event Filings involving twenty or more securities whose executions occurred within a period of five minutes or less	30%, subject to the terms of paragraph (c)(2) below	30%, subject to the terms of paragraph (c)(2) below

- Multi-Stock Events Involving Twenty or More Securities. During Multi-Stock (2) Events involving twenty or more securities, the number of affected transactions may be such that immediate finality is necessary to maintain a fair and orderly market and to protect investors and the public interest. In such circumstances, the Exchange may use a Reference Price other than consolidated last sale. To ensure consistent application across trading centers when this paragraph is invoked, the Exchange will promptly coordinate with the away trading centers to determine the appropriate review period, which may be greater than the period of five minutes or less that triggered application of this paragraph, as well as select one or more specific points in time prior to the transactions in question and use transaction prices at or immediately prior to the one or more specific points in time selected as the Reference Price. The Exchange will nullify as clearly erroneous all transactions that are at prices equal to or greater than 30% away from the Reference Price in each affected security during the review period selected by the Exchange and other markets consistent with this paragraph.
- (3) Additional Factors. Except in the context of a Multi-Stock Event involving five (5) or more securities, an Official may also consider additional factors to determine whether an execution is clearly erroneous, including but not limited to, system malfunctions or disruptions, volume and volatility for the security, derivative securities products that correspond to greater than 100% in the direction of a

tracking index, news released for the security, whether trading in the security was recently halted/resumed, whether the security is an initial public offering, whether the security was subject to a stock-split, reorganization, or other corporate action, overall market conditions, Pre-Market Session or Post-Market Session executions, validity of the consolidated tapes trades and quotes, consideration of primary market indications, and executions inconsistent with the trading pattern in the stock. Each additional factor shall be considered with a view toward maintaining a fair and orderly market and the protection of investors and the public interest.

- (d) Outlier Transactions. In the case of an Outlier Transaction, an Official may, in his or her sole discretion, and on a case-by-case basis, consider requests received pursuant to paragraph (b) of this LTSE Rule 11.270 after thirty (30) minutes, but not longer than sixty (60) minutes after the transaction in question, depending on the facts and circumstances surrounding such request.
 - (1) An "Outlier Transaction" means a transaction where the execution price of the security is greater than three times the current numerical guidelines set forth in paragraph (c)(1) of this LTSE Rule 11.270.
 - (2) If the execution price of the security in question is not within the Outlier Transaction parameters set forth in paragraph (d)(1) of this LTSE Rule 11.270 but breaches the 52-week high or 52-week low, the Exchange may consider Additional Factors as outlined in paragraph (c)(3), in determining if the transaction qualifies for further review or if the Exchange shall decline to act.

(e) Review Procedures

- (1) Determination by Official. Unless both parties to the disputed transaction agree to withdraw the initial request for review, the transaction under dispute shall be reviewed, and a determination shall be rendered by the Official. If the Official determines that the transaction is not clearly erroneous, the Official shall decline to take any action in connection with the completed trade. In the event that the Official determines that the transaction in dispute is clearly erroneous, the Official shall declare the transaction null and void. A determination shall be made generally within thirty (30) minutes of receipt of the complaint, but in no case later than the start of the Regular Market Session on the following day. The parties shall be promptly notified of the determination.
- (2) Appeals. If a Member affected by a determination made under this LTSE Rule 11.270 so requests within the time permitted below, the Clearly Erroneous Execution Panel ("CEE Panel") will review decisions made by the Official under this LTSE Rule, including whether a clearly erroneous execution occurred and

whether the correct determination was made; provided, however, that the CEE Panel will not review decisions made by an Officer under paragraph (f) of this LTSE Rule 11.270 if such Officer also determines under paragraph (d) of this LTSE Rule that the number of the affected transactions is such that immediate finality is necessary to maintain a fair and orderly market and to protect investors and the public interest, and further provided that with respect to rulings made by the Exchange in conjunction with one or more away trading centers, the number of affected transactions is similarly such that immediate finality is necessary to maintain a fair and orderly market and to protect investors and the public interest and, hence, are also non-appealable.

- (A) The CEE Panel will be comprised of the CRO, or a designee of the CRO, and representatives from two (2) Members.
- (B) The Exchange shall designate at least ten (10) representatives of Members to be called upon to serve on the CEE Panel as needed. In no case shall a CEE Panel include a person affiliated with a party to the trade in question. To the extent reasonably possible, the Exchange shall call upon the designated representatives to participate on a CEE Panel on an equally frequent basis.
- (C) A request for review on appeal must be made in writing via e-mail or other electronic means specified from time to time by the Exchange in a circular distributed to Members within thirty (30) minutes after the party making the appeal is given notification of the initial determination being appealed. The CEE Panel shall review the facts and render a decision as soon as practicable, but generally on the same trading day as the execution(s) under review. On requests for appeal received between 3:00 p.m. Eastern Time and the close of trading in the Post-Market Session, a decision will be rendered as soon as practicable, but in no case later than the trading day following the date of the execution under review.
- (D) The CEE Panel may overturn or modify an action taken by the Official under this LTSE Rule 11.270. All determinations by the CEE Panel shall constitute final action by the Exchange on the matter at issue.
- (E) If the CEE Panel votes to uphold the decision made pursuant to paragraph (e)(1) above, the Exchange will assess a \$500.00 fee against the Member(s) who initiated the request for appeal. In addition, in instances where the Exchange, on behalf of a Member, requests a determination by an away trading center that a transaction is clearly erroneous, the Exchange will pass any resulting charges through to the relevant Member.

- (F) Any determination by an Officer or by the CEE Panel shall be rendered without prejudice as to the rights of the parties to the transaction to submit their dispute to arbitration
- (f) System Disruption or Malfunctions. In the event of any disruption or a malfunction in the operation of any electronic communications and trading facilities of the Exchange in which the nullification of transactions may be necessary for the maintenance of a fair and orderly market or the protection of investors and the public interest exist, an Officer of the Exchange or other senior level employee designee, on his or her own motion, may review such transactions and declare such transactions arising out of the operation of such facilities during such period null and void. In such events, the Officer of the Exchange or such other senior level employee designee will rely on the provisions of paragraphs (c)(1)-(3) of this LTSE Rule 11.270, but in extraordinary circumstances may also use a lower numerical guideline if necessary to maintain a fair and orderly market, protect investors and the public interest. Absent extraordinary circumstances, any such action of the Officer of the Exchange or other senior level employee designee pursuant to this paragraph (f) shall be taken within thirty (30) minutes of detection of the erroneous transaction. When extraordinary circumstances exist, any such action of the Officer of the Exchange or senior level employee designee must be taken by no later than the start of Regular Market Hours on the trading day following the date of execution(s) under review. Each Member involved in the transaction shall be notified as soon as practicable by the Exchange, and the party aggrieved by the action may appeal such action in accordance with the provisions of paragraph (e)(2) above.
- Officer Acting on Own Motion. An Officer of the Exchange or senior level employee (g) designee, acting on his or her own motion, may review potentially erroneous executions and declare trades null and void or shall decline to take any action in connection with the completed trade(s). In such events, the Officer of the Exchange or such other senior level employee designee will rely on the provisions of paragraphs (c)(1)-(3) of this LTSE Rule 11.270. Absent extraordinary circumstances, any such action of the Officer of the Exchange or other senior level employee designee shall be taken in a timely fashion, generally within thirty (30) minutes of the detection of the erroneous transaction. When extraordinary circumstances exist, any such action of the Officer of the Exchange or other senior level employee designee must be taken by no later than the start of Regular Market Hours on the trading day following the date of execution(s) under review. When such action is taken independently, each party involved in the transaction shall be notified as soon as practicable by the Exchange, and the party aggrieved by the action may appeal such action in accordance with the provisions of paragraph (e)(2) above.

- (h) Securities Subject to Limit Up-Limit Down Plan. For purposes of this paragraph the phrase "Limit-up-Limit Down Plan" or "Plan" shall mean the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS under the Act. The provisions of paragraphs (a) through (g) above and (h) through (j) below shall govern all Exchange transactions, including transactions in securities subject to the Plan, other than as set forth in this paragraph (h). If, as a result of an Exchange technology or systems issue, any transaction occurs outside of the applicable price bands disseminated pursuant to the Plan, an Officer of the Exchange or senior level employee designee, acting on his or her own motion or at the request of a third party, shall review and declare any such trades null and void. Absent extraordinary circumstances, any such action of the Officer of the Exchange or other senior level employee designee shall be taken in a timely fashion, generally within thirty (30) minutes of the detection of the erroneous transaction. When extraordinary circumstances exist, any such action of the Officer of the Exchange or other senior level employee designee must be taken by no later than the start of Regular Market Hours on the trading day following the date on which the execution(s) under review occurred. Each Member involved in the transaction shall be notified as soon as practicable by the Exchange, and the party aggrieved by the action may appeal such action in accordance with the provisions of paragraph (e)(b) above. In the event that a single plan processor experiences a technology or systems issue that prevents the dissemination of price bands, the Exchange will make the determination of whether to nullify transactions based on paragraphs (a) through (g) above and (h) through (j) below.
- Multi-Day Event. A series of transactions in a particular security on one or more (i) trading days may be viewed as one event if all such transactions were effected based on the same fundamentally incorrect or grossly misinterpreted issuance information resulting in a severe valuation error for all such transactions (the "Event"). An Officer of the Exchange or senior level employee designee, acting on his or her own motion, shall take action to declare all transactions that occurred during the Event null and void not later than the start of trading on the day following the last transaction in the Event. If trading in the security is halted before the valuation error is corrected, an Officer of the Exchange or senior level employee designee shall take action to declare all transactions that occurred during the Event null and void prior to the resumption of trading. Notwithstanding the foregoing, no action can be taken pursuant to this paragraph with respect to any transactions that have reached settlement date or that result from an initial public offering of a security. To the extent transactions related to an Event occur on one or more away trading centers, the Exchange will promptly coordinate with such away trading center(s) to ensure consistent treatment of the transactions related to the Event, if practicable. Any action taken in connection

- with this paragraph will be taken without regard to the numerical guidelines set forth in this LTSE Rule 11.270. Each Member involved in a transaction subject to this paragraph shall be notified as soon as practicable by the Exchange, and the party aggrieved by the action may appeal such action in accordance with the provisions of paragraph (e)(2) above
- (j) Trading Halts. In the event of any disruption or malfunction in the operation of the electronic communications and trading facilities of the Exchange, an away trading center or responsible single plan processor in connection with the transmittal or receipt of a regulatory trading halt, suspension or pause, an Officer of the Exchange or senior level employee designee, acting on his or her own motion, shall nullify any transaction in a security that occurs after the primary listing market for such security declares a regulatory trading halt, suspension or pause with respect to such security and before such regulatory trading halt, suspension, or pause with respect to such security has officially ended according to the primary listing market. In addition, in the event a regulatory trading halt, suspension, or pause is declared, then prematurely lifted in error and is then re-instituted, an Officer of the Exchange or senior level employee designee shall nullify transactions that occur before the official, final end of the halt, suspension or pause according to the primary listing market. Any action taken in connection with this paragraph shall be taken in a timely fashion, generally within thirty (30) minutes of the detection of the erroneous transaction and in no circumstances later than the start of Regular Market Hours on the trading day following the date of execution(s) under review. Any action taken in connection with this paragraph will be taken without regard to the numerical guidelines set forth in this LTSE Rule 11.270. Each Member involved in a transaction subject to this paragraph shall be notified as soon as practicable by the Exchange, and the party aggrieved by the action may appeal such action in accordance with the provisions of paragraph (e)(2) above.

Rule 11.271. Trading Halts

- (a) The Exchange does not accept any orders in a security subject to a trading halt at the time of a trading halt. Any order submitted during a halt will be rejected by the System, except as set forth in LTSE Rule 11.350(e).
- (b) Any orders resting on the Order Book at the time of a trading halt will not be canceled by the System, except as set forth in LTSE Rule 11.350(e). All orders resting on the Order Book in a security subject to a trading halt at the time of a trading halt will be unavailable for trading during the trading halt, but will be available for cancellation by the submitting User.

(c) During a trading halt, all quotes disseminated by the Exchange for such security will be set to zero.

Rule 11.280. Market-Wide Circuit Breakers

- (a) This LTSE Rule 11.280 shall be in effect during a pilot period that expires at the close of business on October 18, 2021. If the pilot is not either extended or approved permanently at the end of the pilot period, the Exchange will amend this LTSE Rule. The Exchange shall halt trading in all stocks and shall not reopen for the time periods specified in this LTSE Rule 11.280 if there is a Level 1, 2, or 3 Market Decline, as outlined below.
 - (1) For purposes of this LTSE Rule 11.280, a Market Decline means a decline in price of the S&P 500® Index between 9:30 a.m. and 4:00 p.m. Eastern Time on a trading day as compared to the closing price of the S&P 500® Index for the immediately preceding trading day. The Level 1, Level 2, and Level 3 Market Declines that will be applicable for the trading day will be publicly disseminated before 9:30 a.m Eastern Time.
 - (2) A "Level 1 Market Decline" means a Market Decline of 7%.
 - (3) A "Level 2 Market Decline" means a Market Decline of 13%
 - (4) A "Level 3 Market Decline" means a Market Decline of 20%
- (b) Halts in Trading.
 - (1) If a Level 1 Market Decline or a Level 2 Market Decline occurs after 9:30 a.m. Eastern Time and up to and including 3:25 p.m. Eastern Time, or in the case of an early scheduled close, 12:25 p.m. Eastern Time, the Exchange shall halt trading in all stocks for 15 minutes after a Level 1 or Level 2 Market Decline. The Exchange shall halt trading based on a Level 1 or Level 2 Market Decline only once per trading day. The Exchange will not halt trading if a Level 1 Market Decline or a Level 2 Market Decline occurs after 3:25 p.m. Eastern Time, or in the case of an early scheduled close, 12:25 p.m. Eastern Time.
 - (2) If a Level 3 Market Decline occurs at any time during the trading day, the Exchange shall halt trading in all stocks for the remainder of the trading day.
- (c) If a primary listing market halts trading in all stocks, the Exchange will halt trading in all stocks until trading has resumed on the primary listing market or notice has been received from the primary listing market that trading may resume. If the primary listing

- market does not reopen a security within 15 minutes following the end of the 15-minute halt period, the Exchange may resume trading in that security.
- (d) Nothing in this LTSE Rule 11.280 should be construed to limit the ability of the Exchange to otherwise halt, suspend, or pause the trading in any stock or stocks traded on the Exchange pursuant to any other LTSE Rule or policy.
- (e) All times referenced in this LTSE Rule 11.280 are Eastern Time.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-03 eff. October 18, 2019; amended by SR-LTSE-2020-07 eff. March 18, 2020; amended by SR-LTSE-2020-18 eff. October 5, 2020)

Rule 11.281. Limit Up-Limit Down Mechanism

- (a) Limit Up-Limit Down Mechanism.
 - (1) Definitions.
 - (A) The term "Plan" or "Limit Up-Limit Down Plan" means the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS under the Act, as amended from time to time.
 - (B) All capitalized terms not otherwise defined in this paragraph (a) shall have the meanings set forth in the Plan or LTSE Rules, as applicable
 - (2) Exchange Participation in the Plan. The Exchange is a participant in, and subject to the applicable requirements of, the Plan, which establishes procedures to address extraordinary volatility in NMS Stocks
 - (3) Member Compliance. Members shall comply with the applicable provisions of the Plan.
 - (4) Exchange Compliance with the Plan. The System shall not rank, display or execute buy (sell) interest above (below) the Upper (Lower) Price Bands, unless such interest is specifically exempted under the Plan.
 - (5) Re-pricing and Cancellation of Interest. The System shall re-price and/or cancel buy (sell) interest that is priced or could be executed above (below) the Upper (Lower) Price Band. When re-pricing resting orders because such orders are above (below) the Upper (Lower) Price Band, the Exchange will provide new timestamps to such orders

- (A) Market Orders and IOC Orders. The System will only execute market orders or IOC orders at or within the Price Bands. If a market order or IOC order cannot be fully executed at or within the Price Bands, the System shall cancel any unexecuted portion of the order without posting such order to the Exchange's Order Book.
- (B) Limit-priced Interest. Incoming limit-priced interest to buy (sell) that is priced above (below) the Upper (Lower) Price Band shall be re-priced to the Upper (Lower) Price Band. The System shall re-price resting limit-priced interest to buy (sell) to the Upper (Lower) Price Band if Price Bands move such that the price of resting limit-priced interest to buy (sell) would be above (below) the Upper (Lower) Price Band. If the Price Bands move again and the original limit price of re-priced interest is at or within the Price Band, the System shall re-price such limit interest to the most aggressive permissible price up to the order's limit price. All other limit interest re-priced pursuant to this paragraph (a) will remain at its new price unless the Price Bands move such that the price of resting limit-priced interest to buy (sell) would again be above (below) the Upper (Lower) Price Band.
- (C) Reserved.
- (D) Reserved.
- (E) Sell Short Orders. During a Short Sale Price Test, as defined in LTSE Rule 11.290(b), Short Sale Orders priced below the Lower Price Band shall be repriced to the higher of the Lower Price Band or the Permitted Display Price.
- (F) Auction Orders. Auction Eligible Orders on the Auction Book are not price slid or canceled due to LULD price bands.
- (6) Reserved
- (7) Trading Pause during a Straddle State. The Exchange may declare a Trading Pause for a NMS Stock listed on the Exchange when (i) the National Best Bid (Offer) is below (above) the Lower (Upper) Price Band and the NMS Stock is not in a Limit State; and (ii) trading in that NMS Stock deviates from normal trading characteristics.
- (8) Re-opening of Trading following a Trading Pause. At the end of the Trading Pause, the Exchange shall re-open trading in LTSE-Primary-Listed Securities pursuant to the procedures set forth in LTSE Rule 11.350(f). Trading in Non-LTSE-Primary-Listed Securities shall re-open upon receipt of the Price Bands

from the single plan processor responsible for consolidation of information for the security.

(Amended by SR-LTSE-2019-03 eff. October 18, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.282. Regulatory Trading Halts

- (a) Authority to Initiate Trading Halts. In circumstances in which LTSE deems it necessary to protect investors and the public interest, LTSE, pursuant to the procedures set forth in paragraph (b).
 - (1) May halt trading on LTSE of an LTSE-Primary-Listed Security to permit the dissemination of material news, provided, however, that in the Pre-Market Session LTSE will halt trading for dissemination of news only at the request of an issuer or pursuant to (a)(2) below;
 - (2) May halt trading on LTSE of a security listed on another national securities exchange during a trading halt imposed by such exchange to permit the dissemination of material news;
 - (3) May halt trading on LTSE: (A) in a security listed on another national securities exchange when such exchange imposes a trading halt in that security because of an order imbalance or influx ("operational trading halt"); or (B) in a security listed on LTSE, when the security is a derivative or component of a security listed on another national securities exchange and such exchange imposes an operational trading halt in that security. In the event that LTSE halts trading, LTSE members may commence quotations and trading otherwise than on LTSE at any time following initiation of operational trading halts, without regard to whether LTSE has terminated the trading halt on LTSE;
 - (4) May halt trading in an LTSE-Primary-Listed Security or American Depository Receipt ("ADR") that is an LTSE-Primary-Listed Security, when the LTSE-Primary-Listed Security or underlying security of the ADR is listed on or registered with another national or foreign securities exchange or market, and the national or foreign securities exchange or market, or regulatory authority overseeing such exchange or market, halts trading in such security for regulatory reasons;
 - (5) May halt trading in a security listed on LTSE when LTSE requests from the issuer information relating to:
 - (A) material news;

- (B) the issuer's ability to meet LTSE listing qualification requirements, as set forth in Chapters 14 and 16; or
- (C) any other information which is necessary to protect investors and the public interest:
- (6) May halt trading in a security listed on LTSE when
 - (A) extraordinary market activity in the security is occurring, such as the execution of a series of transactions for a significant dollar value at prices substantially unrelated to the current market for the security, as measured by the national best bid and offer, and
 - (B) LTSE determines that such extraordinary market activity is likely to have a material effect on the market for the security; and
 - LTSE believes that such extraordinary market activity is caused by the misuse or malfunction of an electronic quotation, communication, reporting, or execution system operated by, or linked to, LTSE; or
 - (ii) After consultation with another national securities exchange trading the security on an unlisted trading privileges basis, LTSE believes that such extraordinary market activity is caused by the misuse or malfunction of an electronic quotation, communication, reporting, or execution system operated by, or linked to, such other national securities exchange; or
 - (iii) After consultation with FINRA regarding a FINRA facility trading the security, LTSE believes that such extraordinary market activity is caused by the misuse or malfunction of such FINRA facility or an electronic quotation, communication, reporting, or execution systems linked to such FINRA facility.
- (7) May halt trading in a security that is the subject of an IPO on LTSE.
- (8) Reserved.
- (9) Reserved.
- (10) Reserved.
- (11) Reserved.
- (b) Procedure for Initiating and Terminating a Trading Halt.

- (1) LTSE issuers are required to notify LTSE of the release of certain material news prior to the release of such information to the public as required by LTSE Rule 14.207(b)(1).
- (2) Notification shall be provided directly to LTSE's Regulation Department in the manner specified by LTSE.
- (3) Upon receipt of information, from the issuer or other source, LTSE will promptly evaluate the information, estimate its potential impact on the market and determine whether a trading halt in the security is appropriate.
- (4) Should LTSE determine that a basis exists under LTSE Rule 11.281 or LTSE Rule 11.282(a) for initiating an LULD trading pause or trading halt, the commencement of the trading pause or halt will be effective at the time specified by LTSE in a notice posted on a publicly available LTSE website.
- (5) Trading in a halted security shall resume at or after the time specified by LTSE in a notice posted on a publicly available website.
- (6) In the case of a trading halt under LTSE Rule 11.282(a)(6) based on the misuse or malfunction of an electronic order entry, communication, reporting, or execution system that is not operated by LTSE, LTSE will promptly contact the operator of the system in question (as well as any national securities exchange or FINRA facility to which such system is linked) to ascertain information that will assist LTSE in determining whether a misuse or malfunction has occurred, what effect the misuse or malfunction is having on trading in a security, and what steps are being taken to address the misuse or malfunction. If the operator of the system is unavailable when contacted by LTSE, LTSE will continue efforts to contact the operator of the system to ascertain information that will assist LTSE in determining whether the trading halt should be terminated.
 - (A) A trading halt initiated under LTSE Rule 11.282(a)(6) shall be terminated as soon as LTSE determines either that the system misuse or malfunction that caused the extraordinary market activity will no longer have a material effect on the market for the security or that system misuse or malfunction is not the cause of the extraordinary market activity.
- (7) A trading halt or pause initiated under LTSE Rule 11.281(a)(2) or (7) or LTSE Rule 11.282(a)(1), (4), or (5) shall be terminated when LTSE releases the security for trading at the conclusion of the Halt or Volatility Auction pursuant to LTSE Rule 11.350(e) or (f), as applicable.

- (8) A trading halt initiated for a security that is the subject of an IPO on LTSE pursuant to LTSE Rule 11.282(a)(7) shall be terminated when LTSE releases the security for trading and the conditions described in this rule are satisfied.
 - (A) Beginning at the start of the Order Acceptance Period (generally, 8:00 a.m.) Users may enter orders in a security that is the subject of an IPO on LTSE. Prior to terminating the halt, there will be a Display Only Period during which LTSE will disseminate LTSE Auction Information via electronic means, and Users may continue to enter Auction Eligible Orders for that security in the System. Thirty (30) minutes after the start of the Display Only Period, unless extended by the underwriter, the security will enter a "Pre-Launch Period" of indeterminate duration. The Pre-Launch Period and the Display Only Period shall end, and the security shall be released for trading by LTSE when the conditions described in paragraphs (b)(8)(A), (B), and (C) are all met, and the requirements of LTSE Rule 11.350(e)(2) are satisfied.
 - (B) LTSE receives notice from the underwriter of the IPO that the security is ready to trade. The System will calculate the Indicative Clearing Price at that time and display it to the underwriter. If the underwriter then approves proceeding, the System will conduct the following validation checks:
 - (i) the System must determine that all market orders will be executed in the IPO Auction; and
 - (ii) the security must pass the price validation test described below:
 - (iii) Prior to the conclusion of the Pre-Launch Period, the underwriter shall select price bands for purposes of applying the price validation test. Under the price validation test, the System compares the Indicative Clearing Price with the clearing price calculated by the IPO Auction. If the clearing price calculated by the IPO Auction differs from the Indicative Clearing Price approved by the underwriter under section (A) above by an amount in excess of the price band selected by the underwriter, the security will not be released for trading and the Pre-Launch Period will continue. The underwriter shall select an upper price band (i.e., an amount by which the clearing price may not be higher than the Indicative Clearing Price approved by the underwriter under section (A) above) and a lower price band (i.e., an amount by which the clearing price may not be lower than the Indicative Clearing Price approved by the underwriter under section (A) above). If a security does not pass the price validation test, the underwriter may, but is not required to, select different price bands before recommencing the process to release the

security for trading. The price bands available for selection shall include \$0 but shall not be in excess of \$0.50. LTSE will notify Members and the public of changes in available price band or increments through a notice that is widely disseminated at least one week in advance of the change. In selecting available price bands and increments, LTSE will consider input from underwriters and other Users and the results of past usage of price bands to adopt price bands and increments that promote efficiency in the initiation of trading and protect investors and the public interest.

- (C) The failure to satisfy these conditions during the process to release the security for trading will result in a delay of the release for trading of the IPO, and a continuation of the Pre-Launch Period, until all conditions have been satisfied. The underwriter, with concurrence of LTSE, may determine at any point during the IPO Auction process up through the conclusion of the Pre-Launch Period to postpone and reschedule the IPO. Market participants may continue to enter orders and order cancellations for participation in the IPO Auction during the Pre-Launch Period until the auction match.
- (9) For purposes of this LTSE Rule and LTSE Rule 11.350(e), the process for halting and initial pricing of a security that is the subject of an IPO shall also be available for the initial pricing of any other security that has not been listed on a national securities exchange or traded in the over-the-counter market pursuant to FINRA Form 211 immediately prior to the initial pricing, provided that a broker-dealer serving in the role of financial advisor to the issuer of the securities being listed is willing to perform the functions under LTSE Rule 11.282(b)(8) that are performed by an underwriter with respect to an initial public offering.

(Amended by SR-LTSE-2019-03 eff. October 18, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.290. Short Sales

Marking. All sell orders entered into the Exchange must be marked long, short, or short exempt.

- (a) Definitions. For purposes of this LTSE Rule, the terms "covered security," "listing market," and "national best bid" shall have the same meaning as in Rule 201 of Regulation SHO.
- (b) Short Sale Price Test. The System shall not execute or display a short sale order not marked short exempt with respect to a covered security at a price that is less than or equal to the current national best bid if the price of that security decreases by 10% or

- more, as determined by the listing market for the covered security, from the covered security's closing price on the listing market as of the end of the Regular Market Session on the prior day (the "Trigger Price").
- (c) Determination of Trigger Price. For covered securities for which the Exchange is the listing market, the System shall determine whether a transaction in a covered security has occurred at a Trigger Price and shall immediately notify the responsible single plan processor.
 - (1) The System will not calculate the Trigger Price of a covered security outside of the Regular Market Session.
 - (2) If a covered security did not trade on the Exchange on the prior trading day (due to a trading halt, trading suspension, or otherwise), the Exchange's determination of the Trigger Price shall be based on the last sale price on the Exchange for that security on the most recent day on which the security traded.
- (d) Duration of Short Sale Price Test. If the Short Sale Price Test is triggered by the listing market with respect to a covered security, the Short Sale Price Test shall remain in effect on the Exchange until the close of the Post-Market Session on the next trading day, as provided for in Regulation SHO Rule 201(b)(1)(ii) (the "Short Sale Period").
 - (1) If the Exchange determines pursuant to LTSE Rule 11.270 that the Short Sale Price Test for a covered security was triggered because of a clearly erroneous execution, the Exchange may lift the Short Sale Price Test before the Short Sale Period ends for securities for which the Exchange is the listing market or, for securities listed on another market notify the other market of the Exchange's determination that the triggering transaction was a clearly erroneous execution as soon as practicable following such determination. The Exchange may also lift the Short Sale Price Test before the Short Sale Period ends, for a covered security for which the Exchange is the listing market, if the Exchange has been informed by another exchange or a self-regulatory organization ("SRO") that a transaction in the covered security that occurred at the Trigger Price was a clearly erroneous execution, as determined by the rules of that exchange or SRO.
 - (2) If the Exchange determines that the prior day's closing price for a listed security is incorrect in the System and resulted in an incorrect determination of the Trigger Price, the Exchange may correct the prior day's closing price and lift the Short Sale Price Test before the Short Sale Period ends.

Rule Series 11.300. System Guidelines

Rule 11.310. Locking or Crossing Quotations in NMS Stocks

- (a) Definitions. For purposes of this LTSE Rule 11.310, the following definitions shall apply:
 - (1) The terms automated quotation, effective national market system plan, intermarket sweep order, manual quotation, NMS stock, protected quotation, the Regular Market Session, and trading center shall have the meanings set forth in Rule 600(b) of Regulation NMS.
 - (2) The term crossing quotation shall mean the display of a bid for an NMS stock during the Regular Market Session at a price that is higher than the price of an offer for such NMS stock previously disseminated pursuant to an effective national market system plan, or the display of an offer for an NMS stock during the Regular Market Session at a price that is lower than the price of a bid for such NMS stock previously disseminated pursuant to an effective national market system plan.
 - (3) The term locking quotation shall mean the display of a bid for an NMS stock during the Regular Market Session at a price that equals the price of an offer for such NMS stock previously disseminated pursuant to an effective national market system plan, or the display of an offer for an NMS stock during the Regular Market Session at a price that equals the price of a bid for such NMS stock previously disseminated pursuant to an effective national market system plan.
- (b) Prohibition. Except for quotations that fall within the provisions of paragraph (c) of this LTSE Rule 11.310, the System shall not make available for dissemination, and Users shall reasonably avoid displaying, and shall not engage in a pattern or practice of displaying, any quotations that lock or cross a protected quotation previously disseminated pursuant to an effective national market system plan.
- (c) Exceptions.
 - (1) The locking or crossing quotation was displayed at a time when the trading center displaying the locked or crossed quotation was experiencing a failure, material delay, or malfunction of its systems or equipment.
 - (2) The locking or crossing quotation was displayed at a time when a protected bid was higher than a protected offer in the NMS stock.

Rule 11.320. Input of Accurate Information

(a) Members of the Exchange shall input accurate information into the System, including, but not limited to, whether the Member acted in a Principal, Agent, or Riskless Principal capacity for each order entered.

Rule 11.330. Data Products

- (a) The Exchange offers the following data products free of charge, except as otherwise noted in the Exchange's fee schedule:
 - (1) LTSE Web Platform. LTSE Web Platform is a data feed, available through the Exchange's public website, that offers aggregated top of book quotations for all orders resting on the Order Book, aggregated depth of book quotations for all orders resting on the Order Book at each price level, execution information (i.e., last sale information) for executions on the Exchange, and provides LTSE Auction Information for LTSE-Primary-Listed Securities.
 - (2) Historical Data. Historical Data is a data product that offers historical top of book quotations, depth of book quotations and other information, and which is available on the Exchange's public website.
 - (3) DROP. DROP is an uncompressed data feed that offers information regarding the equities trading activity of a specific Member. DROP is only available to the Member to whom the specific data relates and those recipients expressly authorized by the Member.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.340. Reserved

Rule 11.350. Auctions

- (a) Definitions
 - (1) The term "Auction Book" refers to the orders specified below that queue prior to the auction match, and shall mean:
 - (A) For Opening Auctions (i.e., Opening Auction Book):
 - (i) On-Open orders;

- (ii) Limit orders with a TIF of DAY or GTX; and
- (iii) Market orders with a TIF of DAY.
- (B) For Closing Auctions (i.e., Closing Auction Book):
 - (i) On-Close orders.
- (C) For IPO Auctions (i.e., IPO Auction Book):
 - (i) On-Open orders;
 - (ii) Limit orders with a TIF of DAY, GTX, GTT, SYS, or IOC; and
 - (iii) Market orders with a TIF of DAY.
- (D) For Halt Auctions (i.e., Halt Auction Book):
 - (i) On-Open orders queued prior to Regular Market Hours if a Pre-Market Session halt persists through the start of Regular Market Hours and the Halt Auction is scheduled to occur during the Regular Market Session;
 - (ii) Limit orders with a TIF of GTT, SYS, or IOC received during the Order Acceptance Period;
 - (iii) Limit orders with a TIF of DAY received during the Order Acceptance Period within the Regular Market Session, or queued prior to the Regular Market Session for securities that have not traded during the Regular Market Session on that trading day;
 - (iv) Limit orders with a TIF of GTX received during the Order Acceptance Period within the Regular Market Session or Post-Market Session, or queued prior to the Regular Market Session for securities that have not traded during the Regular Market Session on that trading day;
 - Market orders with a TIF of IOC received during the Order Acceptance Period within the Regular Market Session;
 - (vi) Market orders with a TIF of DAY received during the Order Acceptance Period within the Regular Market Session, or queued prior to the Regular Market Session for securities that have not traded during the Regular Market Session on that trading day; and

- (vii) Limit orders on the Continuous Book at the time of the halt dissemination.
- (E) For Volatility Auctions (i.e., Volatility Auction Book):
 - (i) On-Close orders, if an LTSE-Primary-Listed Security is paused pursuant to LTSE Rule 11.281 at or after the Closing Auction Lock-in Time, or the Order Acceptance Period of a Volatility Auction for a security paused before the Closing Auction Lock-in Time pursuant to LTSE Rule 11.281 would otherwise be extended by the Exchange to a time after the Closing Auction Lock-in Time;
 - (ii) Limit orders with a TIF of GTX, GTT, SYS, or IOC received during the Order Acceptance Period;
 - (iii) Limit orders with a TIF of DAY received during the Order Acceptance Period within Regular Market Hours;
 - (iv) Market orders with a TIF of IOC, or DAY received during the Order Acceptance Period within Regular Market Hours; and
 - (v) Displayed portions of limit orders on the Continuous Book at the time of the pause dissemination.
- (2) The term "Auction Eligible Order" shall mean all orders that are eligible for execution in the upcoming auction on the Auction Book and the Continuous Book (collectively, the Order Book); such orders are used by the System to calculate LTSE Auction Information and to determine the clearing price of LTSE Auctions.
- (3) Reserved.
- (4) The term "Continuous Book" shall be in reference to all orders resting on the Order Book that are not on the Auction Book and are available for continuous trading. Market orders and orders with a TIF of IOC do not rest on the Continuous Book. There is no Continuous Book when continuous trading in a security is halted or paused; in the event of a halt or pause, Auction Eligible Orders on the Continuous Book shall be incorporated into the Halt or Volatility Auction Book, as applicable.
- (5) The term "Display Only Period" shall be in reference to the period of the time during which LTSE disseminates LTSE Auction Information for IPO, Halt, and Volatility Auctions. The Display Only Period begins thirty (30) minutes prior to the scheduled auction match for an IPO Auction, and the start of the Order

- Acceptance Period for Halt and Volatility Auctions. The Display Only Period shall end when the applicable auction match occurs.
- (6) The term "Final Consolidated Last Sale Eligible Trade" shall mean the last trade prior to the end of Regular Market Hours, or where applicable, prior to trading in the security being halted or paused, that is last sale eligible and reported to the Consolidated Tape System ("Consolidated Tape"), rounded to the nearest MPV or Midpoint Price calculated by the System, whichever is closer.
 - (A) If there is no qualifying Final Consolidated Last Sale Eligible Trade for the current day, the previous official closing price;
 - (i) If there is no qualifying previous official closing price for a security that is not the subject of an IPO or otherwise being priced pursuant to LTSE Rule 11.282(b)(9), the issue price; and
 - (B) In the case of an IPO or the initial pricing of any other security pursuant to Rule 11.282(b)(9), the issue price.
- (7) The term "Final Last Sale Eligible Trade" shall mean the last trade on LTSE prior to the end of Regular Market Hours, or where applicable, prior to trading in the security being halted or paused, that is last sale eligible and reported to the Consolidated Tape.
 - (A) If there is no qualifying Final Last Sale Eligible Trade for the current day, the previous official closing price;
 - If there is no qualifying previous official closing price for a security that is not the subject of an IPO or otherwise being priced pursuant to LTSE Rule 11.282(b)(9), the issue price; and
 - (B) In the case of an IPO or the initial pricing of any other security pursuant to LTSE Rule 11.282(b)(9), the issue price.
- (8) The term "Hyper-aggressive Auction Orders" shall mean:
 - (A) For Opening Auctions, MOO orders and market orders with a TIF of DAY, as well as LOO orders and limit orders with a TIF of DAY or GTX to buy (sell) priced above (below) the latest upper (lower) threshold of the Opening/Closing Auction Collar calculated by the System.

- (B) For Closing Auctions, MOC orders and LOC orders to buy (sell) priced above (below) the latest upper (lower) threshold of the Opening/Closing Auction Collar calculated by the System.
- (9) The term "LTSE Auction Information" shall mean the information disseminated pursuant to Rule 11.330(a) regarding the current status of price, size, imbalance information, auction collar information, and other relevant information related to auctions conducted by the Exchange. LTSE Auction Information shall include:
 - (A) Reference Price: The single price at or within the Reference Price Range at which orders on the Auction Book would match if the LTSE Auction were to occur at that time of dissemination. The Reference Price is set to the price that maximizes the number of the shares from orders on the Auction Book to be executed in the auction. If more than one price maximizes the number of shares that will execute resulting in an auction price range, the Reference Price is set to the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order. If more than one price satisfies the above conditions, the Reference Price is set to the price closest or equal to either the Volume Based Tie Breaker (if such range includes prices in the Reference Price Range) or the Reference Price Range (if such range does not include prices in the Reference Price Range) at the time of dissemination. In the case of an IPO or Halt Auction, the Reference Price shall be the same as the Auction Book Clearing Price.
 - (B) Paired Shares: The number of shares from orders on the Auction Book that can be matched with other orders on the Auction Book at the Reference Price at the time of dissemination.
 - (C) Imbalance Shares: The number of shares from orders on the Auction Book that may not be matched with other orders on the Auction Book at the Reference Price at the time of dissemination.
 - (D) Imbalance Side: The buy/sell direction of any imbalance at the time of dissemination.
 - (E) Indicative Clearing Price: The single price at or within the Opening/Closing Auction Collar at which Auction Eligible Orders would match if the LTSE Auction were to occur at the time of dissemination pursuant to the procedures for determining the clearing price set forth in the applicable auction rule. In the case of an IPO, Halt, or Volatility Auction, the Indicative Clearing Price shall be the same as the Auction Book Clearing Price.

- (F) Auction Book Clearing Price: The single price at which orders on the Auction Book would match if the LTSE Auction were to occur at the time of dissemination pursuant to the procedures for determining the clearing price set forth in the applicable auction rule, but shall not be constrained by the Opening/Closing Auction Collar, as applicable. If shares from market orders would remain unexecuted, LTSE shall disseminate an indicator for "market buy" or "market sell."
- (G) Collar Reference Price: Opening/Closing Auction Collar Reference Price for the Opening and Closing Auctions. Volatility Auction Collar Reference Price for the Volatility Auction.
- (H) Lower Auction Collar: The lower threshold of the Opening/Closing Auction Collar for the Opening and Closing Auctions. The lower threshold of the Volatility Auction Collar for the Volatility Auction.
- (I) Upper Auction Collar: The upper threshold of the Opening/Closing Auction Collar for the Opening and Closing Auctions. The upper threshold of the Volatility Auction Collar for the Volatility Auction.
- (J) Scheduled Auction Time: The projected time of the auction match.
- (K) Extension Number: The total number of automatic Order Acceptance Period extensions an IPO, Halt, or Volatility Auction has received.
- (10) The term "LTSE Official Closing Price" shall mean the price disseminated by the Exchange to the Consolidated Tape as the market center official close of an LTSE-Primary-Listed Security.
- (11) The term "LTSE Official IPO Opening Price" shall mean the price disseminated by the Exchange to the Consolidated Tape following an IPO Auction as the market center official open for an initial public offering of an LTSE-Primary-Listed Security.
- (12) The term "LTSE Official Opening Price" shall mean the price disseminated by the Exchange to the Consolidated Tape as the market center official open of an LTSE-Primary-Listed Security.
- (13) The term "LTSE Re-opening Trade" shall mean the trade resulting from a Halt Auction or Volatility Auction (conducted prior to the Closing Auction Lock-in Time) that is disseminated by the Exchange to the Consolidated Tape as the market center re-opening trade of an LTSE-Primary-Listed Security.

- (14) Reserved
- (15) The term "Initial Consolidated Last Sale Eligible Trade" shall mean the first trade during Regular Market Hours that is last sale eligible and reported to the Consolidated Tape, including the Closing Auction.
 - (A) If there is no qualifying Initial Consolidated Last Sale Eligible Trade for the current day, the previous official closing price will be used.
- (16) The term "Initial Last Sale Eligible Trade" shall mean the first trade on LTSE during Regular Market Hours that is last sale eligible and reported to the Consolidated Tape, including the Closing Auction.
 - (A) If there is no qualifying Initial Last Sale Eligible Trade for the current day, the previous official closing price will be used.
- (17) The term "Impermissible Price" shall mean, for a Volatility Auction, an indeterminable auction price due to a market order imbalance, or an Indicative Clearing Price higher (lower) than the upper (lower) threshold of the Volatility Auction Collar at the scheduled auction match.
- (18) Reserved.
- (19) The term "Latest Consolidated Last Sale Eligible Trade" shall mean the last trade immediately prior to trading in the security being halted or paused that is last sale eligible and reported to the Consolidated Tape, rounded to the nearest MPV or Midpoint Price calculated by the System, whichever is closer.
 - (A) If there is no qualifying Latest Consolidated Last Sale Eligible Trade for the current day, the previous official closing price.
- (20) The term "Limit-On-Close" or "LOC" shall mean a limit order that specifically requests execution at the LTSE Official Closing Price and is designated for execution in the Closing Auction, or in a Volatility Auction when such auction is determining the LTSE Official Closing Price pursuant to LTSE Rule 11.350(f)(3).
- (21) The term "Limit-On-Open" or "LOO" shall mean a limit order that specifically requests execution at the LTSE Official Opening Price (or the LTSE Official IPO Opening Price in the case of an IPO Auction) and is designated for execution in the Opening Auction, IPO Auction, or Halt Auction when queued prior to Regular Market Hours if a Pre-Market Session halt persists through the start of Regular Market Hours.

- (22) The term "Lock-in Time" shall mean two (2) minutes prior to the Opening Auction match (i.e., 9:28 a.m.), and ten (10) minutes prior to the Closing Auction match (i.e., 3:50 p.m., or 10 minutes prior to the end of the Regular Market Session on days that LTSE is subject to an early closing), at which time:
 - (A) Auction Eligible Orders on the Auction Book may not be canceled or modified prior to the auction match (i.e., locked in);
 - (B) Hyper-aggressive Auction Orders are rejected upon receipt; and
 - (C) LTSE begins to disseminate LTSE Auction Information.
- (23) The term "Lock-out Time" shall mean ten (10) seconds prior to the Opening and Closing Auction match, at which time any new Auction Eligible Order otherwise eligible for the Auction Book is restricted from entering the Auction Book and is rejected upon receipt (i.e., locked out). Orders must be on the Auction Book prior to the Lock-out Time to guarantee eligibility for the auction. Orders submitted to the Continuous Book after the Lock-out Time remain eligible for execution on the Continuous Book, and in the upcoming Opening or Closing Auction match.
- (24) The term "Market-On-Close" or "MOC" shall mean a market order that specifically requests execution at the LTSE Official Closing Price and is designated for execution in the Closing Auction, or in a Volatility Auction when such auction is determining the LTSE Official Closing Price pursuant to LTSE Rule 11.350(f)(3).
- (25) The term "Market-On-Open" or "MOO" shall mean a market order that specifically requests execution at the LTSE Official Opening Price (or the LTSE Official IPO Opening Price in the case of an IPO Auction) and is designated for execution in the Opening Auction, IPO Auction, or Halt Auction when queued prior to Regular Market Hours if a Pre-Market Session halt persists through the start of Regular Market Hours.
- (26) Reserved.
- (27) The term "Opening/Closing Auction Collar" shall mean, collectively, the upper and lower threshold prices at or within which the Opening and Closing Auction match must occur. The Opening/Closing Auction Collar is established by taking the greater of fifty cents (\$0.50) or a default threshold percentage of ten percent (10%) applied to the Opening/Closing Auction Collar Reference Price, which shall be added to (subtracted from) the Protected NBO (NBB) to establish the upper (lower) threshold of the Opening/Closing Auction Collar.

- (A) If the Protected NBBO is crossed, the greater of fifty cents (\$0.50) or a default threshold percentage of ten percent (10%) applied to the Opening/Closing Auction Collar Reference Price, shall be added to (subtracted from) the LTSE best offer (bid) to establish the upper (lower) threshold of the Opening/Closing Auction Collar.
- (B) If the Protected NBBO, or, when utilized, the LTSE best bid and best offer ("LTSE BBO"), is not two-sided, the greater of fifty cents (\$0.50) or a default threshold percentage of ten percent (10%) applied to the Opening/Closing Auction Collar Reference Price, shall be added to (subtracted from) the Opening/Closing Auction Collar Reference Price to establish the upper (lower) threshold of the Opening/Closing Auction Collar.
- (28) The term "Opening/Closing Auction Collar Reference Price" shall be the Volume Based Tie Breaker.
- (29) The term "Order Acceptance Period" shall be in reference to the period of time during which LTSE accepts orders submitted for participation in an IPO, Halt, or Volatility Auction. The Order Acceptance Period shall end when the applicable auction match occurs. The Order Acceptance Period shall begin:
 - (A) For an IPO Auction, 8:00 a.m., but is subject to change;
 - (B) For a Halt Auction, five (5) minutes prior to the scheduled auction match, or immediately after a Level 1 or Level 2 Market Decline pursuant to Rule 11.280(a)(1)-(3); and
 - (C) For a Volatility Auction, immediately after the pause dissemination.
- (30) The term "Reference Price Range" is in reference to, for a Volatility Auction, the prices between and including the applicable Volatility Auction Collar, or, for an Opening or Closing Auction, the prices between and including the Protected NBB and Protected NBO for a particular security where the Protected NBBO is a Valid Protected NBBO.
 - (A) The Protected NBBO is a "Valid Protected NBBO" where:
 - (i) There is both a Protected NBB and Protected NBO for the security; and
 - (ii) The Protected NBBO is not crossed.
 - (B) Where the Protected NBBO is not a Valid Protected NBBO, the LTSE BBO will be used where the LTSE BBO is a Valid LTSE BBO. The LTSE BBO is a

- "Valid LTSE BBO" where there is both an LTSE best bid and an LTSE best offer for the security.
- (C) If there is neither a Valid Protected NBBO nor a LTSE BBO and the market is one-sided, the Reference Price Range shall be equal to the price of the Final Consolidated Last Sale Eligible Trade, unless such price is:
 - (i) Lower than the Protected NBB, in which case the Reference Price Range shall be equal to the price of the Protected NBB; or
 - (ii) Higher than the Protected NBO, in which case the Reference Price Range shall be equal to the price of the Protected NBO.
- (D) If there is neither a Valid Protected NBBO nor a Valid LTSE BBO and the market is two-sided, the Reference Price Range shall be equal to the price of the Final Consolidated Last Sale Eligible Trade, unless:
 - (i) The Protected NBBO is not crossed and the price of the Final Consolidated Last Sale Eligible Trade is either:
 - a. Lower than the Protected NBB, in which case the Reference Price Range shall be equal to the price of the Protected NBB; or
 - b. Higher than the Protected NBO, in which case the Reference Price Range shall be equal to the price of the Protected NBO.
 - (ii) The Protected NBBO is crossed and the price of the Final Consolidated Last Sale Eligible Trade is either:
 - Lower than the LTSE best bid, in which case the Reference Price Range shall be equal to the price of the LTSE best bid; or
 - b. Higher than the LTSE best offer, in which case the Reference Price Range shall be equal to the price of the LTSE best offer.
- (E) If there is neither a Protected NBBO nor an LTSE BBO (i.e., a zero-sided market), the Reference Price Range will be the Final Consolidated Last Sale Eligible Trade.
- (31) The term "Volatility Auction Collar" represents the range of prices at or within which the Volatility Auction match can occur, and shall mean:
 - (A) If the Volatility Auction Collar Reference Price is the Lower (Upper) Price Band, the initial lower (upper) threshold of the Volatility Auction Collar is 5%

- less (greater) than the Volatility Auction Collar Reference Price, rounded to the nearest passive MPV, and the upper (lower) threshold of the Volatility Auction Collar is the Upper (Lower) Price Band; or
- (B) For securities with a Volatility Auction Collar Reference Price of \$3.00 or less, the initial lower (upper) threshold of the Volatility Auction Collar is \$0.15 less (greater) than the Volatility Auction Collar Reference Price, rounded to the nearest passive MPV and the upper (lower) threshold of the Volatility Auction Collar is the Upper (Lower) Price Band.
- (32) The term "Volatility Auction Collar Reference Price" shall mean the reference price for calculating the applicable Volatility Auction Collar, and shall equal the price of the Upper or Lower Price Band that triggered the LULD trading pause.
- (33) The term "Volume Based Tie Breaker" shall mean, for an Opening or Closing Auction, the midpoint of the Reference Price Range. In an Opening or Closing Auction, the Volume Based Tie Breaker will be rounded to the nearest MPV. If the Reference Price Range is a single price, the Volume Based Tie Breaker shall be equal to the Reference Price Range. In the case of a Halt Auction, or Volatility Auction that is not determining the LTSE Official Closing Price, the Volume Based Tie Breaker shall be equal to the Latest Consolidated Last Sale Eligible Trade. In the case of a Volatility Auction that is determining the LTSE Official Closing Price, the Volume Based Tie Breaker shall be equal to the Final Consolidated Last Sale Eligible Trade. In the case of an IPO Auction, the Volume Based Tie Breaker shall be equal to the issue price.

* * * * * Supplementary Material * * * *

.01 Opening/Closing Auction Collar

For example, if the Protected NBBO is $$10.00 \times 11.00 , then the Opening/Closing Auction Collar Reference Price equals \$10.50 and the threshold percentage is 10%, resulting in a threshold value of $$1.05 \times 10.50 = 1.05). This threshold value is then added to the Protected NBO and subtracted from the Protected NBB to obtain the auction's Opening/Closing Auction Collar. In this example, it would result in a lower threshold of $$8.95 \times 10.00 - $1.05 = 8.95) and an upper threshold of $$12.05 \times 10.00 + $1.05 = 12.05), thus creating a range of $$8.95 \times 12.05$, within which the auction can occur. This means $$8.95 \times 10.00 \times 10.$

.02 Volatility Auction Collar

For example, if the Lower and Upper Price Bands are \$10.00 and \$11.00, respectively, and a pause is triggered following a Limit State at the Lower Price Band, the Volatility Auction Collar Reference Price would be equal to the Lower Price Band, \$10.00. The lower threshold of the Volatility Auction

Collar ("lower Volatility Auction Collar") would be calculated by subtracting 5% of the Volatility Auction Collar Reference Price, or \$0.50 (5% of \$10.00 = \$0.50), from the Volatility Auction Collar Reference Price. The upper threshold of the Volatility Auction Collar ("upper Volatility Auction Collar") would be equal to the Upper Price Band. In this example, it would result in a lower Volatility Auction Collar of \$9.50 (\$10.00 - \$0.50 = \$9.50) and an upper Volatility Auction Collar of \$11.00, thus creating a range of \$9.50 to \$11.00, within which the Volatility Auction can occur. This means \$9.50 is the lowest price at which the Volatility Auction can occur and \$11.00 is the highest price at which it can occur.

In this example, if the pause was triggered at 12:00 p.m., the above calculated Volatility Auction Collar would be in effect during the initial Order Acceptance Period from 12:00 until 12:05 p.m. To continue the example, if the Indicative Clearing Price was above the upper Volatility Auction Collar at the time of the scheduled auction match, 12:05 p.m., then the Volatility Auction would receive an extension of 5 minutes (the "Initial Extension Period") and the upper Volatility Auction Collar would be updated by adding \$0.50 to the upper Volatility Auction Collar (which is equal to 5% of the original Volatility Auction Reference Price of \$10.00). The lower Volatility Auction Collar remains unchanged. In this example, it would result in an upper Volatility Auction Collar of \$11.50 (\$11.00 + \$0.50 = \$11.50) and a lower Volatility Auction Collar of \$9.50, thus creating a range of \$9.50 to \$11.50, within which the Volatility Auction can now occur. This means \$9.50 is the lowest price at which the Volatility Auction can occur and \$11.50 is the highest price at which it can now occur at the next scheduled auction match 5 minutes from now, at 12:10 p.m.

Furthermore, continuing the example, if the Indicative Clearing Price was below the lower Volatility Auction Collar at the time of the scheduled auction match of 12:10 p.m., then the Volatility Auction would receive an extension of 5 minutes (an "Additional Extension Period") and the lower Volatility Auction Collar would be updated by subtracting \$0.50 from the lower Volatility Auction Collar (which is equal to 5% of the original Volatility Auction Reference Price of \$10.00). In this example, it would result in a lower Volatility Auction Collar of \$9.00 (\$9.50 - \$0.50 = \$9.00) and an upper Volatility Auction Collar of \$11.50, thus creating a range of \$9.00 to \$11.50 within which the Volatility Auction can now occur. This means \$9.00 is the lowest price at which the Volatility Auction can occur and \$11.50 is the highest price at which it can now occur, and the Exchange shall attempt to conduct a Volatility Auction every one (1) second during the course of each Additional Extension Period until the clearing price falls at or within the Volatility Auction Collar.

.03 Eligibility of Market Orders and Limit Orders with a TIF of DAY Outside Regular Market Hours

If a Volatility Auction originally scheduled to occur during Regular Market Hours receives an automatic extension which causes the auction to occur in the Post-Market Session, limit orders with a TIF of DAY and market orders which were submitted during the Order Acceptance Period within Regular Market Hours are included and are only canceled by the System after the auction match or if the auction is extended to the end of Post-Market Hours.

- (b) LTSE Auction Priority.
 - (1) (1) Orders resting on the Order Book shall be ranked and maintained for the Opening, Closing, IPO, Halt, and Volatility Auction based on the following priority:

- (A) Price. The best priced Auction Eligible Order (the highest priced resting order to buy or the lowest priced resting order to sell) has priority over all other orders to buy (or orders to sell) in all cases. Market orders have precedence over limit orders.
 - (i) Resting Price. Auction Eligible Orders resting on the Continuous Book are ranked by the price at which they are resting on the Continuous Book; Auction Eligible Orders resting on the Auction Book are ranked by the limit price defined by the User, if any (in either case, the order's "resting price"), as follows:
 - a. Reserved
 - b. Reserved
 - c. Reserved
 - d. Reserved.
 - e. Limit orders on the Continuous Book are ranked and eligible for execution in the Opening/Closing Auction at the order's resting price.
 - f. Limit orders, including LOO and LOC orders, on the Auction Book are ranked and eligible for execution in an auction at the order's limit price.
 - (ii) Halt or Volatility Auction. Limit orders on the Continuous Book at the time of a halt or pause dissemination are ranked on the Auction Book by the price at which such orders were resting on the Continuous Book at the time of the halt or pause dissemination.
- (B) Reserved.
- (C) Time. Equally priced Auction Eligible Orders ranked in time priority.
 - (i) Where orders to buy (or sell) are ranked at the same price, the oldest order at such price shall have precedence at that price. Orders are ranked by the time at which they are posted to the Order Book at a given price, the first to be posted at a given price being the oldest. Orders maintain their time priority once booked until one of the following occur, at which time the order will receive a new timestamp:
 - a. An order on the Auction Book is incremented by the User;

- b. An order on the Auction Book is re-priced by the User;
- c. Reserved
- d. Any one of the events specified in LTSE Rule 11.220(a)(1)(C) occurs to an order on the Continuous Book.
- (c) Opening Auction.
 - (1) Order Entry and Cancellation Before Opening Auction
 - (A) Users may submit orders to the Exchange at the beginning of the Pre-Market Session for participation in the Opening Auction. Any orders designated for the Opening Auction Book will be queued until the Opening Auction match.
 - (B) Between the Opening Auction Lock-in Time and the Opening Auction match, orders on the Opening Auction Book may not be canceled or modified, and Hyper-aggressive Auction Orders submitted to the Exchange will be rejected upon entry.
 - (C) Orders eligible for the Opening Auction Book received by the Exchange between the Opening Auction Lock-out Time and the Opening Auction match will be rejected.
 - (D) Orders on the Continuous Book may continue to be entered and canceled or modified at any time prior to execution.
 - (2) Opening Auction Process. The Exchange will conduct an Opening Auction for all LTSE-Primary-Listed Securities.
 - (A) Publication of LTSE Auction Information. Beginning at the Opening Auction Lock-in Time, and updated every one second thereafter, LTSE Auction Information associated with the Opening Auction will be disseminated via electronic means.
 - (B) Determination of LTSE Official Opening Price. The LTSE Official Opening Price will be the price of the Opening Auction. In the event that there is no Opening Auction for an LTSE-Primary-Listed Security, the security will be released for trading pursuant to section (3) below, and the LTSE Official Opening Price will be the price of the Initial Last Sale Eligible Trade.
 - (i) The Opening Auction shall occur at the price that maximizes the number of shares of Auction Eligible Orders to be executed;

- (ii) If more than one price exists under subparagraph (i) resulting in an auction price range, the Opening Auction shall occur at the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order;
- (iii) If more than one price exists under subparagraph (ii), the Opening Auction shall occur at the price closest or equal to the Volume Based Tie Breaker; and
- (iv) If the Opening Auction price established by subparagraphs (i) through (iii) is below (above) the lower (upper) threshold of the Opening/Closing Auction Collar in the Opening Auction, the LTSE Official Opening Price will be the price at or within the range of prices between the lower (upper) threshold of the Opening/Closing Auction Collar and the lower (upper) threshold of the Reference Price Range that best satisfies the conditions of subparagraphs (i) through (iii).
- (C) Execution Priority. Opening Auction execution priority occurs in accordance with LTSE Auction Priority as described in section (b) above. Market and MOO orders have priority over all other Auction Eligible Orders, and to the extent there is executable contra side interest, such market and MOO orders will execute at the LTSE Official Opening Price in accordance with time priority. After the execution of all market and MOO orders, the remaining Auction Eligible Orders with a resting price more aggressive than the LTSE Official Opening Price will be executed in price time priority at the LTSE Official Opening Price. All remaining Auction Eligible Orders with a resting price equal to the LTSE Official Opening Price shall execute in time priority at the LTSE Official Opening Price. All AGID modifiers as defined in LTSE Rule 11.190(e), and Minimum Quantity instructions as defined in Rule LTSE 11.190(b)(11), will not be supported in the Opening Auction, but will be enforced on all unexecuted shares released to the Continuous Book following the Opening Auction match.
- (D) Pre-Market Session Halt. If an LTSE-Primary-Listed Security is subject to a Pre-Market Session halt, all orders on the Opening Auction Book will remain open. Users may resume submission of new or modifications to existing Auction Eligible Orders for the halted security during the Order Acceptance Period. Users may cancel open Auction Eligible Orders at any time during the halt. If a halt persists through the start of Regular Market Hours, no Opening Auction will occur, orders on the Opening Auction Book will become part of the Halt Auction Book, and the Halt Auction will determine the LTSE Official Opening Price in accordance with LTSE Rule 11.350(e) below.

- (E) The Halt Auction will determine the LTSE Official Opening Price for an LTSE-Primary-Listed Security pursuant to Rule 11.350(e) below if a Halt Auction is scheduled to occur during the Regular Market Session, and LTSE has not determined an LTSE Official Opening Price due to:
 - (i) An overnight trading halt; or
 - (ii) A lack of crossing interest during the Opening Auction, there is no Initial Last Sale Eligible Trade, and the security is subsequently halted.
- (F) The Volatility Auction will determine the LTSE Official Opening Price for an LTSE-Primary-Listed Security pursuant to LTSE Rule 11.350(f) below if LTSE has not determined an LTSE Official Opening Price due to:
 - (i) A lack of crossing interest during the Opening Auction, there is no Initial Last Sale Eligible Trade, and the security is subsequently paused.
- (3) Transition to Regular Market Session.
 - (A) LOO, MOO, and market orders that are not fully executed at the conclusion of the Opening Auction will be canceled immediately after the Opening Auction match. Limit orders to buy (sell) with a TIF of DAY or GTX and a limit price above (below) the upper (lower) threshold of the Opening/Closing Auction Collar that are not fully executed at the conclusion of the Opening Auction will be canceled immediately after the Opening Auction match;
 - (B) All remaining shares from Auction Eligible Orders that are not canceled by the System immediately after the Opening Auction match shall be released to the Continuous Book for trading in the Regular Market Session, subject to the orders' instructions; and
- (4) Opening Auction Contingency Procedures.
 - (A) When a disruption occurs that prevents the execution of the Opening Auction as set forth above, LTSE shall apply the following Opening Auction Contingency Procedures:
 - (B) LTSE will publicly announce that no Opening Auction will occur. The price of the Initial Consolidated Last Sale Eligible Trade will be used for the LTSE Official Opening Price. The LTSE Official Opening Price will be published to the Consolidated Tape. All orders on the Order Book will be canceled, and LTSE will open the security for trading without an auction.

- (i) If a security's LTSE Official Opening Price cannot be determined based on this procedure, LTSE will not publish an LTSE Official Opening Price for the security.
- (ii) The Regular Market Session shall begin either as scheduled, or upon resolution of the disruption that triggered LTSE to operate the Opening Auction Contingency Procedures.
- (d) Closing Auction.
 - (1) Order Entry and Cancellation Before Closing Auction
 - (A) Users may submit orders to the Exchange at the beginning of the Pre-Market Session, or at the beginning of the Order Acceptance Period for an IPO Auction, for participation in the Closing Auction. Any MOC and LOC orders designated for the Closing Auction Book will be queued until the Closing Auction match.
 - (B) Between the Closing Auction Lock-in Time and the Closing Auction match, orders on the Closing Auction Book may not be canceled or modified, and Hyper-aggressive Auction Orders submitted to the Exchange will be rejected upon entry.
 - (C) Between the Closing Auction Lock-in Time and five (5) minutes before the Closing Auction match (e.g., 3:55 p.m.), On-Close orders can be canceled only if the User requests that LTSE correct a legitimate error in the order (e.g., side, size, symbol, price, or duplication of an order). On-Close orders cannot be canceled or modified at or after five (5) minutes before the Closing Auction match (e.g., 3:55 p.m.) for any reason.
 - (D) Orders eligible for the Closing Auction Book received by the Exchange between the Closing Auction Lock-out Time and the Closing Auction match will be rejected.
 - (E) Orders on the Continuous Book may continue to be entered and canceled or modified at any time prior to execution.
 - (2) Closing Auction Process. The Exchange will conduct a Closing Auction for all LTSE-Primary-Listed Securities.
 - (A) Publication of LTSE Auction Information. At the beginning of the Closing Auction Lock-in Time, and updated every one second thereafter, LTSE

- Auction Information associated with the Closing Auction will be disseminated via electronic means.
- (B) Determination of LTSE Official Closing Price. The LTSE Official Closing Price will be the price of the Closing Auction. In the event that there is no Closing Auction for an LTSE-Primary-Listed Security, the LTSE Official Closing Price will be the price of the Final Last Sale Eligible Trade, and the security will be released for trading pursuant to section (3) below.
 - (i) The Closing Auction shall occur at the price that maximizes the number of shares of Auction Eligible Orders to be executed;
 - (ii) If more than one price exists under subparagraph (i) resulting in an auction price range, the Closing Auction shall occur at the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order;
 - (iii) If more than one price exists under subparagraph (ii), the Closing Auction shall occur at the price closest or equal to the Volume Based Tie Breaker; and
 - (iv) If the Closing Auction price established by subparagraphs (i) through (iii) is below (above) the lower (upper) threshold of the Opening/Closing Auction Collar in the Closing Auction, the LTSE Official Closing Price will be the price at or within the range of prices between the lower (upper) Opening/Closing Auction Collar and the lower (upper) threshold of the Reference Price Range that best satisfies the conditions of subparagraphs (i) through (iii).
- with LTSE Auction Priority as described in section (b) above. MOC orders have priority over all other Auction Eligible Orders, and to the extent there is executable contra side interest, such MOC orders will execute at the LTSE Official Closing Price in accordance with time priority. After the execution of all MOC orders, the remaining Auction Eligible Orders with a resting price more aggressive than the LTSE Official Closing Price will be executed in price time priority at the LTSE Official Closing Price. All remaining Auction Eligible Orders with a resting price equal to the LTSE Official Closing Price shall execute in time priority at the LTSE Official Closing Price. All AGID modifiers as defined in LTSE Rule 11.190(e), and Minimum Quantity instructions as defined in LTSE Rule 11.190(b)(11), will not be supported in the Closing

- Auction, but will be enforced on all unexecuted shares released to the Continuous Book following the Closing Auction match.
- (D) If a halt is disseminated in an LTSE-Primary-Listed Security prior to the Closing Auction, all orders on the Auction Book will remain open. Users may resume submission of new or modifications to existing Auction Eligible Orders for the halted security during the Order Acceptance Period. Users may cancel open Auction Eligible Orders at any time during the halt. If a halt persists through the end of Regular Market Hours, no Closing Auction will occur, all On-Open orders, On-Close orders, market orders, and limit orders with a TIF of DAY will be canceled at the conclusion of Regular Market Hours, and the Final Last Sale Eligible Trade will be the LTSE Official Closing Price. However, where an LTSE-Primary-Listed Security is paused pursuant to LTSE Rule 11.281 at or after the Closing Auction Lock-in Time, or the Order Acceptance Period of a Volatility Auction for a security paused before the Closing Auction Lock-in Time pursuant to LTSE Rule 11.281 would otherwise be extended by the Exchange to a time after the Closing Auction Lock-in Time, On-Close orders are added to the Volatility Auction and such auction will be used to determine the LTSE Official Closing Price for the subject security at the conclusion of Regular Market Hours in accordance with LTSE Rule 11.350(f)(3) below.
- (3) Transition to Post-Market Session.
 - (A) LOC, MOC, as well as limit orders with a TIF of DAY that are not fully executed at the conclusion of the Closing Auction will be canceled immediately after the Closing Auction match;
 - (B) All remaining shares from Auction Eligible Orders that are not canceled immediately by the System after the Closing Auction match will be released to the Continuous Book for trading in the Post-Market Session, subject to the orders' instructions; and
- (4) Closing Auction Contingency Procedures.
 - (A) When a disruption occurs that prevents the execution of the Closing Auction as set forth above, LTSE shall apply either the Primary Closing Auction Contingency Procedures pursuant to this paragraph (A), or the Secondary Closing Auction Contingency Procedures pursuant to paragraph (B) below. LTSE will employ the Primary Closing Auction Contingency Procedures if at all possible, and it will employ the Secondary Closing Auction Contingency Procedures only if it determines that both the standard procedures and the

Primary Closing Auction Contingency Procedures are unavailable. The determination to employ Primary or Secondary Closing Auction Contingency Procedures will be based upon all available information including the type of disruption, the system or sub-system disrupted, the availability of testing and diagnostic data, and observed Member and market impact. The determination to implement Primary or Secondary Closing Auction Contingency Procedures shall be made by the President of LTSE or a senior level employee designated by the President. If such a disruption occurs, LTSE shall publicly announce at the earliest possible time the initiation of Primary or Secondary Closing Auction Contingency procedures via system status alerts and email notification directories. If LTSE determines to initiate the Primary Closing Auction Contingency Procedures, the following Provisions shall apply:

- (i) LTSE will publicly announce that no Closing Auction will occur. The price of the Final Consolidated Last Sale Eligible Trade will be used for the LTSE Official Closing Price. The LTSE Official Closing Price will be published to the Consolidated Tape. LTSE will execute orders on the Closing Auction Book at the LTSE Official Closing Price to the extent executable buy and sell interest exists on the Closing Auction Book. All remaining orders on the Order Book will be canceled at the conclusion of the contingency process. LTSE will report the resulting execution to the Consolidated Tape and deliver execution reports to Users. If a security's LTSE Official Closing Price cannot be determined by this subsection, LTSE will not publish an LTSE Official Closing Price for the security and will cancel all orders on the Order Book. The Post Market Session shall begin either as scheduled, or upon resolution of the disruption that triggered LTSE to operate the Primary Contingency Procedures.
- (B) Secondary Closing Auction Contingency Procedures. When a determination to implement Secondary Closing Auction Contingency Procedures has been made by the President of LTSE or a senior level employee designated by the President pursuant to paragraph (A) above, LTSE shall publicly announce this determination at the earliest possible time via system status alerts and email notification directories. The following procedures shall apply:
 - (i) If LTSE determines to follow Secondary Closing Auction Contingency
 Procedures for one or more securities at or before 3:00 p.m., LTSE shall
 cancel all open orders on the Order Book in the impacted securities to
 give Members the opportunity to route their orders to alternative
 execution venues. LTSE will designate an alternate exchange, and the

LTSE Official Closing Price for those securities will be determined in accordance with the following procedures:

- a. The LTSE Official Closing Price will be the official closing price established for the security under the rules of the designated back-up exchange;
- b. If there is no official closing price in a security on the designated back-up exchange, the LTSE Official Closing Price will be the volume weighted average price ("VWAP") of the last sale eligible trades reported to the Consolidated Tape during the last five (5) minutes of Regular Market Hours on that trading day, including any closing transactions on an exchange and any trade breaks or corrections up to the time the VWAP is processed;
- c. If there are no last sale eligible trades reported to the Consolidated Tape during the last five (5) minutes of Regular Market Hours, the LTSE Official Closing Price of such security will be the Final Consolidated Last Sale Eligible Trade for the security on that trading day;
- d. If there were no last sale eligible trades reported to the Consolidated Tape on that trading day, the LTSE Official Closing Price will be the previous official closing price;
- e. If a security's LTSE Official Closing Price cannot be determined under subsection (a), (b), (c), and (d) above, LTSE will not publish an LTSE Official Closing Price for the security; and
- f. The Post Market Session shall begin either as scheduled, or upon resolution of the disruption that triggered LTSE to operate the Secondary Contingency Procedures.
- (ii) If LTSE determines to follow Secondary Closing Auction Contingency
 Procedures for one or more securities after 3:00 p.m., LTSE shall cancel
 all open orders on the Order Book in the impacted securities to give
 Members the opportunity to route their orders to alternative execution
 venues, and the LTSE Official Closing Price for those securities will be:
 - a. The LTSE Official Closing Price will be the VWAP of the last sale eligible trades reported to the Consolidated Tape during the last five
 (5) minutes of Regular Market Hours on that trading day, including

- any closing transactions on an exchange and any trade breaks or corrections up to the time the VWAP is processed;
- b. If there are no last sale eligible trades reported to the Consolidated
 Tape during the last five (5) minutes of Regular Market Hours, the
 LTSE Official Closing Price of such security will be the Final
 Consolidated Last Sale Eligible Trade for the security on that trading
 day;
- c. If there were no last sale eligible trades reported to the Consolidated Tape on that trading day, the LTSE Official Closing Price will be the previous official closing price;
- d. If a security's LTSE Official Closing Price cannot be determined under subsection (a), (b), and (c) above, LTSE will not publish an LTSE Official Closing Price for the security; and
- e. The Post Market Session shall begin either as scheduled, or upon resolution of the disruption that triggered LTSE to operate the Secondary Contingency Procedures.
- (e) IPO and Halt Auctions. For trading in an LTSE-Primary-Listed Security in an initial public offering (an "IPO"), or the initial pricing of any other security pursuant to LTSE Rule 11.282(b)(9), the Exchange will conduct an IPO Auction, as described below. Following a trading halt in an LTSE-Primary-Listed Security pursuant to LTSE Rule 11.282(a)(1), (4), or (5), the Exchange will conduct a Halt Auction, as described below.
 - (1) Order Entry and Cancellation Before an IPO or Halt Auction.
 - (A) Users may submit Auction Eligible Orders to the Exchange at the beginning of the Order Acceptance Period for participation in an IPO or Halt Auction. All Auction Eligible Orders associated with an IPO or Halt Auction will be queued until the applicable auction match. All orders associated with an IPO or Halt Auction must be received prior to the auction match in order to be eligible to execute in the auction.
 - (B) Auction Eligible Orders associated with an IPO or Halt Auction may be canceled or modified at any time prior to the auction match.

- (C) At the conclusion of Regular Market Hours, On-Open orders, On-Close orders, market orders, and limit orders with a TIF of DAY will be canceled automatically by the System.
- (D) In the event the Exchange cannot complete an IPO or Halt Auction before the end of Post-Market Hours, all open orders in the subject security on the Order Book will be canceled.
- (2) IPO and Halt Auction Process.
 - (A) Publication of LTSE Auction Information. At the start of the Display Only Period for a security and updated every one second thereafter, LTSE Auction Information associated with the IPO or Halt Auction will be disseminated via electronic means.
 - (B) Extending the Order Acceptance Period. The Order Acceptance Period will be extended:
 - (i) Automatically for five (5) minutes in an IPO Auction, or one (1) minute for a Halt Auction, when there are unmatched shares from market orders on the Auction Book associated with the auction at the time of the auction match;
 - (ii) Automatically for five (5) minutes in an IPO Auction, or one (1) minute for a
 Halt Auction, when the Indicative Clearing Price differs by the greater of
 five percent (5%) or fifty cents (\$0.50) from any of the previous fifteen
 (15) Indicative Clearing Price disseminations at the time of the auction
 match;
 - (iii) Automatically in an IPO Auction during the Pre-Launch Period when the clearing price is above (below) the upper (lower) price band selected by the underwriter pursuant to Rule 11.282(b)(8), until the clearing price is within such price bands; or
 - (iv)Manually for an IPO Auction upon request for an extension from the underwriter.
 - (C) Determination of LTSE IPO Opening Price and LTSE Re-opening Trade. The IPO Auction price will be the LTSE Official IPO Opening Price. The execution resulting from the Halt Auction will be the LTSE Re-opening Trade. If there is insufficient trading interest in the System to execute a Halt Auction for that security, no Halt Auction will occur, and the security will be released for trading pursuant to section (3) below. Pursuant to LTSE Rule 11.350(c)(2)(D)

- or (E), as applicable, if LTSE has not determined the LTSE Official Opening Price for an LTSE-Primary-Listed Security, and the Halt Auction is scheduled to occur during the Regular Market Session, the LTSE Official Opening Price will be the price of the Halt Auction. If there is insufficient trading interest to complete the Halt Auction, the transition to the Regular Market Session shall be conducted pursuant to LTSE Rule 11.350(e)(3) below, no auction will occur, and the LTSE Official Opening Price will be the price of the Initial Last Sale Eligible Trade.
- (i) The auction shall occur at the price that maximizes the number of shares of Auction Eligible Orders to be executed;
- (ii) If more than one price exists under subparagraph (i) resulting in an auction price range, the auction shall occur at the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order; and
- (iii) If more than one price exists under subparagraph (ii), the auction shall occur at the price closest or equal to the Volume Based Tie Breaker.
- (iv) If the IPO Auction price established by subparagraphs (i) through (iii) meets the conditions for extending the Order Acceptance Period described in LTSE Rule 11.350(e)(2)(B)(i)-(iii), the Order Acceptance Period shall be extended accordingly; or
- (v) If the Halt Auction price established by subparagraphs (i) through (iii) meets the conditions for extending the Order Acceptance Period described in LTSE Rule 11.350(e)(2)(B)(i)-(ii), the Order Acceptance Period shall be extended accordingly.
- (D) Execution Priority. IPO and Halt Auction execution priority occurs in accordance with LTSE Auction Priority as described in section (b) above. Market and MOO orders have priority over all other Auction Eligible Orders in an IPO or Halt Auction. To the extent there is executable contra side interest, such market and MOO orders will be executed at the LTSE Official IPO Price or the price of the LTSE Re-Opening Trade according to time priority. After the execution of all market and MOO orders, the remaining Auction Eligible Orders with a resting price more aggressive than the LTSE Official IPO Price or the price of the LTSE Re-Opening Trade will be executed in price time priority at the LTSE Official IPO Price, or the price of the LTSE Re-Opening Trade. All remaining Auction Eligible Orders with a resting price equal to the LTSE Official IPO Price or the price of the LTSE Re-Opening Trade shall

execute in time priority at the LTSE Official IPO Price, or the price of the LTSE Re-Opening Trade. All AGID modifiers as defined in Rule 11.190(e), and Minimum Quantity instructions as defined in Rule 11.190(b)(11), will not be supported in the IPO or Halt Auction, but will be enforced on all unexecuted shares released to the Continuous Book following the IPO or Halt Auction match.

- (3) Transition to Continuous Trading.
 - (A) LOO, MOO, and market orders, as well as Auction Eligible Orders with a TIF of IOC that are not fully executed at the conclusion of the IPO Auction will be canceled immediately after the IPO Auction match.
 - (B) Auction Eligible Orders with a time-in-force of IOC and market orders (as well as On-Open orders when the Halt Auction is determining the LTSE Official Opening Price) that are not fully executed at the conclusion of the Halt Auction will be canceled immediately after the Halt Auction match.
 - (C) All remaining shares from Auction Eligible Orders that are not canceled immediately by the System after an IPO or Halt Auction match will be released to the Continuous Book for trading in the applicable market session, subject to the orders' instructions; and
- (4) Contingency Procedures. When a disruption occurs that prevents the execution of an IPO or Halt Auction as set forth above, LTSE shall apply the following Contingency Procedures:
 - (A) For an IPO Auction, LTSE will publicly announce that the Order Acceptance Period for the IPO Auction will reset for the subject security. At which point, LTSE will cancel all orders on the Order Book and disseminate a new scheduled time for the Order Acceptance Period and auction match.
 - (B) For a Halt Auction, LTSE will publicly announce that no Halt Auction will occur. All orders on the Order Book will be canceled, and LTSE will open the security for trading without an auction.

* * * * * Supplementary Material * * *

.01

The Exchange will conduct an IPO Auction for securities that are the subject of an initial public offering. Pursuant to section 12(f)(1)(G)(i)-(ii) of the Securities and Exchange Act, a security is the subject of an initial public offering if the offering of the subject security is registered under the Securities Act of 1933, the issuer of the security, immediately prior to filing the registration

statement with respect to the offering, was not subject to the reporting requirements of the Securities and Exchange Act, and the initial public offering of such security commences at the opening of trading on the day on which such security commences trading on the national securities exchange with which such security is registered. In addition, the Exchange will also conduct an IPO Auction for the initial pricing of any other security pursuant to Rule 11.282(b)(9). Pursuant to Rule 11.282(b)(9), the process for halting and initial pricing of a security that is the subject of an IPO shall also be available for the initial pricing of any other security that has not been listed on a national securities exchange or traded in the over-the-counter market pursuant to FINRA Form 211 immediately prior to the initial pricing, provided that a broker-dealer serving in the role of financial advisor to the issuer of the securities being listed is willing to perform the functions under LTSE Rule 11.282(b)(8) that are performed by an underwriter with respect to an initial public offering.

.02

Initial trading for an LTSE-Primary-Listed Security that is not the subject of an IPO or otherwise being priced pursuant to Rule 11.282(b)(9) will be eligible to begin trading in the Pre-Market Session and have an Opening Auction on LTSE at the start of Regular Market Hours. For example, if an issuer with a class of common stock listed on LTSE offers and lists a preferred class of securities on LTSE, the offering of such securities would not constitute an initial public offering pursuant to section 12(f)(1)(G)(i) of the Securities and Exchange Act. Therefore, if the security does not qualify for the process of halting and initial pricing of a security pursuant to Rule 11.282(b)(9) (e.g., because there is no broker-dealer serving in the role of financial advisor to the issuer of the securities being listed that is willing to perform the functions under LTSE Rule 11.282(b)(8) that are performed by an underwriter with respect to an initial public offering), such security will be eligible for trading in the Pre-Market Session and have an Opening Auction on LTSE at the start of Regular Market Hours.

- (f) Volatility Auction. The Volatility Auction is used to re-open an LTSE-Primary-Listed Security after such security is subject to an LULD trading pause pursuant to LTSE Rule 11.281.
 - (1) Order Entry and Cancellation Before a Volatility Auction.
 - (A) Auction Eligible Orders may be submitted to the Exchange at the beginning of the five (5) minute Order Acceptance Period for participation in a Volatility Auction. However, when an LTSE-Primary-Listed Security is paused pursuant to LTSE Rule 11.281 at or after the Closing Auction Lock-in Time, or if the Order Acceptance Period of a Volatility Auction for a security paused before the Closing Auction Lock-in Time pursuant to LTSE Rule 11.281 would be in effect at the Closing Auction Lock-in Time, the Order Acceptance Period shall continue to the end of the Regular Market Session.

- (B) All Auction Eligible Orders will be queued until the auction match. All orders associated with a Volatility Auction must be received prior to the auction match in order to be eligible for execution in the auction.
- (C) Auction Eligible Orders associated with a Volatility Auction may be canceled or modified at any time prior to the auction match.
- (2) Volatility Auction Process.
 - (A) Publication of LTSE Auction Information. At the start of the Display Only Period and updated every one second thereafter, LTSE Auction Information associated with the Volatility Auction will be disseminated via electronic means.
 - (B) Volatility Auction Collar. The Volatility Auction match must occur at a price at or within the Volatility Auction Collar.
 - (C) Conditions for Extending the Order Acceptance Period. The Order Acceptance Period will be extended:
 - (i) Automatically for five (5) minutes when the Indicative Clearing Price differs by the greater of five percent (5%) or fifty cents (\$0.50) from any of the previous fifteen (15) Indicative Clearing Price disseminations at the time of the auction match;
 - (ii) Automatically for five (5) minutes when the Indicative Clearing Price, at the time of the auction match, is an Impermissible Price. Upon extension, the Volatility Auction Collar will be expanded in the direction of the Impermissible Price pursuant to section (D)(ii) below; the Volatility Auction will continue to be extended in five (5) minute increments and will continue to be expanded in the direction of the Impermissible Price until sufficient trading interest exists at an Indicative Clearing Price at or within the Volatility Auction Collar; or
 - (iii) Automatically to the end of Regular Market Hours where an LTSE-Primary-Listed Security is paused pursuant to LTSE Rule 11.281 at or after the Closing Auction Lock-in Time, or the Order Acceptance Period of a Volatility Auction for a security paused before the Closing Auction Lock-in Time pursuant to LTSE Rule 11.281 would be in effect at the Closing Auction Lock-in Time, in which case the LTSE Official Closing Price will be determined by the Volatility Auction pursuant to section (3) below.

- (D) Incremental Extensions of the Order Acceptance Period following a Trading Pause. Pursuant to section (a)(29)(C) above, the Order Acceptance Period for a Volatility Auction shall commence immediately after the Trading Pause. The Order Acceptance Period may be extended for five (5) minutes pursuant to section 11.350(f)(2)(C)(i) or (C)(ii) above (the "Initial Extension Period"). After the Initial Extension Period, the Order Acceptance Period may be extended for additional five (5) minute periods pursuant to section 11.350(f)(2)(C)(i) or (C)(ii) above (each an "Additional Extension Period") until a Volatility Auction occurs. The Exchange shall attempt to conduct a Volatility Auction every one (1) second during the course of each Additional Extension Period. Should the Order Acceptance Period for a Volatility Auction be extended to a time past the Closing Auction Lock-in Time (i.e., 10 minutes prior to the end of the Regular Market Session), the Volatility Auction shall be conducted pursuant to section (f)(3) of this Rule.
 - (i) At the beginning of the Order Acceptance Period, the Volatility Auction Collar Reference Price and the Volatility Auction Collar shall be determined in accordance with section (a)(32) and (a)(31) of the Rule, respectively.
 - (ii) At the beginning of the Initial Extension Period pursuant to section (C)(ii), the upper (lower) Volatility Auction Collar shall be increased (decreased) by five (5) percent of the original Volatility Auction Collar Reference Price in the direction of the Impermissible Price, rounded to the nearest passive MPV. For securities with a Volatility Auction Collar Reference Price of \$3.00 or less, the Volatility Auction Collar shall be increased (decreased) in \$0.15 increments in the direction of the Impermissible Price. At the beginning of each Additional Extension Period pursuant to section (C)(ii), the Volatility Auction Collar shall be widened in accordance with this paragraph by the same method as the Initial Extension Period.
- (E) Determination of LTSE Re-Opening Trade. The execution resulting from the Volatility Auction will be the LTSE Re-opening Trade. If there is insufficient trading interest in the System to execute the Volatility Auction for that security, no Volatility Auction will occur, and the security will be released for trading pursuant to section (G) below. Pursuant to LTSE Rule 11.350(c)(2)(F), if LTSE has not determined the LTSE Official Opening Price for an LTSE-Primary-Listed Security, and the security is subject to an LULD trading pause, the LTSE Official Opening Price will be the price of the Volatility Auction.

- (i) The Volatility Auction shall occur at the price that maximizes the number of shares of Auction Eligible Orders to be executed;
- (ii) If more than one price exists under subparagraph (i) resulting in an auction price range, the Volatility Auction shall occur at the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order; and
- (iii) If more than one price exists under subparagraph (ii), the Volatility Auction shall occur at the price closest or equal to the Volume Based Tie Breaker.
- (iv) If the Volatility Auction price established by subparagraphs (i) through (iii) is outside the Volatility Auction Collar, the Order Acceptance Period shall be extended pursuant to 11.350(f)(2)(C)(ii) and the Volatility Auction Collars shall be updated pursuant to LTSE Rule 11.350(f)(2)(D)(ii), described above; or
- (v) If the Volatility Auction price established by subparagraphs (i) through (iii) meets the conditions for extending the Order Acceptance Period described in LTSE Rule 11.350(f)(2)(C)(i), the Order Acceptance Period shall be extended accordingly.
- (F) Execution Priority. Volatility Auction execution priority occurs in accordance with LTSE Auction Priority as described in section (b) above. Market orders have priority over all other Auction Eligible Orders in the Volatility Auction. To the extent there is executable contra side interest, such market orders will be executed at the price of the LTSE Re-Opening Trade according to time priority. After the execution of all market orders, the remaining Auction Eligible Orders with a resting price more aggressive than the price of the LTSE Re-Opening Trade will be executed in price time priority at the price of the LTSE Re-Opening Trade. All remaining Auction Eligible Orders with a resting price equal to the price of the LTSE Re-Opening Trade shall execute in time priority at the price of the LTSE Re-Opening Trade. All AGID modifiers as defined in Rule 11.190(e), and Minimum Quantity instructions as defined in Rule 11.190(b)(11), will not be supported in the Volatility Auction, but will be enforced on all unexecuted shares released to the Continuous Book following the Volatility Auction match.
- (G) Transition to Regular Market Session.

- (i) Auction Eligible Orders with a TIF of IOC and market orders that are not fully executed in a Volatility Auction will be canceled immediately after the Volatility Auction match;
- (ii) All remaining shares from Auction Eligible Orders that are not canceled immediately by the System after a Volatility Auction match will be released to the Continuous Book for trading in the Regular Market Session, subject to the orders' instructions; and
- (H) Contingency Procedures. When a disruption occurs that prevents the execution of a Volatility Auction as set forth above, LTSE shall apply the following Volatility Auction Contingency Procedures:
 - (i) LTSE will publicly announce that no Volatility Auction will occur, and the Exchange will immediately notify the single plan processor responsible for consolidation of information for the security. All orders on the Order Book will be canceled, and LTSE will open the security for trading without an auction after the single plan processor responsible for consolidation of information for the security has disseminated Price Bands.
- (3) Closing with a Volatility Auction. Where an LTSE-Primary-Listed Security is paused pursuant to LTSE Rule 11.281 at or after the Closing Auction Lock-in Time, or the Order Acceptance Period of a Volatility Auction for a security paused before the Closing Auction Lock-in Time pursuant to LTSE Rule 11.281 would otherwise be extended by the Exchange to a time after the Closing Auction Lock-in Time, no Closing Auction for the security will occur. Instead, the Exchange will conduct a Volatility Auction at the end of Regular Market Hours to determine the LTSE Official Closing Price for the security.
 - (A) Order Entry and Cancellation Before Closing with a Volatility Auction.
 - (i) Auction Eligible Orders may be submitted to the Exchange at the beginning of the Order Acceptance Period for participation in a Volatility Auction. All Auction Eligible Orders will be queued until the auction match. All orders associated with a Volatility Auction must be received prior to the auction match in order to be eligible for execution in the Volatility Auction.
 - (ii) MOC and LOC orders queued for the Closing Auction will be incorporated into the Auction Book for the Volatility Auction.
 - (iii) Reserved.

- (iv) Auction Eligible Orders associated with a Volatility Auction may be canceled or modified at any time prior to the auction match.
- (v) In the event the Exchange cannot complete a Volatility Auction before the end of Post-Market Hours, all open orders in the subject security on the Order Book will be canceled.
- (B) Process for Closing with a Volatility Auction.
 - (i) Publication of LTSE Auction Information. At the start of the Display Only Period and updated every one second thereafter, LTSE Auction Information associated with the Volatility Auction will be disseminated via electronic means.
 - (ii) Determination of LTSE Official Closing Price. The LTSE Official Closing Price will be the price of the Volatility Auction. If there is insufficient trading interest in the System to execute the Volatility Auction for that security, the Final Last Sale Eligible Trade shall be used as the LTSE Official Closing Price in that security, and the security will be released for trading pursuant to section (C) below. Pursuant to Rule 11.350(c)(2)(F), if LTSE has not determined the LTSE Official Opening Price for an LTSE-Primary-Listed Security, and the security is subject to an LULD trading pause, the LTSE Official Opening Price will be the price of the Volatility Auction.
 - a. The Volatility Auction shall occur at the price that maximizes the number of shares of Auction Eligible Orders to be executed;
 - b. If more than one price exists under subparagraph (a) resulting in an auction price range, the Volatility Auction shall occur at the price at or within such range that is not lower (higher) than the most aggressive unexecuted buy (sell) order; and
 - c. If more than one price exists under subparagraph (b), the Volatility
 Auction shall occur at the price closest or equal to the Volume Based
 Tie Breaker.
 - d. If the Volatility Auction price established by subparagraphs (a) through (c) is outside the Volatility Auction Collar, the Order Acceptance Period shall be extended pursuant to 11.350(f)(2)(C)(ii) and the Volatility Auction Collars shall be updated pursuant to LTSE Rule 11.350(f)(2)(D)(ii), described above; or

- e. If the Volatility Auction price established by subparagraphs (a) through (c) meets the conditions for extending the Order Acceptance Period described in LTSE Rule 11.350(f)(2)(C)(i), the Order Acceptance Period shall be extended pursuant to 11.350(f)(2)(D).
- (iii) Execution Priority, Volatility Auction execution priority occurs in accordance with LTSE Auction Priority as described in section (b) above. Market and MOC orders have priority over all other Auction Eligible Orders in the Volatility Auction. To the extent there is executable contra side interest, such market and MOC orders will be executed at the LTSE Official Closing Price according to time priority. After the execution of all market and MOC orders, the remaining Auction Eligible Orders with a resting price more aggressive than the LTSE Official Closing Price will be executed in price – time priority at the LTSE Official Closing Price. All remaining Auction Eligible Orders with a resting price equal to the LTSE Official Closing Price shall execute in time priority at the LTSE Official Closing Price. All AGID modifiers as defined in LTSE Rule 11.190(e), and Minimum Quantity instructions as defined in LTSE Rule 11.190(b)(11), will not be supported in the Volatility Auction, but will be enforced on all unexecuted shares released to the Continuous Book following the Volatility Auction match.
- (C) Transition to Post-Market Session.
 - (i) LOC, MOC, and market orders, as well as all orders with a TIF of DAY or IOC that are not fully executed at the conclusion of the Volatility Auction will be canceled immediately after the Volatility Auction match; and
 - (ii) All remaining shares from Auction Eligible Orders that are not canceled immediately by the System after the Volatility Auction match will be released to the Continuous Book for trading in the Post-Market Session, subject to the orders' instructions.
- (D) Contingency Procedures for Closing with a Volatility Auction.
 - (i) When a disruption occurs that prevents the execution of the Volatility Auction as set forth above, LTSE will utilize the Closing Auction Contingency Procedures as defined in LTSE Rule 11.350(d)(4).
- (g) Short Sale Order Handling.

- (1) For Opening, Closing, Halt, and Volatility Auctions for covered securities, when the Short Sale Price Test of Rule 201 of Regulation SHO is in effect, the Exchange will not execute or display short sale orders not marked short exempt at a price at or below the current NBB.
 - (A) When the Short Sale Price Test of Rule 201 of Regulation SHO is in effect during the auction match for covered securities, and the inclusion of one or more sell short orders not marked short exempt would push the auction match price to a price at or below the current NBB price at the time of the auction match (i.e., the time of execution of orders in the auction), then such sell short order not marked short exempt and all other sell short orders not marked short exempt with lesser priority shall not receive an execution in the auction match.
- (h) Whenever, in the judgment of the Exchange, the interests of a fair and orderly market so require, the Exchange may adjust the timing of or suspend the auctions set forth in this LTSE Rule with prior notice to Users.
- (i) Reserved
- (j) For purposes of this Rule, all references to a.m. and p.m. times shall mean Eastern Time.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2019-03 eff. October 18, 2019; amended by SR-LTSE-2019-04 eff. December 5, 2019)

Rule 11.360. Reserved.

Rule 11.370. Reserved

Rule 11.380. Risk Management

- (a) Risk Controls
 - (1) Risk Controls may be optionally elected by a Member or the clearing firm of a Member
 - (2) Risk Controls can be configured to accumulate and specify a limit or limits on the Gross Notional Exposure, Net Notional Exposure, or both, as defined in subparagraphs (a)(2)(A) and (a)(2)(B), respectively ("Risk Controls Limit"). Risk Controls Limits can be configured for matched trades for a Member or clearing firm's broker correspondent across MPIDs, by MPID, by FIX session, or in combination, per clearing firm relationship or Member, as applicable. If a Risk Controls Limit is exceeded, new orders will be automatically rejected and all open orders will be canceled. Any Risk Controls Limit may be increased or decreased on an intra-day basis by a Member or the clearing firm of a Member, as applicable.
 - (A) "Gross Notional Exposure" is calculated as the absolute sum of the notional value of all buy and sell trades: equal to the value of executed buys plus the absolute value of executed long sells plus the absolute value of executed short sells. There is no netting of buys and sales in the same symbol or across symbols. Gross Notional Exposure resets for each new trading day.
 - (B) "Net Notional Exposure" is calculated as the absolute net sum of the notional value of all buy and sell trades: equal to the value of executed buys minus the absolute value of executed long sells minus the absolute value of executed short sells. Netting is calculated across symbols. Net Notional Exposure resets for each new trading day.

(Amended by SR-LTSE-2020-23 eff. April 16, 2021).

Rule 11.390. Reserved

Rule Series 11.400. Market Data Feeds

Rule 11.410. Use of Market Data Feeds and Calculations of Necessary Price Reference Points

(a) Market Data Sources.

Away Trading Center	Primary Source Quotes	Source Trades & Admin
Cboe BYX Exchange (BATY)	CQS/UQDF	CTS/UTDF
Cboe BZX Exchange (BATS)	CQS/UQDF	CTS/UTDF
Cboe EDGA Exchange (EDGA)	CQS/UQDF	CTS/UTDF
Cboe EDGX Exchange (EDGX)	CQS/UQDF	CTS/UTDF
Investors Exchange (IEX)	CQS/UQDF	CTS/UTDF
MEMX LLC (MEMX)	CQS/UQDF	CTS/UTDF
MIAX PEARL, LLC (MPRL)	CQS/UQDF	CTS/UTDF
NASDAQ BX (XBOS)	CQS/UQDF	CTS/UTDF
NASDAQ PSX (XPHL)	CQS/UQDF	CTS/UTDF
NASDAQ Stock Market (XNGS)	CQS/UQDF	CTS/UTDF
New York Stock Exchange (XNYS)	CQS/UQDF	CTS/UTDF
NYSE American (XASE)	CQS/UQDF	CTS/UTDF
NYSE ARCA (ARCX)	CQS/UQDF	CTS/UTDF
NYSE Chicago (XCHI)	CQS/UQDF	CTS/UTDF
NYSE National (XCIS)	CQS/UQDF	CTS/UTDF

- (1) Top of Book. LTSE determines the Top of Book quotation for each away trading center to be equal to the price and size of the most current displayed best priced bid and displayed best priced offer of an away trading center in an Regulation NMS Covered Security ("covered security") known to the System during system hours through the market data sources described in paragraph (3) below.
- (2) Reserved.
- (3) SIP Market Data Feeds. LTSE consumes SIP consolidated quotation and trade data feeds for each of the National Tape Plans for covered securities. The Exchange will maintain connectivity and access to the relevant SIP for the receipt of SIP feeds. SIP feeds are a primary source of administrative messages such as halts, unhalts, limit up-limit down reference prices, Regulation SHO short sale circuit breakers, and last sale information. SIP feeds are also the primary source of administrative messages for certain reporting, regulatory and compliance systems within LTSE.

Rule 11.410. Use of Market Data Feeds and Calculations of Necessary Price Reference Points

- (4) LTSE Best Priced Quotation. LTSE is aware of its own Top of Book, aggregated best priced, resting orders for which it is publishing a protected quotation, intrinsically within the LTSE System. The LTSE System is the primary source of the LTSE Top of Book for the purposes of calculating quote related reference prices for the trading system. SIP feeds and the LTSE proprietary market data feeds may be the, or one of the, primary sources of LTSE Top of Book information for certain reporting, regulatory, and compliance systems of the Exchange. The LTSE proprietary market data feeds will provide information about odd lot-sized orders, including when such orders are at prices better than the LTSE Top of Book.
- (b) Quote Related Reference Prices are derived from composite of Top of Book determined for each away trading center as per paragraph (a) above in the following manner:
 - (1) Protected Quotations. Protected Bids and Offers are determined from all Top of Book information for away trading centers quotations meeting the requirements defined in rules of Regulation NMS. LTSE consumes the Protected Quotations from the away trading centers listed in this LTSE Rule.
 - (2) National Best Bid and Offer. The NBBO is equal to the highest bid and lowest offer among all valid Top of Book for each protected quotation in each covered security, including LTSE's own quotation. Quotations of venues against which LTSE has declared self-help as described in LTSE Rule 11.230(d), are included in the determination of the NBBO.
 - (3) Protected Best Bid and Offer. The Protected NBBO is equal to the highest bid and lowest offer among all valid Top of Book for each protected quotation in each covered security, including LTSE's own quotation. Quotations of venues against which LTSE has declared self-help as described in LTSE Rule 11.230(d), are excluded in the determination of the PBBO.
 - (4) Reserved.
- (c) Matching Engine Market Data Usage. The LTSE Matching Engine uses the NBBO to determine price for the Regulation SHO Short Sale Price Test, and the Protected NBBO to determine the protected inside for the purpose of preventing locked and crossed markets, NMS price sliding, and trade through protection.
- (d) Reserved.

(Amended by SR-LTSE-2019-02 eff. September 27, 2019; amended by SR-LTSE-2020-13 eff. August 18, 2020; amended by SR-LTSE-2020-13 eff. September 8, 2020)

Rule 11.420. Reserved.

(Amended by SR-LTSE-2021-05 eff. September 1, 2021)

Rule Series 11.500. Reserved

Rule Series 11.600. Consolidated Audit Trail Compliance Rule

Rule 11.610. Consolidated Audit Trail - Definitions

- (a) "Account Effective Date" means:
 - (1) With regard to those circumstances in which an Industry Member has established a trading relationship with an institution but has not established an account with that institution:
 - (A) when the trading relationship was established prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options), either:
 - (i) the date the relationship identifier was established within the Industry Member:
 - (ii) the date when trading began (i.e. the date the first order was received) using the relevant relationship identifier; or
 - (iii) if both dates are available, the earlier date will be used to the extent that the dates differ; or
 - (B) When the trading relationship was established on or after commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options), the date the Industry Member established the relationship identifier, which would be no later than the date the first order was received;
 - (2) Where an Industry Member changes back office providers or clearing firms prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options), the date an account was established at the relevant Industry Member, either directly or via transfer:
 - (3) Where an Industry Member acquires another Industry Member prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether

the account involves Eligible Securities that are equities or options), the date an account was established at the relevant Industry Member, either directly or via transfer;

- (4) Where there are multiple dates associated with an account established prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options), the earliest available date;
- (5) With regard to Industry Member proprietary accounts established prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options):
 - (A) The date established for the account in the Industry Member or in a system of the Industry Member; or
 - (B) The date when proprietary trading began in the account (i.e., the date on which the first orders were submitted from the account).

With regard to paragraphs (2)–(5), the Account Effective Date will be no later than the date trading occurs at the Industry Member or in the Industry Member's system.

- (b) "Active Accounts" means an account that has had activity in Eligible Securities within the last six months.
- (c) "Allocation" means (1) the placement of shares/contracts into the same account for which an order was originally placed; or (2) the placement of shares/contracts into an account based on allocation instructions (e.g., subaccount allocations, delivery versus payment ("DVP") allocations).
- (d) "Allocation Report" means a report made to the Central Repository by an Industry Member that identifies the Firm Designated ID for any account(s), including subaccount(s), to which executed shares/contracts are allocated and provides (1) the security that has been allocated; (2) the identifier of the firm reporting the allocation; (3) the price per share/contract of shares/contracts allocated; (4) the side of shares/contracts allocated; (5) the number of shares/contracts allocated to each account; (6) the time of the allocation; (7) Allocation ID, which is the internal allocation identifier assigned to the allocation event by the Industry Member; (8) trade date; (9) settlement date; (10) IB/correspondent CRD Number (if applicable); (11) FDID of new order(s) (if available in the booking system); (12) allocation instruction time (optional); (12) if account meets the definition of institution under FINRA Rule 4512(c); (13) type of allocation (allocation to a custody account, allocation to a DVP

account, step-out, correspondent flip, allocation to a firm owned or controlled account, or other non-reportable transactions (e.g., option exercises, conversions); (14) for DVP allocations, custody broker-dealer clearing number (prime broker) if the custodian is a U.S. broker-dealer, DTCC number if the custodian is a U.S. bank, or a foreign indicator, if the custodian is a foreign entity; and (15) if an allocation was cancelled, a cancel flag indicating that the allocation was cancelled, and a cancel timestamp, which represents the time at which the allocation was cancelled; provided, for the avoidance of doubt, any such Allocation Report shall not be required to be linked to particular orders or executions.

- (e) "ATS" means an alternative trading system, as defined in Rule 300(a)(1) of Regulation ATS under the Exchange Act.
- (f) "Business Clock" means a clock used to record the date and time of any Reportable Event required to be reported under this Rule Series.
- (g) "CAT" means the consolidated audit trail contemplated by SEC Rule 613.
- (h) "CAT NMS Plan" means the National Market System Plan Governing the Consolidated Audit Trail, as amended from time to time.
- (i) "CAT-Order-ID" means a unique order identifier or series of unique order identifiers that allows the Central Repository to efficiently and accurately link all Reportable Events for an order, and all orders that result from the aggregation or disaggregation of such order.
- (j) "CAT Reporting Agent" means a Data Submitter that is a third party that enters into an agreement with an Industry Member pursuant to which the CAT Reporting Agent agrees to fulfill such Industry Member's reporting obligations under this Rule Series.
- (k) "Central Repository" means the repository responsible for the receipt, consolidation, and retention of all information reported to the CAT pursuant to SEC Rule 613 and the CAT NMS Plan.
- (I) "Client Account" means, for the purposes of an Allocation and Allocation Report, any account or subaccount that is not owned or controlled by the Industry Member.
- (m) "Compliance Threshold" has the meaning set forth in Rule 11.693(d).
- (n) "Customer" means:
 - (1) the account holder(s) of the account at an Industry Member originating the order; and

- (2) any person from whom the Industry Member is authorized to accept trading instructions for such account, if different from the account holder(s).
- (o) "Customer Account Information" shall include, but not be limited to, account type, customer type, date account opened, and large trader identifier (if applicable); except, however, that:
 - (1) In those circumstances in which an Industry Member has established a trading relationship with an institution but has not established an account with that institution, the Industry Member will:
 - (A) provide the Account Effective Date in lieu of the "date account opened"; and
 - (B) identify the "account type" as a "relationship".
 - (2) in those circumstances in which the relevant account was established prior to commencement of Phase 2c or Phase 2d (as applicable depending on whether the account involves Eligible Securities that are equities or options), and no "date account opened" is available for the account, the Industry Member will provide the Account Effective Date in the following circumstances:
 - (A) where an Industry Member changes back office providers or clearing firms and the date account opened is changed to the date the account was opened on the new back office/clearing firm system;
 - (B) where an Industry Member acquires another Industry Member and the date account opened is changed to the date the account was opened on the postmerger back office/clearing firm system;
 - (C) where there are multiple dates associated with an account in an Industry Member's system, and the parameters of each date are determined by the individual Industry Member; and
 - (D) where the relevant account is an Industry Member proprietary account.
- (p) "Customer Identifying Information" means information of sufficient detail to identify a Customer, including, but not limited to:
 - (1) with respect to individuals: name, address, year of birth, individual's role in the account (e.g., primary holder, joint holder, guardian, trustee, person with the power of attorney); and

- (2) with respect to legal entities: name, address, Employer Identification N umber ("EIN")/Legal Entity Identifier ("LEI") or other comparable common entity identifier, if applicable; provided, however, that an Industry Member that has an LEI for a Customer must submit the Customer's LEI in addition to other information of sufficient detail to identify a Customer.
- (q) "Data Submitter" means any person that reports data to the Central Repository, including national securities exchanges, national securities associations, broker-dealers, the SIPs for the CQS, CTA, UTP and Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information ("OPRA") Plans, and certain other vendors or third parties that may submit data to the Central Repository on behalf of Industry Members.
- (r) "Eligible Security" includes:
 - (1) all NMS Securities; and
 - (2) all OTC Equity Securities.
- (s) "Error Rate" means the percentage of Reportable Events collected by the Central Repository in which the data reported does not fully and accurately reflect the order event that occurred in the market.
- (t) "Firm Designated ID" means (1) a unique and persistent identifier for each trading account designated by Industry Members for purposes of providing data to the Central Repository, provided, however, such identifier may not be the account number for such trading account if the trading account is not a proprietary account; (2) a unique and persistent relationship identifier when an Industry Member does not have an account number available to its order handling and/or execution system at the time of order receipt, provided, however, such identifier must be masked; or (3) a unique and persistent entity identifier when an employee of an Industry Member is exercising discretion over multiple client accounts and creates an aggregated order for which a trading account number of the Industry Member is not available at the time of order origination, where each such identifier is unique among all identifiers from any given Industry Member.
- (u) "Industry Member" means a member of a national securities exchange or a member of a national securities association.
- (v) "Industry Member Data" has the meaning set forth in Rule 11.630(a)(2).

- (1) "Phase 2a Industry Member Data" means Industry Member Data required to be reported to the Central Repository commencing in Phase 2a.
- (2) "Phase 2b Industry Member Data" means Industry Member Data required to be reported to the Central Repository commencing in Phase 2b.
- (3) "Phase 2c Industry Member Data" means Industry Member Data required to be reported to the Central Repository commencing in Phase 2c.
- (4) "Phase 2d Industry Member Data" means Industry Member Data required to be reported to the Central Repository commencing in Phase 2d.
- (5) "Phase 2e Industry Member Data" means Industry Member Data required to be reported to the Central Repository commencing in Phase 2e. The full scope of Industry Member Data required by the CAT NMS Plan will be required to be reported to the CAT when Phase 2e has been implemented, subject to any applicable exemptive relief or amendments to the CAT NMS Plan.
- (w) "Initial Plan Processor" means the first Plan Processor selected by the Operating Committee in accordance with SEC Rule 613, Section 6.1 of the CAT NMS Plan and the National Market System Plan Governing the Process for Selecting a Plan Processor and Developing a Plan for the Consolidated Audit Trail.
- (x) "Introducing Industry Member" means a broker-dealer that does not qualify as a Small Industry Member solely because such broker-dealer satisfies Rule 0-10(i)(2) under the Exchange Act in that it introduces transactions on a fully disclosed basis to clearing firms that are not small businesses or small organizations.
- (y) "Listed Option" or "Option" have the meaning set forth in Rule 600(b)(35) of Regulation NMS.
- (z) "Manual Order Event" means a non-electronic communication of order-related information for which Industry Members must record and report the time of the event.
- (aa) "Material Terms of the Order" includes: the NMS Security or OTC Equity Security symbol, security type, price (if applicable), size (displayed and non-displayed), side (buy/sell), order type, if a sell order, whether the order is long, short, short exempt, open/close indicator (except on transactions in equities), time in force (if applicable), if the order is for a Listed Option, option type (put/call), option symbol or root symbol, underlying symbol, strike price, expiration date, and open/close (except on market maker quotations), and any special handling instructions.

- (bb) "NMS Security" means any security or class of securities for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan or an effective national market system plan for reporting transactions in Listed Options.
- (cc) "NMS Stock" means any NMS Security other than an option.
- (dd) "Operating Committee" means the governing body of the CAT NMS, LLC designated as such and described in Article IV of the CAT NMS Plan.
- (ee) "Options Market Maker" means a broker-dealer registered with an exchange for the purpose of making markets in options contracts traded on the exchange.
- (ff) "Order" or "order", with respect to Eligible Securities, shall include:
 - (1) Any order received by an Industry Member from any person;
 - (2) Any order originated by an Industry Member; or
 - (3) Any bid or offer.
- (gg) "OTC Equity Security" means any equity security, other than an NMS Security, subject to prompt last sale reporting rules of a registered national securities association and reported to one of such association's equity trade reporting facilities.
- (hh) "Participant" means each Person identified as such in Exhibit A of the CAT NMS Plan, as amended, in such Person's capacity as a Participant in CAT NMS, LLC.
- (ii) "Person" means any individual, partnership, limited liability company, corporation, joint venture, trust, business trust, cooperative or association and any heirs, executors, administrators, legal representatives, successors and assigns of such Person where the context so permits.
- (jj) "Plan Processor" means the Initial Plan Processor or any other Person selected by the Operating Committee pursuant to SEC Rule 613 and Sections 4.3(b)(i) and 6.1 of the CAT NMS Plan, and with regard to the Initial Plan Processor, the National Market System Plan Governing the Process for Selecting a Plan Processor and Developing a Plan for the Consolidated Audit Trail, to perform the CAT processing functions required by SEC Rule 613 and set forth in the CAT NMS Plan.
- (kk) "Received Industry Member Data" has the meaning set forth in Rule 11.630(a)(2).
- (II) "Recorded Industry Member Data" has the meaning set forth in Rule 11.630(a)(1).

- (mm) "Reportable Event" includes, but is not limited to, the original receipt or origination, modification, cancellation, routing, execution (in whole or in part) and allocation of an order, and receipt of a routed order.
- (nn) "SRO" means any self-regulatory organization within the meaning of Section 3(a)(26) of the Exchange Act.
- (oo) "SRO-Assigned Market Participant Identifier" means an identifier assigned to an Industry Member by an SRO or an identifier used by a Participant.
- (pp) "Small Industry Member" means an Industry Member that qualifies as a small broker-dealer as defined in Rule 0-10(c) under the Securities Exchange Act of 1934, as amended.
- (qq) "Trading Day" shall have the meaning as is determined by the Operating Committee. For the avoidance of doubt, the Operating Committee may establish different Trading Days for NMS Stocks (as defined in SEC Rule 600(b)(47)), Listed Options, OTC Equity Securities, and any other securities that are included as Eligible Securities from time to time.
- (rr) "Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN")" means the interim value created by an Industry Member based on a Customer ITIN/SSN.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020; amended by SR-LTSE-2019-12 eff. July 30, 2020; amended by SR-LTSE-2020-24 eff. December 18, 2020)

Rule 11.620. Consolidated Audit Trail – Clock Synchronization

- (a) Clock Synchronization
 - (1) Each Industry Member shall synchronize its Business Clocks, other than such Business Clocks used solely for Manual Order Events or used solely for the time of allocation on Allocation Reports, at a minimum to within a fifty (50) millisecond tolerance of the time maintained by the atomic clock of the National Institute of Standards and Technology ("NIST"), and maintain such synchronization.
 - (2) Each Industry Member shall synchronize:
 - (A) its Business Clocks used solely for Manual Order Events; and

- (B) its Business Clocks used solely for the time of allocation on Allocation Reports at a minimum to within a one second tolerance of the time maintained by the NIST atomic clock, and maintain such synchronization.
- (3) The tolerance for paragraphs (a)(1) and (2) of this Rule includes all of the following:
 - (A) The difference between the NIST atomic clock and the Industry Member's Business Clock;
 - (B) The transmission delay from the source; and
 - (C) The amount of drift of the Industry Member's Business Clock.
- (4) Business Clocks must be synchronized every business day before market open to ensure that timestamps for Reportable Events are accurate. To maintain clock synchronization. Business Clocks must be checked against the NIST atomic clock and re-synchronized, as necessary, throughout the day.
- (b) Documentation. Industry Members must document and maintain their synchronization procedures for Business Clocks. Industry Members must keep a log of the times when they synchronize their Business Clocks and the results of the synchronization process. This log should include notice of any time a Business Clock drifts more than the applicable tolerance specified in paragraph (a) of this Rule. Such log must include results for a period of not less than five years ending on the then current date, or for the entire period for which the Industry Member has been required to comply with this Rule if less than five years.
- (c) Certification. Each Industry Member shall certify to the Exchange that its Business Clocks satisfy the synchronization requirements set forth in paragraph (a) of this Rule periodically in accordance with the certification schedule established by the Operating Committee pursuant to the CAT NMS Plan.
- (d) Violation Reporting. Each Industry Member with Business Clocks must report to the Plan Processor and the Exchange violations of paragraph (a) of this Rule pursuant to the thresholds set by the Operating Committee pursuant to the CAT NMS Plan.

- (a) Recording and Reporting Industry Member Data
 - (1) Subject to paragraph (3) below, each Industry Member shall record and electronically report to the Central Repository the following details for each order

and each Reportable Event, as applicable ("Recorded Industry Member Data") in the manner prescribed by the Operating Committee pursuant to the CAT NMS Plan:

- (A) For original receipt or origination of an order:
 - (i) Firm Designated ID(s) for each Customer;
 - (ii) CAT-Order-ID;
 - (iii) SRO-Assigned Market Participant Identifier of the Industry Member receiving or originating the order;
 - (iv) date of order receipt or origination;
 - (v) time of order receipt or origination (using timestamps pursuant to Rule 11.660);
 - (vi) Material Terms of the Order;
 - (vii) the unique identification of any appropriate information barriers in place at the department within the Industry Member where the order was received or originated;
 - (viii) any request by a Customer that a limit order not be displayed, or that a block size limit order be displayed, pursuant to applicable rules;
 - (ix) the nature of the department or desk that originated the order, or received the order from a Customer;
 - (x) the type of account holder for which the order is submitted;
 - (xi) for an Industry Member that operates an ATS:
 - (1) the ATS's unique identifier for the order type of the order;
 - (2) the National Best Bid and National Best Offer (or relevant reference price) at the time of order receipt or origination, and the date and time at which the ATS recorded such National Best Bid and National Best Offer (or relevant reference price);
 - (3) the identification of the market data feed used by the ATS to record the National Best Bid and National Best Offer (or relevant reference price) for purposes of subparagraph (xi)(2). If for any reason, the ATS uses an alternative market data feed than what was reported on its ATS data submission, the ATS must provide

notice to the Central Repository of the fact that an alternative source was used, identify the alternative source, and specify the date(s), time(s) and securities for which the alternative source was used:

- (4) the sequence number assigned to the receipt or origination of the order by the ATS's matching engine;
- (5) whether the ATS displays subscriber orders outside the ATS (other than to alternative trading system employees). If an ATS does display subscriber orders outside the ATS (other than to alternative trading system employees), indicate whether the order is displayed to subscribers only or through publicly disseminated quotation data.
- (B) For the routing of an order:
 - (i) CAT-Order-ID;
 - (ii) date on which the order is routed;
 - (iii) time at which the order is routed (using timestamps pursuant to Rule 11.660);
 - (iv) SRO-Assigned Market Participant Identifier of the Industry Member routing the order;
 - (v) SRO-Assigned Market Participant Identifier of the Industry Member or Participant to which the order is being routed;
 - (vi) if routed internally at the Industry Member, the identity and nature of the department or desk to which the order is routed, and the unique identification of any appropriate information barriers in place at the department within the Industry Member to which the order was transmitted;
 - (vii) Material Terms of the Order; and
 - (viii) for Industry Members that operate ATSs, the sequence number assigned to the routing of the order by the ATS's matching engine.
- (C) For the receipt of an order that has been routed, the following information:
 - (i) CAT-Order-ID;
 - (ii) date on which the order is received;

- (iii) time at which the order is received (using timestamps pursuant to Rule 11.660);
- (iv) SRO-Assigned Market Participant Identifier of the Industry Member receiving the order;
- (v) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order;
- (vi) Material Terms of the Order;
- (vii) the unique identification of any appropriate information barriers in place at the department within the Industry Member which received the order;
- (viii) the nature of the department or desk that received the order;
- (ix) any request by a Customer that a limit order not be displayed, or that a block size limit order be displayed, pursuant to applicable rules; and
- (x) for an Industry Member that operates an ATS:
 - (1) the ATS's unique identifier for the order type of the order;
 - (2) the National Best Bid and National Best Offer (or relevant reference price) at the time of order receipt, and the date and time at which the ATS recorded such National Best Bid and National Best Offer (or relevant reference price);
 - (3) the identification of the market data feed used by the ATS to record the National Best Bid and National Best Offer (or relevant reference price) for purposes of subparagraph (x)(2). If for any reason, the ATS uses an alternative market data feed than what was reported on its ATS data submission, the ATS must provide notice to the Central Repository of the fact that an alternative source was used, identify the alternative source, and specify the date(s), time(s) and securities for which the alternative source was used;
 - (4) the sequence number assigned to the receipt of the order by the ATS's matching engine;
 - (5) whether the ATS displays subscriber orders outside the ATS (other than to alternative trading system employees). If an ATS does display subscriber orders outside the ATS (other than to alternative trading system employees), indicate whether the order is displayed to subscribers only or through publicly disseminated quotation data.

- (D) If the order is modified or cancelled:
 - (i) CAT-Order-ID;
 - (ii) date the modification or cancellation is received or originated;
 - (iii) time at which the modification or cancellation is received or originated (using timestamps pursuant to Rule 11.660);
 - (iv) price and remaining size of the order, if modified;
 - (v) other changes in the Material Terms of the Order, if modified;
 - (vi) whether the modification or cancellation instruction was given by the Customer or was initiated by the Industry Member;
 - (vii) the unique identification of any appropriate information barriers at the department within the Industry Member which received or originated the modification;
 - (viii) any request by a Customer that a limit order not be displayed, or that a block size limit order be displayed, pursuant to applicable rules;
 - (ix) for an Industry Member that operates an ATS:
 - (1) the ATS's unique identifier for the order type of the order;
 - (2) the National Best Bid and National Best Offer (or relevant reference price) at the time of order modification or cancellation, and the date and time at which the ATS recorded such National Best Bid and National Best Offer (or relevant reference price);
 - (3) the identification of the market data feed used by the ATS to record the National Best Bid and National Best Offer (or relevant reference price) for purposes of subparagraph (ix)(2). If for any reason, the ATS uses an alternative market data feed than what was reported on its ATS data submission, the ATS must provide notice to the Central Repository of the fact that an alternative source was used, identify the alternative source, and specify the date(s), time(s) and securities for which the alternative source was used;
 - (4) the sequence number assigned to the modification or cancellation of the order by the ATS's matching engine;

- (5) each time the ATS's matching engine re-prices an order or changes the display quantity of an order, the time of such modification and the applicable new price or size.
- (E) If the order is executed, in whole or in part:
 - (i) CAT-Order-ID;
 - (ii) date of execution;
 - (iii) time of execution (using timestamps pursuant to Rule 11.660);
 - (iv) execution capacity (principal, agency or riskless principal);
 - (v) execution price and size;
 - (vi) SRO-Assigned Market Participant Identifier of the Industry Member executing the order;
 - (vii) whether the execution was reported pursuant to an effective transaction reporting plan or the Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information; and
 - (viii) for Industry Members that operate ATSs:
 - (1) the National Best Bid and National Best Offer (or relevant reference price) at the time of execution, and the date and time at which the ATS recorded such National Best Bid and National Best Offer (or relevant reference price);
 - (2) the identification of the market data feed used by the ATS to record the National Best Bid and National Best Offer (or relevant reference price) for purposes of subparagraph (viii)(1). If for any reason, the ATS uses an alternative market data feed than what was reported on its ATS data submission, the ATS must provide notice to the Central Repository of the fact that an alternative source was used, identify the alternative source, and specify the date(s), time(s) and securities for which the alternative source was used; and
 - (3) the sequence number assigned to the execution of the order by the ATS's matching engine.
- (F) Other information or additional events as may be prescribed pursuant to the CAT NMS Plan.

- (2) Subject to paragraph (3) below, each Industry Member shall record and report to the Central Repository the following, as applicable ("Received Industry Member Data" and collectively with the information referred to in Rule 11.630(a)(1), "Industry Member Data") in the manner prescribed by the Operating Committee pursuant to the CAT NMS Plan:
 - (A) If the order is executed, in whole or in part:
 - (i) SRO-Assigned Market Participant Identifier of the clearing broker, if applicable; and
 - (ii) CAT-Order-ID of any contra-side order(s);
 - (B) If the trade is cancelled, a cancelled trade indicator;
 - (C) for original receipt or origination of an order, the Firm Designated ID for the relevant Customer, Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN"), and in accordance with Rule 11.640, Customer Account Information and Customer Identifying Information for the relevant Customer.
 - (D) An Industry Member that operates an ATS must provide to the Central Repository:
 - (1) a list of all of its order types twenty (20) days before such order types become effective; and
 - (2) any changes to its order types twenty (20) days before such changes become effective. An identifier shall not be required for market and limit orders that have no other special handling instructions.
 - (E) if an Industry Member is required to submit and submits a trade report for a trade, and, if the trade is cancelled, a cancellation, to one of FINRA's Trade Reporting Facilities, OTC Reporting Facility or Alternative Display Facility pursuant to applicable SRO rules, and the Industry Member is required to report the corresponding execution and/or cancellation to the Central Repository:
 - (1) the Industry Member is required to report to the Central Repository the trade identifier reported by the Industry Member to such FINRA facility for the trade when the Industry Member reports the execution of an order pursuant to Rule 11.630(a)(1)(E) or cancellation of an order pursuant to Rule 11.630(a)(1)(D) beginning June 22, 2020 for Large Industry Members and Small

- Industry OATS Reporters and beginning December 13, 2021 for Small Industry Non-OATS Reporters, and such trade identifier must be unique beginning October 26, 2020 for Large Industry Members and Small Industry OATS Reporters and beginning December 13, 2021 for Small Industry Non-OATS Reporters;
- (2) if the order is executed in whole or in part, and the Industry Member submits the trade report to one of FINRA's Trade Reporting Facilities, OTC Reporting Facility or Alternative Display Facility pursuant to applicable SRO rules, the Industry Member is not required to submit the SRO-Assigned Market Participant Identifier of the clearing broker pursuant to Rule 11.630(a)(2)(A)(ii); provided, however, if the Industry Member does not report the clearing number of the clearing broker to such FINRA facility for a trade, or does not report the unique trade identifier to the Central Repository as required by Rule 11.630(a)(2)(E)(1), then the Industry Member would be required to record and report to the Central Repository the clearing number of the clearing broker as well as information about the contra party to the trade beginning April 26, 2021 for Large Industry Members and Small Industry OATS Reporters and beginning December 13, 2021 for Small Industry Non-OATS Reporters; and
- (3) if the trade is cancelled and the Industry Member submits the cancellation to one of FINRA's Trade Reporting Facilities, OTC Reporting Facility or Alternative Display Facility pursuant to applicable SRO rules, the Industry Member is not required to submit the cancelled trade indicator pursuant to Rule 11.630(a)(2)(B); provided, however, if the Industry Member does not report a cancellation for a canceled trade to such FINRA facility, or does not report the unique trade identifier as required by 11.630(a)(2)(E)(1), then the Industry Member would be required to record and report to the Central Repository a cancelled trade indicator as well as a cancelled trade timestamp beginning June 22, 2020 for Large Industry Members and Small Industry OATS Reporters and beginning December 13, 2021 for Small Industry Non-OATS Reporters.
- (F) an Allocation Report any time the Industry Member performs an Allocation to a Client Account, whether or not the Industry Member was the executing broker for the trade.
- (3) Each Industry Member that is an Options Market Maker is not required to report to the Central Repository the Industry Member Data regarding the routing, modification or cancellation of its quotes in Listed Options. Each Industry Member that is an Options Market Maker shall report to the Exchange the time at which its quote in a Listed Option is sent to the Exchange (and, if applicable, any subsequent quote modification time and/or cancellation time when such modification or cancellation is originated by the Options Market Maker).

- (b) Timing of Recording and Reporting
 - (1) Each Industry Member shall record Recorded Industry Member Data contemporaneously with the applicable Reportable Event.
 - (2) Each Industry Member shall report:
 - (A) Recorded Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member records such Recorded Industry Member Data; and
 - (B) Received Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such Received Industry Member Data.
 - (C) Industry Members may, but are not required to, voluntarily report Industry Member Data prior to the applicable 8:00 a.m. Eastern Time deadline.

(c) Applicable Securities

- (1) Each Industry Member shall record and report to the Central Repository the Industry Member Data as set forth in paragraph (a) of this Rule for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange.
- (2) Each Industry Member shall record and report to the Central Repository the Industry Member Data as set forth in this paragraph (a) of this Rule for each Eligible Security for which transaction reports are required to be submitted to FINRA.

(d) Security Symbology

- (1) For each exchange-listed Eligible Security, each Industry Member shall report Industry Member Data to the Central Repository using the symbology format of the exchange listing the security.
- (2) For each Eligible Security that is not exchange-listed, each Industry Member shall report Industry Member Data to the Central Repository using such symbology format as approved by the Operating Committee pursuant to the CAT NMS Plan.
- (e) Error Correction. For each Industry Member for which errors in Industry Member

 Data submitted to the Central Repository have been identified by the Plan Processor

Rule 11.640. Consolidated Audit Trail - Customer Information Reporting

- or otherwise, such Industry Member shall submit corrected Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on T+3.
- (f) Each Industry Member that operates an ATS that trades OTC Equity Securities shall provide to the Central Repository;
 - (1) the best bid and best offer for each OTC Equity Security traded on such ATS;
 - (2) an indication of whether each bid and offer for OTC Equity Securities was solicited or unsolicited; and
 - (3) the unpriced bids and offers for each OTC Equity Security traded on such ATS.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020; amended SR-2020-24 eff. December 18, 2020)

Rule 11.640. Consolidated Audit Trail - Customer Information Reporting

- (a) Initial Set of Customer Information. Each Industry Member shall submit to the Central Repository the Firm Designated ID, the Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN"), Customer Account Information and Customer Identifying Information for each of its Customers with an Active Account prior to such Industry Member's commencement of reporting to the Central Repository and in accordance with the deadlines set forth in Rule 11.680.
- (b) Updates to Customer Information. Each Industry Member shall submit to the Central Repository any updates, additions or other changes to the Firm Designated ID, the Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN"), Customer Account Information and Customer Identifying Information for each of its Customers with an Active Account on a daily basis.
- (c) Periodic Updates to Complete Set of Customer Information. On a periodic basis as designated by the Plan Processor and approved by the Operating Committee, each Industry Member shall submit to the Central Repository a complete set of Firm Designated IDs, the Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN"), Customer Account Information and Customer Identifying Information for each of its Customers with an Active Account.
- (d) Error Correction. For each Industry Member for which errors in Firm Designated ID, the Transformed Value for individual tax payer identification number ("ITIN")/social security number ("SSN"), Customer Account Information and Customer Identifying Information for each of its Customers with an Active Account submitted to the Central

Repository have been identified by the Plan Processor or otherwise, such Industry Member shall submit corrected data to the Central Repository by 5:00 p.m. on T+3.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020)

Rule 11.650. Consolidated Audit Trail - Industry Member Information Reporting

Each Industry Member shall submit to the Central Repository information sufficient to identify such Industry Member, including CRD number and LEI, if such LEI has been obtained, prior to such Industry Member's commencement of reporting to the Central Repository and in accordance with the deadlines set forth in Rule 11.680, and keep such information up to date as necessary.

Rule 11.660. Consolidated Audit Trail - Time Stamp

- (a) Millisecond Time Stamps
 - (1) Subject to paragraphs (a)(2) and (b), each Industry Member shall record and report Industry Member Data to the Central Repository with time stamps in milliseconds.
 - (2) Subject to paragraph (b), to the extent that any Industry Member's order handling or execution systems utilize time stamps in increments finer than milliseconds. such Industry Member shall record and report Industry Member Data to the Central Repository with time stamps in such finer increment up to nanoseconds; provided, that Industry Members that capture timestamps in increments more granular than nanoseconds must truncate the timestamps after the nanosecond level for submission to CAT, rather than rounding such timestamps up or down, until April 8, 2025.
- (b) One Second Time Stamps/Electronic Order Capture
 - (1) Each Industry Member may record and report Manual Order Events to the Central Repository in increments up to and including one second, provided that each Industry Member shall record and report the time when a Manual Order Event has been captured electronically in an order handling and execution system of such Industry Member ("Electronic Capture Time") in milliseconds; and
 - (2) Each Industry Member may record and report the time of Allocation Reports in increments up to and including one second.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020)

Rule 11.665. Consolidated Audit Trail Clock Synchronization Rule Violation

An Industry Member that engages in a pattern or practice of reporting Reportable Events outside of the required clock synchronization time period as set forth in this Rule Series without reasonable justification or exceptional circumstances may be considered in violation of this Rule.

Rule 11.670. Consolidated Audit Trail - Connectivity and Data Transmission

- (a) Data Transmission. Each Industry Member shall transmit data as required under the CAT NMS Plan to the Central Repository utilizing such format(s) as may be provided by the Plan Processor and approved by the Operating Committee.
- (b) Connectivity. Each Industry Member shall connect to the Central Repository using a secure method(s), including but not limited to private line(s) and virtual private network connection(s).
- (c) CAT Reporting Agents
 - (1) Any Industry Member may enter into an agreement with a CAT Reporting Agent pursuant to which the CAT Reporting Agent agrees to fulfill the reporting obligations of such Industry Member under this Rule Series 11.600.
 - (2) Any such agreement shall be evidenced in writing, which shall specify the respective functions and responsibilities of each party to the agreement that are required to effect full compliance with the requirements of this Rule Series.
 - (3) All written documents evidencing an agreement described in subparagraph (1) shall be maintained by each party to the agreement.
 - (4) Each Industry Member remains primarily responsible for compliance with the requirements of this Rule Series 11.600, notwithstanding the existence of an agreement described in this paragraph.

Rule 11.680. Consolidated Audit Trail - Development and Testing

- (a) Development
 - (1) Industry Member file submission and data integrity testing for Phases 2a and 2b shall begin in December 2019.
 - (2) Industry Member testing of the Reporter Portal, including data integrity error correction tools and data submissions, shall begin in February 2020.

Rule 11.693. Consolidated Audit Trail - Timely, Accurate and Complete Data

- (3) The Industry Member test environment shall open with intra-firm linkage validations to Industry Members for both Phases 2a and 2b in April 2020.
- (4) The Industry Member test environment shall open to Industry Members with interfirm linkage validations for both Phases 2a and 2b in July 2020.
- (5) The Industry Member test environment shall open to Industry Members with Phase 2c functionality (full representative order linkages) in January 2021.
- (6) The Industry Member test environment shall open to Industry Members with Phase 2d functionality (manual options orders, complex options orders, and options allocations) in June 2021.
- (7) Participant exchanges that support options market making quoting shall begin accepting Quote Sent Time on quotes from Industry Members no later than April 2020.
- (8) The Industry Member test environment (customer and account information) will be open to Industry Members in January 2022.
- (b) Testing. Each Industry Member shall participate in testing related to the Central Repository, including any industry-wide disaster recovery testing, pursuant to the schedule established pursuant to the CAT NMS Plan.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020)

Rule 11.690. Consolidated Audit Trail - Record keeping

Each Industry Member shall maintain and preserve records of the information required to be recorded under this Rule Series for the period of time and accessibility specified in SEC Rule 17a-4(b). The records required to be maintained and preserved under this Rule may be immediately produced or reproduced on "micrographic media" as defined in SEC Rule 17a- 4(f)(I)(i) or by means of "electronic storage media" as defined in SEA Rule 17a-4(f)(I)(ii) that meet the conditions set forth in SEC Rule 17a-4(f) and be maintained and preserved for the required time in that form.

Rule 11.693. Consolidated Audit Trail - Timely, Accurate and Complete Data

(a) General. Industry Members are required to record and report data to the Central Repository as required by this Rule Series in a manner that ensures the timeliness, accuracy, integrity and completeness of such data.

- (b) LEIs. Without limiting the requirement set forth in paragraph (a), Industry Members are required to accurately provide the LEIs in their records as required by this Rule Series and may not knowingly submit inaccurate LEIs to the Central Repository; provided, however, that this requirement does not impose any additional due diligence obligations on Industry Members with regard to LEIs for CAT purposes.
- (c) Compliance with Error Rate. If an Industry Member reports data to the Central Repository with errors such that the error percentage exceeds the maximum Error Rate established by the Operating Committee pursuant to the CAT NMS Plan, then such Industry Member would not be in compliance with the Rule Series 11.600.
- (d) Compliance Thresholds. Each Industry Member shall be required to meet a separate compliance threshold, which will be an Industry Member-specific rate that may be used as the basis for further review or investigation into the Industry Member's performance with regard to the CAT (the "Compliance Thresholds"). Compliance Thresholds will compare an Industry Member's error rate to the aggregate Error Rate over a period of time to be defined by the Operating Committee. An Industry Member's performance with respect to its Compliance Threshold will not signify, as a matter of law, that such Industry Member has violated this Rule Series.

Rule 11.695. Consolidated Audit Trail - Compliance Dates

(a) General. Paragraphs (b) and (c) of this Rule set forth the additional details with respect to the compliance dates of Rules 11.610 - 11.695. Unless otherwise noted, Rules 11.610 - 11.695 are fully effective and Industry Members must comply with their terms.

(b) Clock Synchronization

- (1) Each Industry Member shall comply with Rule 11.620 with regard to Business Clocks that capture time in milliseconds commencing on or before March 15, 2017.
- (2) Each Industry Member shall comply with Rule 11.620 with regard to Business Clocks that do not capture time in milliseconds commencing on or before February 19, 2018.

(c) CAT Data Reporting

(1) Each Industry Member (other than a Small Industry Member) ("Large Industry Member") shall record and report the Industry Member Data to the Central Repository, as follows:

Rule 11.695. Consolidated Audit Trail - Compliance Dates

- (A) Phase 2a Industry Member Data by June 22, 2020;
- (B) Phase 2b Industry Member Data by July 20, 2020;
- (C) Phase 2c Industry Member Data by April 26, 2021;
- (D) Phase 2d Industry Member Data by December 13, 2021; and
- (E) Phase 2e Industry Member Data by July 11, 2022.
- (2) Each Industry Member that is a Small Industry Member shall record and report the Industry Member Data to the Central Repository, as follows:
 - (A) Small Industry Members that are required to record or report information to FINRA's Order Audit Trail System pursuant to applicable SRO rules ("Small Industry OATS Reporter") to report to the Central Repository Phase 2a Industry Member Data by June 22, 2020.
 - (B) Small Industry Members that are not required to record or report information to FINRA's Order Audit Trail System pursuant to applicable SRO rules ("Small Industry Non-OATS Reporter") to report to the Central Repository Phase 2a Industry Member Data by December 13, 2021.
 - (C) Small Industry Members to report to the Central Repository Phase 2b Industry Member Data, Phase 2c Industry Member Data, and Phase 2d Industry Member Data by December 13, 2021; and
 - (D) Small Industry Members to report to the Central Repository Phase 2e Industry Member Data by July 11, 2022.
- (3) Introducing Industry Members must comply with the requirements of the CAT NMS Plan applicable to Small Industry Members.

(Amended by SR-LTSE-2019-09 eff. June 22, 2020)